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6. mednarodni znanstveni in strokovni simpozij
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Portorož 2010



SODOBNI POGLEDI NA GIBALNI RAZVOJ OTROKA

CONTEMPORARY VIEWS ON THE MOTOR DEVELOPMENT OF A CHILD

prispevki
proceedings

uredili
edited by

Rado Pišot
Vesna Štemberger
Boštjan Šimunič
Petra Dolenc
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UNIVERZA NA PRIMORSKEM
Znanstveno-raziskovalno središče Koper
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STANDARDS FOR DEVELOPMENT AND LEARNING OF EARLY-AGED CHILDREN**STANDARDI ZA ZGODNJI RAZVOJ IN UČENJE OTROK V ZGODNJEM OBDOBJU****Ms Snezana NIKOLIC, Ms Danijela ILIC – STOSOVIC, Ms Snezana ILIC**

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Summary

The results of many studies indicate that the first years of life are good base for the overall development and that they can not be established without providing qualitative physical and social environment for the early child development and learning. One of the first practical steps in providing qualitative environment for the early child development is creating standards for early development and learning.

Project 'National Frame of standards for early Development and Learning for Children in Serbia' defines the standards of development expectations, and described wide domain of development. Each domain consists of sub-domains, and those of developmental lines. In each developmental line we have a description of "what we expect" in that developmental aspect.

This paper describes optimal child development from birth to six years through the changes in gross motor, fine motor skills, habits and child independence. In sub-domain of gross motor skills we are talking about developmental lines: head control, activities in the prone position, development of righting and activities in the sitting position, development of balance and activities in the standing position, and development of complex motor activities and skills. In sub domain of development of fine motor skills and recognition, we distinguish four developmental lines: holding and gripping objects, manipulation of objects, development of the senses, discrimination and recognition and the development of graph motor abilities. Sub domain – the 'Adoption of Habits and Gaining Independence' follows child's activities that are related to the hygiene, nutrition and clothing.

Key words: early intervention, senso-motor development, developmental lines, developmental novelties

POVZETEK

Rezultati številnih raziskovanj jasno sugerirajo, da se v prvih letih življenja postavljajo dobri temelji celostnega razvoja in da niso mogoči brez kvalitetnega fizičnega in socialnega okolja, za zgodnji razvoj in učenje otrok. Eden od prvih praktičnih korakov v omogočanju kvalitetnejšega okolja za zgodnji razvoj otrok je formulacija standardov zgodnjega razvoja in učenja.

Projekt "Nacionalni okvir standardov za razvoj in učenje otrok zgodnjega obdobja v Srbiji", definira standarde s pomočjo katerih so prikazana razvojna pričakovanja, ki so opisana v širših domenah razvoja. Vsaka domena je organizirana v pod-domene, te pa v razvojne linije. V okviru vsake razvojne linije so opisane razvojne novosti (novice) ki se pričakujejo v tem razvojnem aspektu.

Opisan je optimalen razvoj otroka od rojstva do šestega leta skozi spremembe v grobi motoriki, fini motoriki, spoznavanju in usvajanju navad ter doseganje

samostojnosti. V okviru sub-domene razvoj grobe motorike so prikazane razvojne linije: obvladovanje kontrole glave in aktivnosti v ležečem položaju, razvoj pokončne drže in aktivnosti v sedečem položaju, razvoj ravnotežja in aktivnosti v stoječem položaju ter razvoj sestavljenih motoričnih aktivnosti in veščin. V okviru subdomene razvoj fine motorike in spoznavanja se razlikujejo štiri razvojne linije: držanje in prijetanje predmeta, manipulacija s predmeti, razvoj čutil, diskriminacija in percepcije, ter razvoj grafomotorične spretnosti. Subdomena usvajanje navad in doseganje samostojnosti spremlja aktivnosti ki jih otrok uporablja vezane za higijeno, hranjenje in oblačenje.

Ključne besede: zgodnja intervencija, senso-motorični razvoj, razvojne linije, razvojne novosti

STANDARDS FOR DEVELOPMENT AND LEARNING OF EARLY-AGED CHILDREN

By signing the Convention of the Child's Rights, the countries have committed to provide necessary conditions for the development and learning to every child. Nevertheless, many recent studies have shown that the infant is far more capable, that every child can learn to develop important skills and that the early development does not occur on its own, but it largely depends on the interaction with the environment.

The results of numerous studies clearly suggest that during the period of first years of life, a solid foundation for child's overall development are established, and that those foundations can not be established without quality physical and social environment. One of the first practical steps in providing a better environment for the early- aged child development is creating standards for early development and learning at the national level. Under the term 'Standards for an Early-aged Development and Learning' on one hand, we talk about developmental expectations at certain age (i.e. what are the capabilities that a majority of children can develop and practice at certain age) on the other hand, we talk about what are the principles of communication and interaction with children and what are the characteristics of social and physical environment as necessary conditions which provide basis for learning and developmental child's expected capabilities. These standards should be in compliance with the contemporary scientific knowledge and research (developmental psychology, pedagogical, sociological, anthropological, neurological and especially interdisciplinary studies of childhood), and also with the specific social and cultural needs of the community. In other words, those standards should be developmentally realistic and should be adjusted to the social and cultural context, as well as to the long-term perspectives of society development.

