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Multidisciplinary Approach to the Patient with Cerebral Palsy

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ABSTRACT

Aim: Disease of cerebral palsy can be described as neurodevelopmental disability non-progressive brain, which causes disruption of motor development children. Often spans multiple areas of development – combined with intellectual disabilities, sensory defects, and affects the development of communications kills. The aim of the study was to develop a new theory using metaparadigm nursing, using a „grounded theory", which would prove the validity and correlation nursing care to every sphere of life (physical, psychological, social, legislative) for those aff ected children.

Methods: Are working-out complex casuist of three case. On inquiries are elect method semistructured conversation and method study health documentation title person. Complex casuist are analyzing method „grounded theory".

Results: Information that are acquirement us offer precious expression following those are create new theory with metaparadigm nursing by methods „grounded theory", which mention causality relation nursing care with region life (physically, psychic, social, legislative) child with spastic form infantile cerebral palsy and which also points to the need for multidisciplinary cooperation experts in neurology, physiotherapy, psychology, speechtherapy, special education and social interaction with in the area of the patients.

Conclusion: Our theory shows that quality nursing care, comprehensive multidisciplinary approach experts in neurology, physiotherapy, psychology, special education and social care can improve the living conditions of chilren with cerebral palsy in its holistic range.

KEY WORDS

infantile cerebral palsy,multidisciplinary approach, nursing care, complex casuistics, grounded theory

INTRODUCTION

„Cerebral palsy is a neurological disorder caused by damage to the brain. It is characterized by damage to the motor system non –progressive" (Love, Webb, 2009, p. 309). Komarek, Zumrová et al. (2008) are defined disease of child cerebral palsy motor development of the child's disability, which non-progressive as was founded on the basis of completed prenatal, perinatal and post-natal damage to the developing brain in a timely manner.

When a disease of childhood cerebral palsy in **clinical picture** is a combination of intellect, the senses, epileptic syndrome and in particular the disability disorders of mobility (Brozman et al., 2011). For this disease, it is fitting that is dominated by the failure of the development momentum of gross and fine motor skills,delays in the development of rotation, sitting, walking, standing, and walking. Speech disorders in terms of vocal development, developmental delays in children with cerebral palsy are frequent dysphasia, among others. Need help logopedical and foniatrical. Important are relaxation techniques, agility drills, drills of the coordinated breathing, tongue, lips (Murgaš, 2004). Cerebral palsy occurs in the form of dyskinetical, atonical and mixed. The most common form of spasmodic, occurs which is divided into diparetical (spasmodic paraparesis of the lower extremities without any sensitivity disorders), hemiparetical (contralateral half of the body, with more damage to the upper extremity impairment) and cvadruparetical form (disability of intellect, epileptic seizures) (Brozman et al., 2011). **Treatment** of child cerebral palsy is a drug rehab and corrective orthopaedic devices, operational. Supportive medications are used to enhance the use of the substance nootrop in the brain cells of oxygen and glucose

lowering medications, spasticitis, myorelaxans. Application of botulinum toxin injection eliminates spasticitis achille tendons (Murgaš, 2004).

A part of the treatment is physiotherapy. In the age of the child, within one year of life in Slovakia and in the Czech Republic is the most utilized methodology Vojtova reflective locomotion. Later, he usually classifies the Bobath concept. It is possible to carry out rehabilitation as an outpatient, in the form of rehabilitation stays at various facilities (hospitals, nursing homes, children's integration centres, etc.) or a spa treatment, which it is appropriate to assign on a regular basis. It is always important for consistency and patience, rehabilitation is practically a lifetime (Okáľová, 2008). **Vojta's method (reflective locomotion)** is used for the child since birth. The methodology is carried out by a trained physiotherapist who gradually of both parents. Must be carried out 4 times per day. Exercise is accompanied by the child's crying, which responds to the position, not forced on pain (Boledovičová et al., 2010). **Bobaths** always stressed the importance of the earliest diagnosis. After the birth of a child has brain pathways, neural cell bodies, has preforming that are still „empty" without relevant information, which they assessed the development and mutual linking dendrits and neurits. In so far as this information network will begin to create in the form of bad programs, their fix will very difficult to impossible. The exercise program works with „artificial" motorical activity according to the sophisticated neurofyziological expertise and an irreplaceable personal experience (Pfeiffer, 2007). To facilitate the lives of the affected children will use a variety of prosthetic devices as follows. In children with a strong spasticitis is an important collaboration with the orthopedic surgeon and an orthopedic protetic. Using a variety of assistive devices: limb brace, brace the spine, orthopedic shoes. It is often used as well as surgical treatment of complications from cerebral palsy (Okáľová, 2008). Waberžinek, Krajíčková et al. in its publication stating that ".. .the part of the care of the child should be family psychotherapy, social assistance, balneotherapy, in older children, the possibility of integration into the system of basic occupational therapy schools and further education" (Waberžinek, Krajíčková et al., 2007, p. 279).

