Sen u dzieci specjalnej troski

Sleep and children with special needs

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STRESZCZENIE

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Upośledzenie umysłowe nie jest chorobą. Dzieci specjalnej troski potrzebują wskazówek, całościowej lub okazyjnej pomocy i wsparcia adekwatnie do swojego stanu. Ich rozwój przebiega inaczej w porównaniu do ich zdrowych rówieśników. Różnice są widoczne w wielu obszarach, także w rytmie i jakości snu. Sen jako jedna z życiowych aktywności, u dzieci specjalnej troski ma innych przebieg i inne jest podejście do zapewnienia koniecznych warunków dla ich snu. Opis przypadków instytucji ZUDV Dornava potwierdził fakt, że z powodu wielu czynników, które mają wpływ na rozwój dzieci specjalnej troski, zaburzenia snu są u nich częstsze. Czynniki zewnętrzne wspólnie z chorobą dziecka specjalnej troski wzmagają problemy ze snem. Konieczne jest indywidualne i holistyczne podejście w procesie leczenia tych zaburzeń.

Słowa kluczowe: **dziecko specjalnej troski, sen, zaburzenia snu, czynniki wpływające na sen, podejście do leczenia zaburzeń snu**

ABSTRACT

Sleep and children with special needs

Mental retardation is not a disease. Children with special needs need guidance, occasional or full assistance or support, respectively. Their development is different as in healthy peers. Changes are evident in many areas, even in sleep. Sleep as a life activity in children with special needs has different approaches in providing necessary conditions for sleep. A case report of the institution ZUDV Dornava confirmed the fact, that sleep disturbances are more frequent in persons with special needs, because of all other factors which have influence on their development. External factors are together with the basic disorder increasing sleep difficulties. The treatment should be approached individually and holistically.

Key words: **child with special needs, sleep, sleep disorder, factors which influence on sleep, approach to treatment sleep disorders**

INTRODUCTION

Mental retardation is not a disease but a permanent state of a disturbed, intellectual development. The development of such a child is not only limited but also difficult. It does not take place by itself, but with a lot of parental support, as well as of the narrower and wider surroundings. Expert and correct help is the most effective tool for the proper treatment of children with a mental disorder [1].

Persons with intellectual disabilities mostly are not able to care for their basic needs. Some need guidance, other partial support; however, most of the mare completely dependent on the assistance of others.

Dependence of others mostly predict following elements:

- degree of intellectual disability (moderate, severe, profound),
- physical disability (moderate motor failure, moderate, and severe dysfunction, profound motor physical disorder),
- combined disorder or illness (chronic illness or chronic condition, systemic congenital anomalies, epilepsy, impaired sensory organs),
- frequency of acute illnesses [2].

Sleep of children with special needs

An individual approach allows consideration of beliefs, expectations and recognition of the needs of the individual. An integrated approach in assessing the needs considers the constraints of the environment, resources and situations within which the individual operates.

Sleep is the natural state of bodily rest. Humans and most animals need sleep to survive. The reason why we need to sleep is quite simple. The body and soul must rest. In sleep we are unconscious and unaware of the surrounding. Dr. Paucel stated that sleep means a warning sign and that we do not sleep because we are tired but as not to be tired. Fatigue is a physiological condition resulting from intra-or extra cellular combustion of sources of vital energy that we all have. The restoration of vital forces, which wear out with activity in the waking state, is possible only with the primary energy materials, both by ingestion of food and through sleeping and resting of the organism. If this renewal is not available or is incomplete, there is a depletion of vital energy and fatigue becomes a pathological condition [3].

Children with special needs are a group of people, who cannot always express their desires, needs, and describe their mood. Those who are confronted with them in their work must have a clear and professional point of view, what lack of sleep is, and when the issue is as large that it can be regarded as a problem.

