

PART I - PSYCHOLOGICAL ASPECTS OF EXCEPTIONAL DEVELOPMENT

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Emotional development of infants brought up out of family

We face a specific type of child's development when we talk about infants who are placed in a care institution at the very early period of their life. One of the main reasons of such type of development is the syndrome of reactive attachment disorders, which become evident in the behavioral characteristics of infants. Even at the preschool age there appear hyperactivity, displaced relationships with adults and environment, exceptional attachment to one person or, vice versa, undefined indifferent relations with caregiver. We can talk about the first signs of disadvantageous emotional reactions demonstrated to the caregiver occasionally at this age. Children who are in the state care institutions are psychically deprived. The younger the child placed in a care institution, the more distinct the features of deprivation are (Radzevičienė 1997).

Another significant point is that in most of cases the babies were unwanted, so they experienced their first emotional neglect before their birth, because the natural psychobiological link between mother and child was interrupted. The low birth weight, weak immunity system, inborn pathology of the central nervous system, and later reduction of postural reflexes might be assessed as a partial influence of early emotional abuse, experienced in the prenatal period. Somatic weakness is characteristic of deprived early-age children (Atkinson, Zucker 1997; Daulenskiene 1998, Archer 2003). Psychological rejection and neglect in prenatal period, no breast-feeding, and lack of maternal love and care do not satisfy children's need to feel safe and to form non-avoidant attachment.

A pressing problem. The education of infants who are brought up in care institutions from the first days of their life is a hard-to-solve problem for pedagogues (Vainauskas and others 1999; Raslavičienė 1994; Braslauskiene 2000), psycholo-

gists (Pikūnas, Palujanskienė 2000; Mielke 1997; Utz 2001; Balge, Milner 2000; Deasy 1994; Juodraitis 1999), and psychiatrists (Goldberg 2002; Bowlby 1990; Hobbs 1998). Finally, the society faces the behavioral problems of former infant-home wards when they become adults. Disorders of emotional and behavioral development of infants in many cases depend on early emotional experience, which is significant for child's later personal development. The phenomenon of deprivation (emotional, cognitive, social, and sensor) becomes stable and later it causes personal desadaptation in society.

Pedagogical processes, professional knowledge, experience and competences are specific in care institutions. It is so due to the objective conditions in care institutions. It is very hard to create conditions close to those which are in the family, because family factor at this age is essential. Because of the reasons mentioned earlier, the infants who are brought up in care institutions might be labeled as exceptional children.

There are a lot of people with whom infants have to contact every day, such as nurses, specialists (pediatricians, physiotherapists, speech therapists, and others), or volunteers, so the quality and quantity of contacts differ, but emotional development is displaced, because the child has no opportunity to attach to one person, and his need of safety is not satisfied. In the infant's development in care institutions the significant periods of dyad, of reciprocity are missing (Hedwig 1993). These are the facts to which teachers must pay attention while assessing the emotional state of infants. Up to 3 years of age it is better to define emotional phenomena more exactly as emotional reactions or behavior. Later, emotions might be assessed as background in the context of forming behavior models and individual functioning in the person's environment. Disorders of early emotional reactions in full value environment could be assessed as a risk factor in child's development (Bowlby 1990; Holmes 2001; Brisch 2002; Cassidy, Shaver 2002).

We wanted to learn how education could influence the changes of emotional reactions and which reactions might be influenced and which might not, and if education processes are suitable for these changes. If by specialized education processes we could change some emotional reactions, so we could say that in the future we are going to optimize the emotional and psychosocial development of these children. We assess education as a preventive measure of emotional and behavioral disorders.

The object of research are possible changes of infant's emotional reactions, after application of specific pedagogical input.

The aim of research is to check the effectiveness of education in the processes of changes of emotional reactions among wards of Infant homes.

Method of research:

1. Pedagogical experiment; 2. Methods of Descriptive Statistic.

Methodological issues of pedagogical experiment

Methods of demonstration, observation and imitation were used in pedagogical experiment.

Play was the main activity in the experimental program. The goal of the pedagogical experiment was to analyze the development of emotional reactions according to children's gender, age, dynamics and structure of emotional reactions.

The reliability of experiment data was determined after evaluation of: 1) internal reliability (historical, factor of growing old, statistical regression, instrument of evaluation, principles of groups formation, factor of pine) and 2) external validity (clarified independent variable, groups of research are common to the population that they represent; we also avoided the Hawthorn effect and senility in the conditions of experiment (Kembel, 1996).

The content of the experiment was based on the method of observation and imitation and children could choose either to observe or to imitate. They were not pressed to repeat the content of the session.

The pedagogical experiment was directed at 17 infants from 1 to 2 years of age and lasted 15–20 minutes. 2 infants took part in one session. Pedagogical experimental program consisted of 9 topics and lasted 9 months. Every month the same topic was modified (toys, education materials, place of session, situation) in order to protect and eliminate the factor of mastering.