THE OBJECTIVE OF THE WORK

To determine and compare the problems of children with cerebral palsy, to identify deficiencies in the area of nursing care in the diagnosis and delineation of strategies to improve it. To create a theory of metaparadigm nursing, which would involve using the scope and impact of nursing care, not only in the sphere of health. We chose these goals because we like to uncover new aspects in the framework of the provision of nursing care in children with spastic cerebral palsy affected. For the purpose of practice we wanted to see this disease as much as possible about the problems and the resulting needs of this group of people, in order to become a comprehensive and high quality nursing care and to lead to the elimination of these problematic areas. At the same time, we will try to prove that nursing care is not only health, but also affects the social, legislative and other. Our next objective was to point out the merits of individual clinical departments in improving the quality of life of multidisciplinary cooperation among affected children.

FILE AND THE METHODOLOGY

In the study, we focused on three children with cerebral palsy with the spastic form of the disease. **The first participant Patrik**, age 14 years cvadruparetic present disability. Personal history: child from 3. pregnancy (1 times spontaneous abort), giving birth to a premature for bleeding of the uterus in 34. week ended, after giving birth to baby cesarean section patient in the paediatric ICU, 1 month, birth weight 2150 grams, birth length 44 inches, breast-fed for 1 month. Rehabilitation treatment started from 2. the month of the child's age. **The second participant Michal**, age 15 years cvadruparetical present disability. Personal history: a child of 1. pregnancy, as the twin gemini 1., risk pregnancy terminated cesarean section for metroragia in 29. week of pregnancy. 1400 grams of birth weight, birth length of 37 inches. Artificial pulmonary ventilation, hospitalization, child to ICU 2 months, asphyxia. Rehabilitation treatment started from 2. the month of the child's age. **The third participant Patrícia**, age 18 years,present diparetical disability. Personal history: a child of 2. physiological pregnancy, spontaneous physiological birth date, birth weight 600 grams, birth length 57 inches, from 12. month lag in development, rehabilitation launched in 12. the month of the child's age.

In our research we will use the term participant for the person and the concept of informant for parents (perfectly the same environment), so as suggested by Gavora (2006). Research questions we put to the legal representatives. Conscious choice we make as an appropriate method of selection of criterial due to the fact that they had the same life situation – a child with spastic form of cerebral palsy.

Found empirical data have been processed into **three comprehensive case reports**, which we analyzed **the method of „grounded theory"** as suggested by the

Hendl (2008). We have created a new theory, which could be applicable to children with spastic form of cerebral palsy. Although qualitative research can not be generalized, we think that this theory would be to use as a tool to properly oriented and holistic nursing care, which also highlights the interconnectedness of nursing care with all the areas of life affected. There are different strategies or techniques to build a theory of data. The most developed the technique of „grounded theory" by Glaser and Strauss. It works with three levels of encryption (open, axial, selective), which are arranged hierarchically (Gavora, 2006).

RESULTS AND DISCUSSION

Open coding is the lowest degree of working with data (Gavora, 2006). Recordings with various informants we store into a written form. After repeated reading, we delve into the meanings of the words we are each divided into individual segments according to the different periods of casuistic questions. We further analyzed the data and change in axial coding.