Medical diagnoses itself tell us what problems may arise from the underlying disease and what realistic expectations for sleep are. In some mental disorders, sleep disorders occur more frequently than in healthy subjects. It should be noted that persons with special needs are at different stages of development of motor skills, socialization, emotional age, communication and in the field of everyday skills. Someone with chronological age of 22 years, with intellectual disability and emotional age at the level of a 6-month-old baby, probably has a different sleep rhythm as his healthy peer. The baby is in this period waking up during the night, feeds at night and keeps falling asleep during the day (up to 4hours). The total sleep time in the 6-month old child is up to14.5hours. For a person with intellectual disability, which is according to his intellectual ability and emotional age on the stage of an infant, it is necessary to assess the rhythm of sleep in a different way than in the healthy peer. The nurse is the one who must recognize the child's needs. According to his degree of disability she must recognize the behaviour that is normal for the individual, behaviour which is different from his normal behaviour and behaviour that may mean a change in his medical condition [4]. Ignorance of the individual, lack of knowledge of nursing a child with special needs and not considering the integrity of the individual can lead terrorising designing an individual program(identifying nursing needs), forming a nursing plan (design of activities), setting goals and evaluating the nursing process.

To see the problems that may arise relating to sleeping persons with intellectual disabilities there are exposed three cases, where studies have been completed to confirm that sleep disorders occur more frequently in them than in their healthy peers.

Sleep and people with Down syndrome

There are several studies showing, that children with Down syndrome sleep less than their healthy peers and that their sleep is more fragmented. The causes may be of different, and not necessarily of biological, origin. The American Society for Sleep (AASM) has on its 22nd meeting in Westchester, Illinois, presented study of the author Nicole N. Phillips, MD (University of Michigan). The study involved 38 children with Down syndrome who have had trouble sleeping and have been managed and treated in their clinic Centre for sleep disorders. The average age of children was 7years.

The study revealed that:

- they need longer to fall asleep,
- sleep is less effective,
- restless sleep,
- lower total sleep time,
- there is more sleep in stage I, less sleeping REM stage,
- with age there occurs a slower rhythm of waves of sleep.

Dr. Phillips explained that this sleep pattern may occur in childhood and may reflect the phenol type of this population [5].

Another study (Hampshire) included 91children with Down syndrome, of which 51were boys and 40girls.The figures show the correlation between sleep problems in children with Down syndrome and the comparison group of healthy children. Figures show that sleep problems in children with Down syndrome are derived from two sources: behavioural and physical.

Behaviour a problems canal so occur as physiological problems in greater numbers than in the comparison group. The differences are even more pronounced in cases with physiological cause. In children with Down syndrome are more prevalent sleep apnoea, cough, restlessness, sleep in unusual positions, there is also excessive sweating present. Apnoea episodes do not affect the amount of time spent sleeping; however they do affect the quality of sleep [6].

ADHD and sleep

Problems in group of children with ADHD are extremely high in the field of behavioural aspects. The problems that arise due to the disrupted sleep, is further deteriorating their behaviour. Often these children are prescribed medication to lessen the symptoms of the basic disorder, medications to treat mood disorders, medications, trying to arrange concentration of the child, medication enabling them better integration into daily activities and obligations in the school. The prescribed therapy may further aggravate sleep and cause sleep problems [7].

Sleep and autism

In children with autism sleep disorders occur more frequently than in their healthy peers, some authors suggest that even in the range from 40 up to 80 %.

Some explain that children, who are healthy, can by external signs and surrounding activities, such as darkness and quiet activities, identify as an allusion to prepare for sleep. In children with autism, where the socialization is impaired and the perception of the environment is not such as in healthy peers, there is a lack of understanding of those signs and activities that show it.

Some studies show a decrease in the hormone melatonin and that it does not increase or decrease in accordance to the time of day, respectively. This hormone is important in regulating biological rhythms of many circadian functions. Even tryptophan as amino acid, which is important for the synthesis of melatonin for sleep should be lower in subjects with autism. A third explanation for the problems that occur in autism, is that they are much more sensitive to stimuli from the environment like touch, sound, light. Their sleep may be disturbed by opening doors, switching on light sin the hallway, touch by covering up with a blanket, noise from the road [8].