Parallel, we describe developmental expectations and characteristics of physical and social environment by standards. Child's development is not just their responsibility, nor it takes place in accordance with some

congenital program. Early development and learning depends on physical and social characteristics of the environment in which the child is engaged. The child's development reflects the society in which the child is included; therefore it is necessary to define the framework for future policies, measures and activities that are established in order to provide adequate environment for the early development and learning for the children of Serbia.

Image of child development from birth to the age of six is a mosaic and it can be detected throughout the achievements that we expected to occur at certain developmental stages – consist of separate elements that we can recognize in each developmental level to the majority of children. These mosaic varieties of the development are consequences of the nature of the document, and are not the result of the development itself. In order to define usable standards of development, it is necessary to recognize and single out crucial development capabilities and achievements, as well as outside visible marks which can lead us to the conclusion that the child had developed certain competence. Usability of standards means that the standards can be used as efficient tool in order to determine what and how much a child can do, and most importantly, they can provide appropriate conditions for the development of child's potentials. However, in reality, child's development is a unique phenomenon, the way and tempo of development is individual for every child. When we talk about development novelties, there are no strict rules in terms of age, every child has a period of rapid and slower development, and the development of different domains can progress at different speed level. In other words, development achievements that are described in different parts of this document and under different titles are not isolated elements nor their meaning is universal for all children; they are interrelated and mutually conditioned, and should be considered integrally, and not partially. These relations are explicit in certain parts of this document, and a reader can see how the same development phenomenon can be described through different aspects.

Goal

Define usable standards of child development, developmental expectations in developmental aspects through the age of child. We have to do identification of development achievements and choosing key and external signs of developmental competence. At the other side we have to find principles of interaction and communication with children and characteristics of physical and social environment as a condition for good start base of learning and child expectable developmental competence.

Hypotheses

Define standards of child development in hypothetical approach could provide:

- 1) Support professionals sensitivity for specific aspects of child development
 - 2) Better recognition developmental potential and importance of early and appropriate stimulation
 - 3) Good marking of expectable developmental change
- Understanding the way and course of the development helps the environment to react appropriately. Therefore, besides biological factors, environment has great

influence on each aspect of child's development. In great deal, the environment shapes and directs that development. Thus, the basic purpose of this document is to help crucial persons (parents, relatives, educator and others) who, throughout communication and joint activities (with a child), are taking part as co-authors in child's development, which allows them to recognize and stimulate different aspects of the development. From the very beginning, the child is a social being, and the persons, who surround it, by reacting on child's needs and behavior, give the meaning to that kind of behavior.

Method

In document 'National Framework of Standards for the Development and Learning of Early-aged Children in Serbia' "the developmental expectations are shown, i.e. competence that the child develops at some development phases under the condition that the environment adequately supports that child. Development expectations are describe within the broader domain of development: Intellectual (cognitive) development, Emotional and Social development, Communications and Speech, Sensory and Motor development. Each domain is further organized into sub-domains, and these sub-domains into *developmental lines*. Within each developmental line actual achievements are described, i.e. development expectations, which are expected to occur at the final stage of a certain developmental period. There is also a list of examples on how the actual achievements manifest in child's behavior (indicators). Those indicators illustrate what are the activities by which the child and the adult can be supported with, at the certain developmental change.

This document refers to the period from birth until the age of six. Age limits of development phases for which developmental expectations are described, are defined as follows: from month 0-8, 8 – 18, 18 – 36, and 36 – 72. For every age limit there is a development achievement which is expected at the end of that certain period, in other words, those are the most complex achievements that are expected at certain age. Therefore, we can assume that the child, who has achieved more complex competence, has also achieved simpler capabilities which come prior to the complex one. Of course, the age at which we expect to find certain development achievement is not so strict; it is more flexible, and somehow more probable. (Baucal A. 2009).

Results

Within the domain of senso – motor development, from birth until the age of six, the child's optimal development is described through changes in gross motor skills, fine motor skills, adopting habits and gaining independence.

Within each sub-domain the following developmental lines are distinguished:

- Within sub-domain the 'Development of Gross Motor Skills' head control ability, activities in prone position, righting development and the activities in sitting position, balance development and activities in standing position and finally, the development of complex motor activities and skills.
- Within sub-domain the 'Development of Fine Motor Skills and Recognition' four developmental

lines are distinguished: holding and catching objects, manipulation of objects, development of discrimination and recognition senses and the development of graph motor capabilities.