Axial coding is finding relations between categories, leading to the formulation of categories as open coding abstractly (Gavora, 2006). Segments of text from an open coding we designed redesigned. These new segments should vary in length depending on the theme and of the same type as the thrown in various facets of the categories. The names of the categories we create meaning with regard to the possibility of a quick orientation in the categories and have been identified as more abstract concepts, which at the same time aptly calling it contained segments of text. For each category we assigned the code (the initials of the category) – table 1 (for a limited number of pages is only a short article for an example of the coding of the information obtained in the axial casuistic). At the same time, we have outlined the relationship between the various of categories (the proposition). We analysed the data incrementally with each informantom until there has been saturation theory. There were no longer any new semantic categories.

Selective coding is the highest level in a hierarchy of relationships and results to the creation of a central category, which is subject to all of the sub-categories (Gavora, 2006). The category has become a central semantic category "professional help" (PH), which covers nursing and health care. The sub-categories, which are subject to other semantic categories were: life reality (LR), behavioural area (BA), the cognitive area (CA), technology (T), the soul of man (SM), a social interaction (SI), institutions (I), legislation (L), compensation (C), the vision of the future (VF) – in scheme 1.

From the above proposition result schema (relations) and also the hierarchy between the various categories of meaning. Professional assistance (nursing and health care) affects the living reality of the participants (admission diagnosis parents, settling in the phase of reconciliation with disability of the child support, enough interest and empathy on the part of health professionals). The reality of life is influenced by both the behavioural area (psychological emotion) and techniques (using exercises, alternative methods of treatment) and also the cognitive area (information, knowledge). Behavioural influence social interaction area (relationships, neighborhood) and the soul of man (participants character traits). The best area of influence of the institution (Office of labour, Social Affairs and family), from which informantion obtain, information on social assistance from the State. Institutions are affected by the legislation. The legislation affects the future (social application), vision (overdue but important steps) and offset (compensatory aids granted). The diagram clearly shows the horizontal and vertical relationships between of categories.