RECORD OF SLEEP IN CLIENTS IN THE INSTITUTION ZUDV DORNAVA

Concerning the sleep habits of the clients in the institution ZUDV Dornava, a questionnaire of open type was used (324 subjects), which was filled out by nurses on a certain ward.

In the last time there were several observations done concerning the sleep habits and the occurrence of sleep disturbances in the institution. The findings of the observations during night revealed that the number of occurrences of negative forms of behaviour during night is not comparable with the occurrence during day time, it is however expressed in a higher number as the occurrence in the healthy population.

It is very hard to evaluate the quality of sleep without measuring devices, as the description is very subjective. On the basis of subjective data there was carried out also an evaluation of sleep of the clients of the institution ZUDV Dornava.

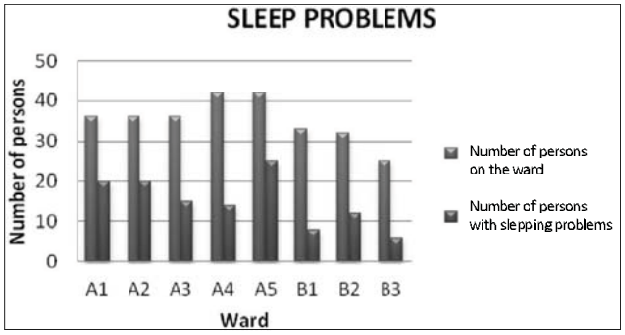

Fig. 1. Persons with sleep disturbances

Most problems with sleep occurred on the ward A5, according to the nurses, where adults live with intellectual disabilities and a group of persons with autism. On this ward there are also many forms of negative behaviour during the day. Given the link that sleep can affect the reduction of cognitive abilities during the day and consequently leads to an increased incidence of negative behaviours, it would probably be necessary to address problems that occur during sleep more targeted. A similar situation occurs also on the wards A1 and A2.

A minimum of problems occurs on the wards B1, B2 and B3, where live people with severe forms of cerebral palsy. Intellectual abilities in people with cerebral palsy are often higher than their motor skills. Wakening can be attributed to muscle tension and pain due to contractures.

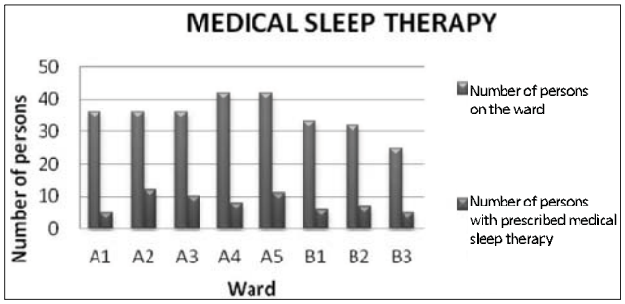

Fig. 2. Number of persons with medical sleep therapy

The highest numbers of persons with medical therapy are on the wards A2 and A5, which is related to the incidence of sleep problems. On the ward A1 there are at the least prescribed therapies for sleep, which means that sleeping problems are attributed to their underlying disorder and are taken as a symptom of the underlying disease. A reflection of such a treatment is the result of an integrated approach in addressing the individual.

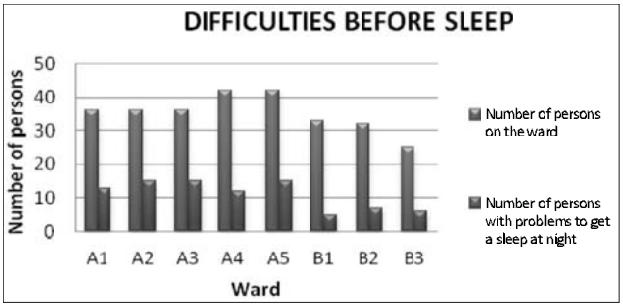

Fig. 3. Difficulties with sleep in the evening

Difficulties to fall asleep at night are more or less similar on all wards, except on the wards B1, B2, and B3. On these three wards persons with cerebral palsy are living, which often express a desire to have a rest already in the late afternoon.