Conventionally topics of the experimental program were divided into 3 blocks: a) self-cognition, b) cognition of various phenomena, c) cognition of objects and environment.

Assessment of the observed emotional reactions

During the experiment spontaneity, joy, curiosity, impatience, lack of attention, hyperactivity, irritability, apathy, and indifference were assessed. These emotional reactions and states were selected after longitudinal observations of infant's emotional status. In order to get more obvious and objective results, we connected and compared results of emotional status that was found out in observation and results we found out in the pedagogical experiment.

We present categorized (table 1) emotions and emotional states according to which the emotional phenomenon was analyzed in the dissertation research. Identification of main observed emotional reactions was made under the analysis of infants behavioral particularities that were fixed by caregivers.

The fact that some emotional reactions appeared during the pedagogical input only indicates possible changes in the educational conditions of residential care.

Identified emotions	Emotional phenomenon fixed in observation process	Emotional phenomenon fixed in Pedagogical experiment
Interest	Desire of contacts with adults and other infants.	Curiosity, impatience, concentration.
Joy	Joy, exultation, vocalizing, softness, snuggling up to adult.	Spontaneity, joy.
Anxiety	Stereotypic movements.	
Sadness	Sluggish, relentless cry.	Apathy,
Anger	Whimsiness, irritability, aggression against others, auto-aggression.	Irritability.
Identified emotional states		
Homeostatic emotional state	Emotional state without strongly expressed signs of emotion.	
Hyperactivity		Increased liveliness, anxiety of emotionally disturbed children.

Table 1. Definitions of emotions and emotional states

Hyperactive behavior and lack of attention in our experimental research was fixed separately. Phenomenon of hyperactivity is too complicated to include all its symptoms in one area.

Observation data of emotional status of infants and its analysis revealed that emotional reactions and emotional state of infants who are brought up in infant homes are not so diverse as it is defined in Izard's (2000) classification. Spitz (2001), and Brown (1998) describe emotional development of infants who are out of family as poor, monotonous, with displaced relationships with adults. In the early age, instinctive emotional reactions are more common for the wards of infant home, and only later do they distinguish themselves with different modality.

Emotions of **wonder, aversion, pain/suffering** are not so often expressed by the children of infant homes. But we can't say that they are not observable. At the moment they arise, nurses try to eliminate them as soon as they can. Infants also have no possibilities to observe these emotional reactions of the adults. This situation reveals one of the specific features of interactions and contacts between infants and pedagogues that take place in care institutions. Infants cannot imitate or understand reasons of emotional reactions, and cannot place them in their plays. Infant home wards have no possibility to learn what distinct, intensive positive or negative emotional reactions of adults means, in comparison with children who are brought up in families.

The emotion of **anger** is not defined in Izard's (2000) classification (emotion of anger in early age might be considered as emotion of hatred). In our research we revealed that the feeling of anger was demonstrated quite often among the wards of infant homes. It depends on objective conditions present in care institutions: constant nonsatisfaction of child's basic psychical needs, lack of sense of security and displaced attachment, continual company of other children and the noise, and the daily change of nurses provoke irritability, anger and tiredness.

We defined that **homeostatic state** is common to the infants, as well. It isn't an emotion, but it was fixed and it reflects the lack of motivation, active interest in the environment, and stereotypic contacts with adults.

Emotional reactions that were fixed in the observation were filled up with emotion of interest, which reflects predisposition of cognitive development, and in the pedagogical experiment it was welcome.

The emotion of **fear** was fixed in the behavior of infants, too. But fear was not fixed as common, because the feeling of fear never lasts longer than 30 minutes: a nurse tried to calm a child down immediately when she noticed its frightened expression. That's why emotional reactions of fear are not analyzed in our research.

Analysis of the research data (the pedagogical experiment)

During the pedagogical research we observed processes in which infants' emotional reactions transformed from the psychical activity regulation into psychical activity-evaluation phenomenon. It's an important moment in child's life, because it indicates not only psychosocial progress, but also positive dynamics of cognitive development.

The analysis of the results of infants' emotional state shows that significant changes in this sphere appeared after the pedagogical experiment. The fact of statistically significant changes indicates a direct contribution of education to developing emotional reactions of infants who are out of family.

We examined changes of emotional reactions according to the daytime in experimental and control groups. It is obvious that the educational process took place in statistically significant changes in all emotional reactions that were observed (table 2). The most significant changes of emotional reactions were fixed at day and evening time. We make a premise that emotion of joy decreased and emotion of interest increased because of differentiation of emotions: due to the pedagogical input the emotion of joy transferred to the emotion of interest, which increased significantly. Thus, cognitive processes were developed, therefore we can talk about correctly organized pedagogical input (Fig. 1).