Scheme 1 Proposition and the hierarchy between the different categories

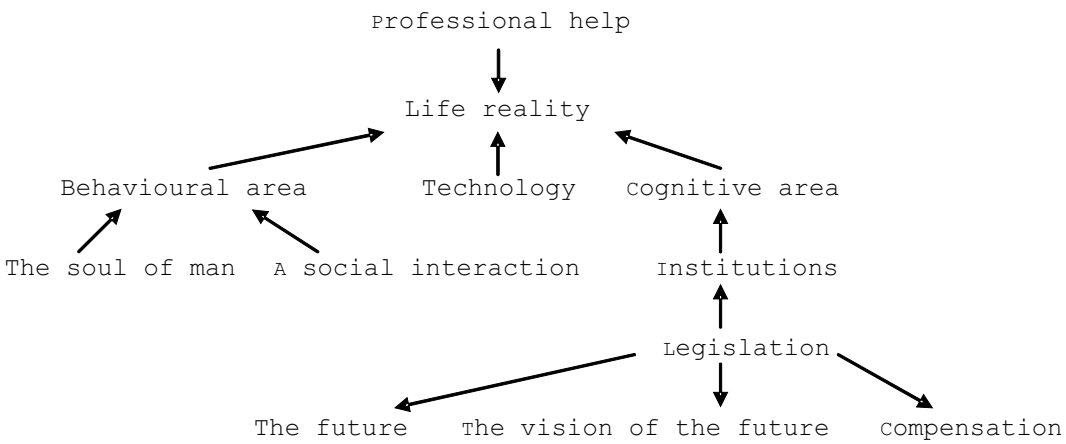


Table 1 Statements and codes of casuistic „Patrik“

Participant	Code	The text of the	Segment number
Patrik	LR	When he was 6 months old and still has not been stable in a sitting position, fell. The older the more it was on it to see that it is lagging behind in development. Either with your hand during a data call or had stiff legs.	1
Patrik	T	Diagnosis of the doctors told me at birth. Rehabilitation treatment was started as soon as you have selected from the incubator. To me he doctor Vojta methods. As soon as we started practicing.	1.2
Patrik	PH	Around the year my neurologist said when he seized the arms, that what I do with those “arms” I want to do. I was very disappointed by the us attitude, actually did not give any hope at that moment instead of encouraging me and completely demotivation.	2
Patrik	LR	Despite the forecast of the doctor... 24 hours a day at the expense of the older son and housework. Everything, the whole day, my sick child needs extended mode. I told him poems, sang songs, still went to the TV or radio, in order to have incentives to ...	2.1
Patrik	T	... and of course we practiced 4 times daily by the Vojta method. After the 6. year we practiced only three times a day.	3
Patrik	BA	When left in the apartment, be afraid. He had remained silent and still must hear the sounds by the psychic site develops.	4
Patrik	CA	In general, I can say that, I have very little information about the diseases of childhood cerebral palsy...	5
Patrik	PH	... from the experts, therefore, doctors and nurses, what is more, I met with a negative attitude on their part to solve the problems of my son. The Declaration further were pessimistic forecasts.	5.1
Patrik	CA	Up to rehabilitation when communicating with other expectant moms affected children, I learned about the possibilities of maybe operating solutions, other rehabilitation exercises spasticity.	6
Patrik	PH	But this information has not been communicated to health care professionals, but the general public.	6.1
Patrik	CA	As I have already said, there is a problem with obtaining information. Most of the information I learn at the spa from the mums affected children.	7
Patrik	PH	From the pediatrician, a neurologist and neither from the nurses I‘ve even learned that I am entitled to a spa treatment with my son.	7.1
Patrik	CA	Some information I learned from books and from the Internet. And we have, therefore, we call each other when moms is something new, some new scans, treatment option.	8
Patrik	BA	One that has affected the child and never. I‘m trying to take this sport if I cried, I would by themselves did not help my son.	9
Patrik	LR	Even the weak moments, but if you think that my son tells me, I can go with him there where he is seen walking around healthy kids even if it is a problem with barriers for example. We have a problem to get into the bakery as there are stairs and the door is narrow so that a wheelchair would not pass them.	9.1
Patrik	LR	The elder son believed he was less affected by his brother when the train gets well. Later came to understand that it will not.	10
Patrik	SI	I divorced with my husband, I think, that my son had a great impact on the handicap that it turned out this way.	11
Patrik	BA	Husband with his disabilities, has not avoided communicating with me.	11.1
Patrik	LR	I had to be patient, especially in the beginning we were either son, we were in the hospital or at the spa.	12
Patrik	LR	My son is immobile, every now and then you should rotate, pick up, positioning him. The influence of these activities as well as my condition worsened. I have problems with the spine, with a motion at the same time, lift it and honestly exercise, because he already has 40 pounds. My son is older, the following acts are more challenging for me.	13
Patrik	T	Practice with it and use the concept of Bobath Guinea fowl. It is an ordinary bath into which the air flows from the Guinea fowl, which are balance, then the special equipment on the basis of this method are its muscles relaxed. This procedure I do it once a week.	13.1
Patrik	L	This unit cost me 800 euros and I bought it myself to make me any amount of the purchase, the State of the device.	14
Patrik	T	Guinea fowl I bought because the spa treatment as well as at least some treatments cost money and me I even in domestic conditions.	14.1