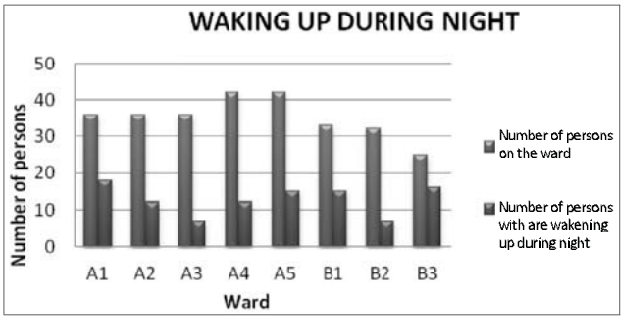

Fig. 4. Waking up during night

Wakening at nights occurs everywhere in proportion to the incidence of sleep problems, but mostly on the wardB3. The reason for the a wakening at night is probably related to early with drawls to rest. A problem is also night surveillance of the staff, which is done according to the needs on the ward. On the wards B1, B2 and B3 are due to the prevention of pressure ulcer son going activities to change the position of the body, because of which the persons always wake up.

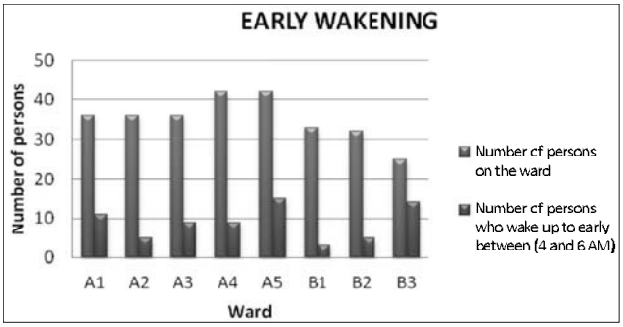

Fig. 5. Early wakening

Most people wake up too early on the ward B3, probably also due to going early to bed.

Undisrupted sleep is the largest in the range from 4 to 8 hours.

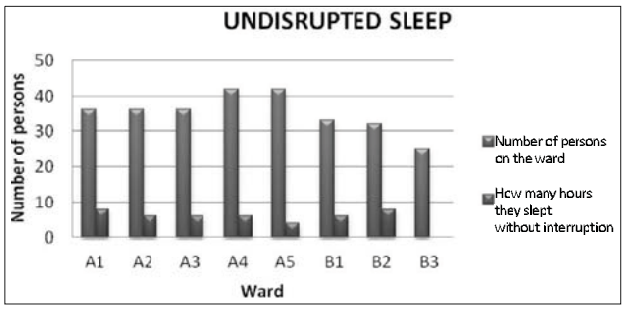

Fig. 6. Sleep without interruptions

darkness lead to a continuing 24-hour rhythm of sleep and wakefulness.

In some cases, the take-in of light is impaired (blind, visually impaired persons). In some, the circadian cycle is disturbed. There are also persons with serious cerebral palsy, which may not detect the outlines of their own body.

• TEMPERATURE

Sleep is influenced by both air temperature, as well as body temperature of the sleeping person. Frost has slightly a greater impact on the change in sleep as heat.