- Within sub-domain the 'Adoption of Habits and Gaining Independence' activities related to the hygiene, diet and clothing are observed.

The development of gross motor skills are described through manifestations that are visible in the child's behavior and which appearance is enabled by spontaneous maturation of central nervous system. During the period from 0 to 8 months primitive reflexes are dominant at the level of spinal cord and brain stem, and those reflexes enable activities in prone position and head control. Following is the ability to maintain balance which enables development of rightening activities and also activities in sitting position. At that time balance reactions start to appear, and this, at older age is becoming more dominant and allows child's activities in standing position, and also enables getting control over more complex motor activities and skills, with significant increase of balance and coordination control, when performed. Adoption of motor skills is important precondition for child's independence. Although motor skills are developing spontaneously, very important precondition for the entire development is exercise, in which the child's environment has significant role. Important role in early play skills development has imitation and obvious presentation, and at the middle and older preschool age, verbal instructions are crucial while motivation is also essential. Thus, it is necessary for a child to be engage in those kinds of activities and tasks which are meaningful to a child, because in that way a child would form more precise, more effective and more productive skills. Voluntary regulation of movements is not just the result of better motor skills, but of cognitive development as well. Influence is mutual: cognitive development allows children to gain better motor control and in that way they form more complex motor skills. While motor skills contribute to the child's ability to more easily explore the world surrounding it, getting involved in various activities, stimulates cognitive development. Similar mutual influence exists between motor development, social, emotional and speech development.

Another sub-domain describes how coordinated motor activities and senses do contribute to the development of senso-motor activities, with the development of perceptive capabilities that are in consistence with previous experience. We described development ability to hold on and grasp objects, in the case of typical senso-motor development, should be achieved by 12th month. While developing ability to grasp, the child's ability to manipulate object also develops. Already by 8th - 18th month, and especially later, the role of observation can be detected in actions with certain materials. As above mentioned, it is noticeable to which extent the senso - motor development is interlaced and mutually conditioned with other aspects of development, especially cognitive development. Development of grapho-motor skills is excluded because of its complex structure of afferent-efferent mechanism that condition it: objective characteristic as perception, fine motor skills, memory and attention, orientation and lateralisation, have significant role, but the role of subjective characteristic such as: experience, motivation, habits, expectations and interests is not insignificant either.

The environment with its stimulating influences has a significant role in adopting habits related to hygiene, nutrition and clothing. Ever more growing child's

independence while performing every day activities, is a good indicator of the successful process of forming habits (Nikolic, S., 2009).

Conclusion

Learning is a natural, spontaneous and logical process to which the main reward is cognitive process itself, if the social and physical environment allows it. Children are very different among each other, even when they are the same age. Different progress and rhythm of child development, are absolutely acceptable and normal and do not mean that it is different from what is expected, but are rather natural varieties, and they represent kind of an individual development characteristics of each person. In other words, there are normal varieties in terms of development progress, some timelines in development, and etc, but some deviation (significant development delays, some forms of behavior that are far from norm) can be a sign of pathology in development. This is precisely the main argument against the creation of norms for an early child development, because of the fear of misunderstanding the specific individual characteristics. Varieties that exist in every child's development process, as well as varieties in the development of certain functions and abilities of a child, must be respected and taking into account when we design child care and learning methods (except in cases of big deviation from the normal development process).

The development does not happen in a vacuum but in a specific conditions of a certain environment and that environment has a formative meaning, i.e. not only that it influences the development and the speed of the development, but also shapes and structures the development of even the biologically given functions, meaning that the biological basics are also influenced by the surrounding factors.

There are a conditional relation among the nerve structure and behavior. It is generally accepted that the level of nerve structure development influences the behavior patterns, but it is often neglected that practicing specific action influences the development of the nerve structure itself (Ispanovic V., 1986).

Physical and social environment and learning activities must be adjusted to each child to the greatest extend. This is important for all the children and it is especially important for the children in risk, children with development difficulties. During early age integrative approach is necessary, and all the development aspects are stimulated by it (physical, cognitive, emotional and social). The learning process is not specific as school subjects, but it is rather complete process such as gaining life skills. Learning is an interactive process at all ages. Elders ought to prepare environment for studying in order for children to learn through active exploration and by interactions with adults, other children and objects. Good conditions for development represent support to child's independence, to their independent activities in social environment (Pesikan A., Antic D., 2009).

Finally, it can be concluded that contemporary theories of child's development accept the opinion that child's development is interactive with biological and environmental factors. Precondition for normal development is a structurally complete and functionally matured nerve system, but the environment is equally important. It provides conditions for uninterrupted physical growth and for establishing strong emotional ties between the child and the adults, which allows children to learn, explore and actively interact with the

environment, by supporting and rewarding the child (Ispanovic, V.1986).

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