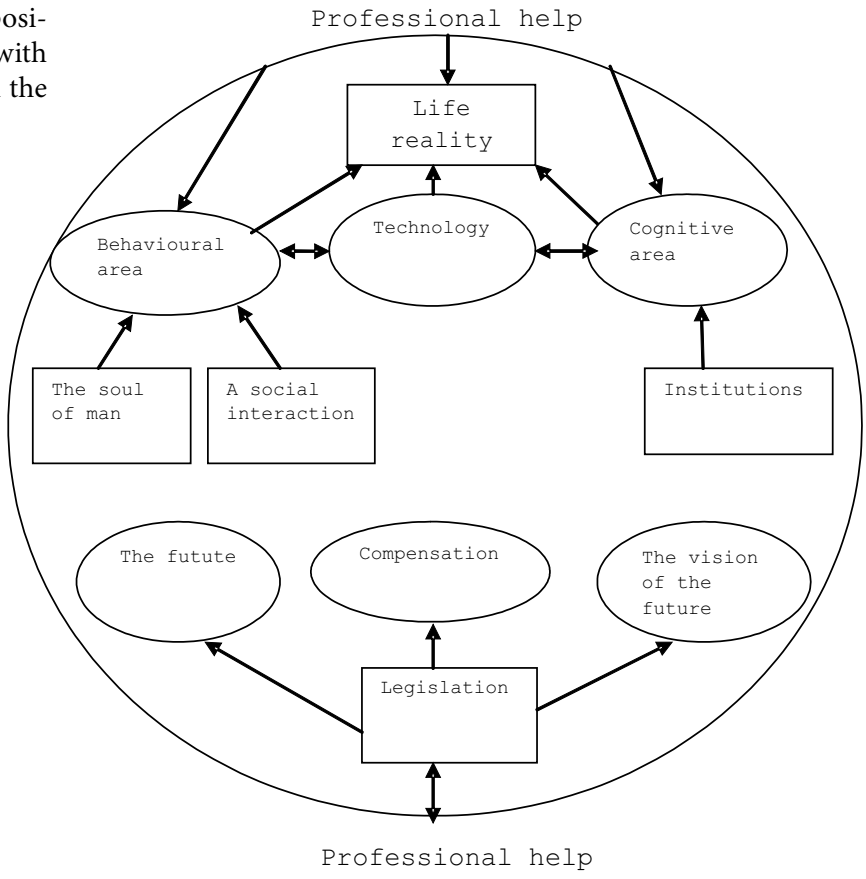
At the beginning of the study, we assumed that the nursing care only affects the health of life of these children's area. Deeper into the meaning of verbal statements by the presence of a informants, however, we come to the propozition, which interact with all areas of the life of children affected by spastic form of cerebral palsy. Nursing care as it affects the overall reality, all areas of their lives. It is important that you are aware of this fact, because our sister study pointed to the importance of the quality of nursing care, which is transformed into all walks of life of these children and thus helps to improve and eliminate problem areas. Nursing care is not confined to interventions within the health care facility, but also the overall quality of life, you may very well be significantly affect nurses needs and existing problems of this group of the population and to cooperate with the authorities of the State administration and territorial self-government in the adoption of such measures, which will improve the quality of life of these people. Proposition (relations between the categories) we create a new theory, which we have schematically with the use of metaparadigm nursing. Content filling, the subject of nursing are: the person, health, environment, nursing care and the relationships between them. In our research, we have identified metaparadigm as follows:

Person – a child with cerebral palsy and his reality.
Health – behavioural and cognitive area – mental health and knowledge leading to improved health, strengthening,
- techniques to improve the health status and leadership – exercise approach to the State of health,
- compensation – device features, help attain a certain degree of unsoundness of mind replacing health, to achieve personal fulfillment and the future - mental health,
- vision – important measures leading to mental health,
- social interaction – the relationships between the people influencing mental health,
- the soul of man – character traits affecting the psychological health.

Environment – legislation - laws affecting the life of the affected person, but also the practice of nursing in the Slovak Republic, the application of the laws of the institution — in practice in the Slovak Republic.
Nursing care – professional help affecting the biological, psychological, social and spiritual health.

In Diagram 2 we show clearly the bases between the metaparadigm in the newly formed nursing theory.