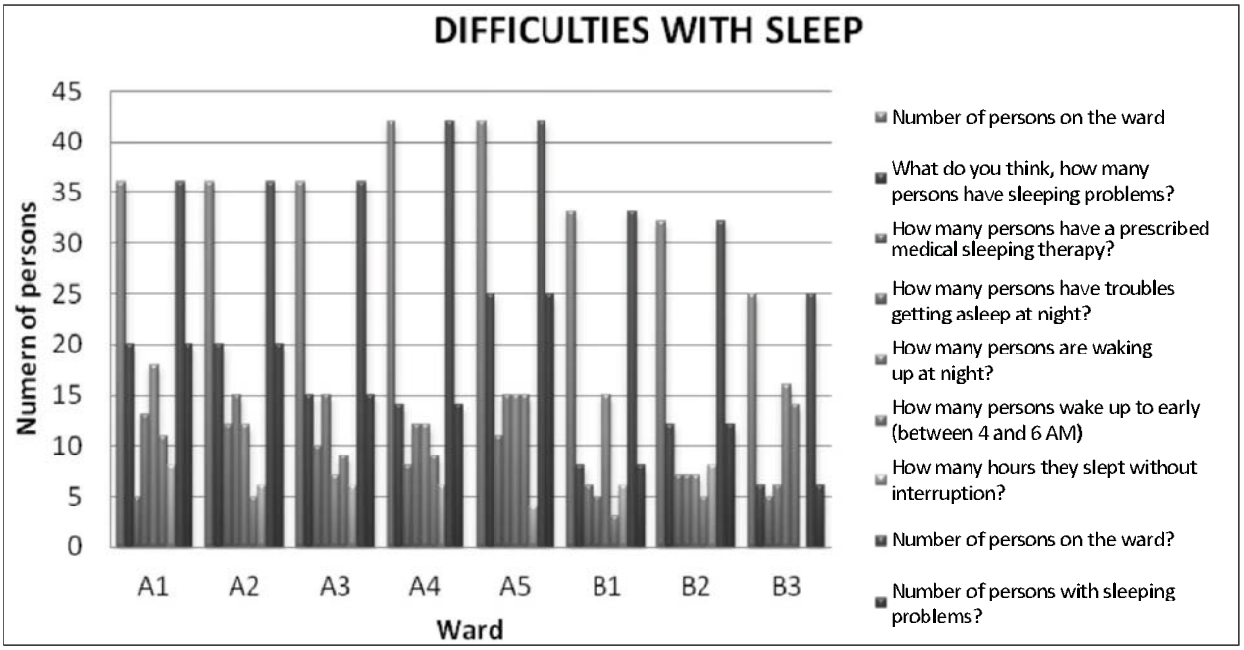

Fig. 7. Connection between survey questions

Effects on sleep in connection with intellectual disability

Sleep is influenced by several factors; at the presence of mental disorders the impact of these factors is even increased. Every single factor may interfere with sleep; it is particularly difficult if a number of factors are acting together.

• NOISE

The effects of noise are more conscious phases, accelerated change of wakefulness and sleep and interference with the conduct of individual stages of sleep. Also the number of body movements at night increases. Noise reduces REM stages.

Persons residing in the institution, often have an increased sensibility and sensitivity to auditory stimuli. Sounds that do not cause problems to us, may in persons with intellectual disability even result in pain stimuli (phone, repetitive sound stimuli, closing the door ...). Persons with intellectual disabilities do not sleep alone in their rooms, which can be an annoying factor when someone else does not sleep at night.

• LIGHT

It affects all people, but not all the same. It slows down the secretion of the hormone melatonin. This hormone informs the brain about the time of day and night. Light and

In individuals with intellectual disability often incontinence is present. At night, we do not change diapers, only in exceptional circumstances (e.g. diarrhoeal).

Due to immobility, the bloodstream is worse. Due to the sense of wetness, and poor circulation they can feel cold.

• SLEEPING POSITION

Everyone can choose the sleeping position that suits him best. A position, to which the individual is not accustomed, is shortening the total time of sleep and extends the phase of wakefulness. Problems are more frequent in immobile persons and persons with contractures. Movement during night for prevention of pressure ulcers, causes wakening at night. Due to the improper position the muscle tone is increasing, as well as the pain in the muscles and bones.