Observed emotions	Time of the day	Experimental group		Control group		Experimental group		Control group		Difference of experimental group before and after experiment	Difference of control group before and after experiment
		Before experiment		After experiment		Before experiment		After experiment			
		Σ	X	Σ	X	Σ	X	Σ	X		
Joy	Morning	387**	7,74	182	6,81	304	5,54	182	5,61	-	0,02
	Day	291*	10,79	180	7,64	171	7,13	180	3,44	0,01	0,01
	Evening	394**	6,69	233	8,43	295	6,48	233	6,68	0,02	-
Interest	Morning	262*	6,03	237	10,26	401**	4,65	134	5,12	0,00	0,02
	Day	116	4,21	110	4,24	179**	3,10	125	3,48	0,01	-
	Evening	247	6,13	193	7,71	491**	3,67	242	6,38	0,00	0,05
Sadness	Morning	209	6,16	245	9,65	184	5,54	365**	10,65	-	0,00
	Day	164	5,60	205	10,09	63	2,22	300**	8,27	0,00	0,01
	Evening	147	4,41	300**	12,24	113	3,72	311*	12,82	-	-
Anger	Morning	9	1,17	7	0,79	10	0,79	17	1,83	-	-
	Day	3	0,39	5	0,77	1	0,24	11	1,41	-	-
	Evening	4	0,75	5	0,77	12	1,31	36	2,57	-	0,00
Anxiety	Morning	45*	2,08	22	1,79	6	0,78	10	1,69	0,00	-
	Day	1	0,24	2	0,48	53**	2,20	16	0,96	0,00	0,00
	Evening	0	0,00	3	0,39	125**	3,95	22	1,49	0,00	0,00
Homeostatic state	Morning	184	4,12	231	5,46	227*	3,96	188	5,50	-	-
	Day	170	4,10	190	4,14	165	6,38	133	3,22	-	0,01
	Evening	164	5,86	339**	5,60	223	2,86	303	7,23	0,04	-

Table 2. Changes of emotional reactions during the daytime

* - level of significance p<0,05; ** - level of significance p=0,00;

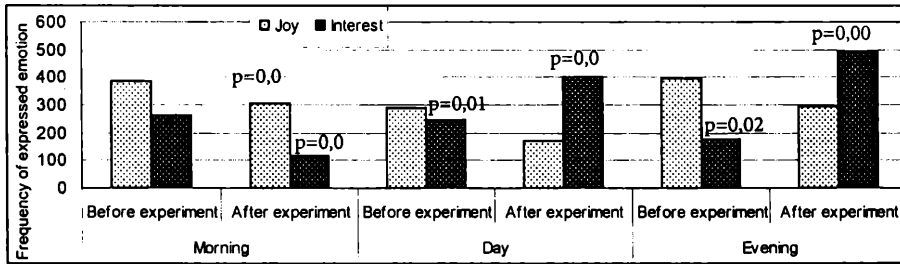


Fig. 1. Changes of emotional reaction under the pedagogical input

Emotions of sadness and anxiety became more expressed. Children who had experienced positive emotions during experimental sessions became upset at evening time, as they were separated from people with whom they played, and demonstrated attempts to show attachment. Especially the emotion of anxiety was strongly expressed. It proves that infant home wards feel a great lack of human, sensitive contacts and that institutional conditions can't satisfy this basic needs in early-age children.

The results of the research reveal some differences of emotional reactions according to the gender (table 3). Boys were more joyful than girls before the experimental research. After pedagogical input, joy decreased in both groups, but significantly this process was observed in the emotional reaction of joy among girls. We claim that decreasing of joy is a positive process, because according to the theoretical issue of emotional differentiation, emotional reactions of joy transfer to the emotional reactions of interest. This transmitting is positive in the educational aspect, because it shows that during the pedagogical experiment the emotional component of experiment stimulates the cognitive component of experimental content; so emotions of interest increase significantly.

Emotions	Before experiment				After experiment			
	Boys N-18		Girls N-16		Boys N-18		Girls N-16	
	Σ	\bar{x}	Σ	\bar{x}	Σ	\bar{x}	Σ	\bar{x}
Joy	940	22,50	727	23,11	792	18,14	561	12,21
Interest	632	15,51	533	16,52	851**	19,10	721*	21,38
Sadness	652	24,94	618	24,39	709	28,23	627	30,48
Anger	23*	2,32	10	1,11	55	4,49	32	2,89
Anxiety	41	2,29	32	2,06	122*	6,23	110**	6,13
Homeostatic status	723	15,72	555	13,36	709	12,38	530	11,26

Table 3. Changes of emotional reactions according to gender

* – level of significance $p < 0,05$; ** – level of significance $p = 0,00$

Emotions of interest after the experimental research increased significantly among girls and boys, and it can be assessed as a possibility to develop cognitive processes through differentiation of emotions.