Diagram 2 New theory with propositions in nursing care of children with spastic form of cerebral palsy with the use of metaparadigm nursing



In the diagram we have identified each other connected areas and their mutual interaction. In a new theory we have come to the conclusion that professional assistance, namely nursing care affects all of us, because we are being into the category on semantic designed the Interior of the circle. Professional help is transformed into all walks of life of the child and his or her family (life reality). Behavioural area (psychic survival), techniques (exercises, methods of treatment) and cognitive area (knowledge, information about diseases, treatment options) are influenced by the quality of nursing care, at the same time affect the standard of reality (an ordinary, everyday life) of a child with spastic form of cerebral palsy. At the same time, we have found that these three areas influence each other. Social interaction, including interaction with other members of the multidisciplinary team and assisted relationships affect behavioural area child. The soul of man (the nature of the child) affects the psyche and psychic survival of the child and his or her family (behavioural area). The best area of influence of the institution (Office of labour, Social Affairs and family) that give information on social assistance and possible compensatory measures. Institutions are affected by a professional using the, which points out to the needs of a disabled child, and shows the real need to support this and maintain the utmost extent selfcare. The legislation affects the professional assistance (scope of nursing practice, the use of assistive devices), as well as professional assistance affects legislation that shows the problems and needs of a practice that is needed. From the diagram suggests that the legislation subsequently affect the future, the social application of children with spastic cerebral palsy in the form. At the same time affects the compensation to which they are utilities, according to the legislation of the Slovak Republic are entitled to these children. The legislation even if it indirectly affects the visions of the children and their families (dreams, desires, overdue measure).

As Silverman argues in his publication, the comparative method is a fundamental scientific method. Even if you can't find a comparable case, try to find a way to split your data to different files and compare the following (Silverman, 2005). Since we could not find the same or similar research on the formation of the theory of the cerebral palsy, we had the opportunity to view our new theory directly compare with other research studies. In the discussion, we will focus on the comparison of the results of our research with other authors. It was a comparison of the results of the case, not about the results in the formation of the new theory. Extensive research, which made Palisano, Kang, Chiarello, Orlin, Oeffinger, Maggs (2009) in the States of the USA: Chicago, Illinois, Erie, Pennsylvania, Lexington, Kentucky, Sacramento, California, Philadelphia, Springfield, Massachusetts, and Charlottesville for 500 children affected by cerebral palsy, revealed that children tethered to a wheelchair most of the time they spend for that your computer on the Internet or playing computer and video games. I have a problem with moving and don't have a lot of social interactions, because most of the time they spend at home. Children with cerebral palsy, which are mobile have more social interactions with peers, because they can run, jump, play around with them. Parents of children are marked with a wheelchair for problematic environmental barriers as well as the size of the rooms for children tethered to a wheelchair, wheelchair not adapted suitable public transport for these people. The authors of the study, on the basis of the statements made by the respondents recommend that elimination barriers to mobility and to seek appropriate means of transportation for those active people. Our research we can confirm the results and thus it is important to provide a barrier-free environment and appropriate means of transport to move people living with cerebral palsy and so encourage their social contacts.

Novosad in its publication States that families with these children are socially unrecognized. Parents have no work of relief and the possibility of their career growth and professional application may be limited, the family is economically weak. A common problem associated with disabled children, their families, isolation or loneliness and high demands on personality, mental stability and physical stamina of both parents (Novosad, 2009). These correspond with the results of our research because all the thesis of informants expressed the desire for the Club, the Center for children with cerebral palsy where they could exchange experiences, to organize the collection, a variety of tours. If part of the Centre was also affected children's education and at the same time such a center to provide an opportunity of employment for parents of affected children, would also eliminate another phenomenon and that the feelings of parents, they are excluded from interaction relations with other people in the working-age population and at the same time such a device would allow some kind of earn extra money and thus to improve their financial situation.

CONCLUSION

We've tried to create a new theory of using nursing metaparadigm suitable for practical use for children

with spastic form of cerebral palsy. We wanted her to point out the causality of nursing care with other areas such as social, physical, psychological and legal. We must remember that the work of the sisters is very responsible and challenging. Our theory proves that in order to provide adequate and quality care nurse must be aware that its procedure and the patient not only in the sphere of health, this affects the thinking but that her experience and knowledge can improve the conditions of life in a holistic way. Their activities must contribute to the sisters just to the authorities of the State administration and territorial self-government, aware of the deficit areas in the affected persons and to help remove them. Equally important is the need for multidisciplinary cooperation in solving problems as well as disabled children.

The contribution presents partial results of a research study of the rigorous work of the designer.

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