• NUTRITION

Hunger reduces deep sleep. Persons with intellectual disabilities may have swallowing disorders. They should eat food of suitable consistency, which means it should be pureed or enteral. Such foods are quickly metabolized and hunger may occur earlier.

• STIMULANTS

The most common stimulants such as coffee, alcohol and nicotine affect sleep. The most common bad habit is drinking coffee, which sometimes passes into real dependence. In children mainly occur dependences on soft drinks (Coca-Cola).

• MEDICINE

The effects of sleeping pills and tranquilizers on our sleep are known. Means for lowering blood pressure, anti-itching and allergy medications, and anti-epileptic drugs can cause drowsiness during the day and may disturb night sleep. Corticosteroid drugs, medicine with caffeine, beta blockers, diuretics, and antidepressants also can affect sleep. In persons with developmental disorders drugs are almost inevitable, because of many associated diseases (epilepsy, mental illness).

• PHYSICAL ACTIVITY

After physical exercise it is sometimes easier to fall asleep. It is a natural form of fatigue that is often absent due to poor motor skills. Persons with learning disabilities are not as physically active as their healthy peers.

• PAIN

The sensation of pain has an impact on sleep. In persons with developmental disorders occur muscle pain, bone pain, stomach pain (a lot of therapy), hot legs. An additional problem is that people are not able to express the feeling of pain.

• FEAR

Sleep disturbance is often associated with feelings of fear. Fear leads to an increased secretion of stress hormones. Fear cannot be eliminated, if it is not expressed. Fears may be very different, in persons with intellectual disabilities they may even not be understood, because they often cannot express them verbally.

• DEPRESSION

Persons with depression have trouble sleeping. Persons with intellectual disabilities can be present an additional psychiatric illness, which is very difficult recognizable and it is difficult to differentiate it because the symptoms of mental disorders and psychiatric disorders often overlap [9].

To the provision of better sleep in clients of the institution ZUDV Dornava

The only proper, quality and goal-oriented approach is the individual approach, which enables a holistic consideration of the individual. Before sleeping problems are identified as a disorder, the professional staff at rehabilitation meeting discusses all the options, which they can use before the person concerned is examined by a physician or child psychiatrist. A person, who is wakening up at night, is observed and all behaviours during the night are recorded. Recorded are the times when a person falls asleep, is waking up and the behaviour which accompanies the wakening stage. A continuous period of sleep is also recorded. Sometimes through conversation and exchange of professional experience, the cause is identified to which they may link a common goal for all practitioners for the individual. The approach to work is always as a team.

A person with intellectual disorders requires a different approach than a healthy child. Experience has shown that for all a structured environment, order of sequence of activities and the same approach of all those involved in the work is very important.

CONCLUSIONS

Poor quality and quantity of sleep further deteriorates cognitive, behavioural and physical abilities of persons with intellectual disabilities.

Experience shows that there is a link between lack of sleep and the following characteristics:

- aggression
- depression
- hyperactivity
- increase of behavioural problems
- irritability
- reduction and decrease of cognitive abilities

Due to the incidence of negative behaviours an individual and holistic approach is required, which allows the identification of all individual's needs. One of the basic physiological needs is sleep. If this need is not guaranteed, there it comes to a disruption in daily activities, which in the long-term lead to that that the person begins to express feelings of frustration, anxiety, and fatigue in a way it is able. These ways of expressing their needs are most commonly autoagression, motor restlessness, heteroagression, stereotypes.

Employees in the health care must have expertise in the field of nursing a child, they should know the growth and development of a healthy child and get to know very well a child with special needs, because this is the only way to provide quality care and on the basis of identified needs a correct approach for solving problems and identified needs can be started.

Health care in institutions for training, work and care as any other activities reflect the dominant values of a particular time. Caring for an individual is a dynamic process, which shows the relationship of nurse towards the client. The basic tool for working with persons with intellectual disabilities is a mutual relationship, which includes respect for the individual.

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