Changes of emotion of anger in gender groups were observed in the analysis of research data, as well. Boys demonstrated more emotional reactions of anger after the experiment and this increase could be defined as non-satisfaction of increased emotions of interest. Anger increased significantly in both girls and boys after the experimental research.

The increase in emotional reactions of anxiety in gender groups reflects insufficiency of emotionally-close direct contacts with adults, sense of safety, and quality of attachment. Significantly higher anxiety, which was demonstrated during post-experimental observation, can be assessed as a typical regularity of psychical development of infants in care institutions. On the other hand, it shows that pedagogical input cannot be used in order to decrease emotional reactions of anxiety.

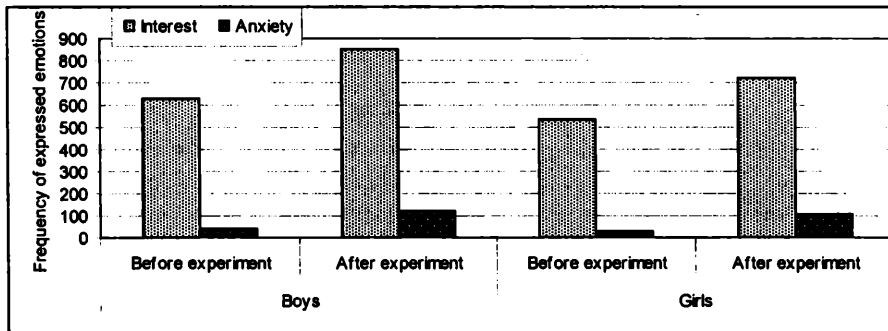


Fig. 2. Changes of emotional reactions according gender

It's obvious that basic emotional needs can't be developed: they can be satisfied or not. As we realized, early-age deprived girls are influenced more by the environment and are more flexible in their emotional behavior. They are more 'open' to new situations, and can react more quickly. Boys are more 'closed' and passive. Their decisions and behavior is clumsier, they are more sensitive, irritable, and it seems that they are not enough confident of themselves. Generally, we can say that negative emotions and intensity of expression, hyperactivity, and inadequate relationship with environment and adults are common features for all deprived children at any age of early childhood (table 2). Emotions of interest after the experimental research increased significantly among girls and boys, and it can be assessed as a possibility to develop cognitive processes through differentiation of emotions.

The analysis of dynamics of emotions let us draw a conclusion that educational activity induces the increase in emotional expression of deprived infants, with various levels of their psychical development. The results prove that even at the early age

the content of education must differ according to the psychical development of the children.

Children who are brought up in Infant Homes are not homogenous according to their emotional reactions. Different emotional reactions are mentioned, depending on the child's psychical development. The dynamics of emotional reactions in pedagogical process is significant for the children with delay in their psychical development. Positive emotional reactions during the program increased and negative reactions decreased. Emotional reactions of children with undefined intellectual disorders can be defined as sluggish, and resistible to pedagogical input. For children with emotional and behavioral disorders it is common that emotional reactions are nonmotivated and unstable.

There are some particularities of emotional reactions according to the gender. Boys are more emotionally sensitive, which is distinguished by the liability of their emotions. Girls are more emotionally stable and more 'open' to the environmental changes.

The educational environment that surrounds early-age infants must be organized bearing in mind the level of child's development, and the compensation mechanisms of psychical functions. Anyway, the educational process for children with displaced emotional development must be oriented towards the standards of normal development. Educational content must be oriented to the cognition of environment, based on positive emotional reactions of infants. For the children with emotional and behavioral disorders, the educational content is not so significant in comparison with high-level structured environment (space, time, subjects and forms of education sessions): what is much more important is a close relationship with the caregiver. Positive emotional background of the pedagogical input serves the development of cognitive emotions among children who are placed in the care institutions.

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Rozwój emocjonalny niemowląt wychowywanych poza rodziną

Streszczenie

Niniejszy artykuł przedstawia wyniki eksperymentu pedagogicznego przeprowadzonego w dwóch litewskich domach dziecka. Celem eksperymentu było zbadanie, jakie możliwości zmiany statusu emocjonalnego niemowląt mają wychowawcy oraz czy w przebiegu procesu edukacyjnego mogą oni wpływać na zachowania dzieci. Podczas długofalowej obserwacji reakcji emocjonalnych niemowląt wyszczególniono dominujące emocje. Badane były również warunki edukacyjne placówek opiekuńczych. Podsumowując, oddziaływania pedagogiczne realizowane wobec niemowląt wpływają na ich reakcje emocjonalne takie, jak: spontaniczna radość, ciekawość, niecierpliwość, brak koncentracji uwagi, nadpobudliwość, drażliwość, apatia oraz obojętność.