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Guidelines to promote the healthy and active life of children with special needs in the unexpected crisis situations

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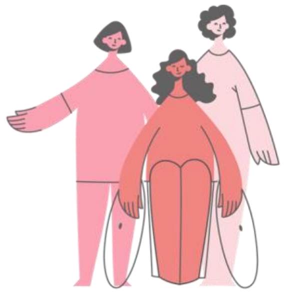

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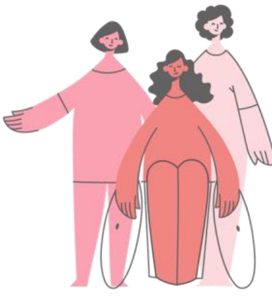

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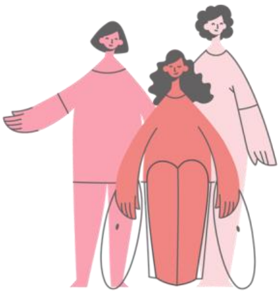

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Foreword

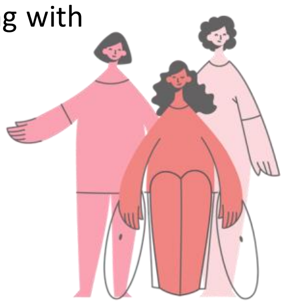
The COVID-19 pandemic entered our lives unexpectedly. It had a huge impact on the whole world for two years. Although it seems to have reduced its impact these days with the development of vaccines, acquired social immunity and the evolution of the virus into less effective virus types, unfortunately, its effects on our daily lives continue.

COVID-19 has the potential to affect all individuals physiologically, spiritually, and socially, whether they get the disease or not. The United Nations has declared specially that children with disabilities are a vulnerable population and their isolation is mandatory. It affects the musculoskeletal and cardiopulmonary system functions as a result of the decrease in the physical activity levels of the individuals, especially due to the duration of staying at home and the time spent in front of the screen in distance education, and psychologically, it causes an increase in the incidence of anxiety, stress, and depression. Due to these physical, mental, and social impacts, it is estimated that the participation of disabled individuals in social life will be seriously affected in the long term and their health expenses will increase.

The EU Commission stated that people with disabilities are among the most affected by the COVID-19 crisis and that it is necessary to strive during the crisis to ensure that the quality of life of people with disabilities is improved and their rights are guaranteed. Parallel to this, the EU has started to work on combating the pandemic and reducing the effects of the crisis. In March 2021, the EU and UNICEF announced that they are launching a program to reduce the impact of COVID-19 on the most vulnerable children and families. In addition to the students with special needs (SSN), during the distance education given during the pandemic process, teachers also face various physical and mental health problems due to their prolonged immobility in front of the screen while teaching. It is possible to minimize the short and long-term, direct and indirect effects of the pandemic on SSN and their teachers, and therefore to keep social participation and quality of life at the highest level both during and after the pandemic (to the extent permitted by pandemic conditions) with health promotion strategies. For this reason, during this crisis faced by the world, countries to improve health need studies focusing on "Development and Sustainability of HLB", especially for SSN and their teacher.

Based on this, we prepared this book, which can be a guide for families and professionals working with individuals with special needs, within the scope of a European Union project that aims to develop and maintain healthy lifestyle behaviors in children with special needs and their teachers in unexpected crisis situations.

This book, which discusses healthy lifestyle behaviors under the headings of physical activity, healthy nutrition and stress management, was created by a multidisciplinary team of health professionals, sports science experts and teachers who have been working with



these children for many years. We hope that the book will be a guide that will shed light on children with special needs and their stakeholders by answering the most frequently asked questions about this subject.

Sevim ACAROZ, PhD

SAHHIM project coordinator

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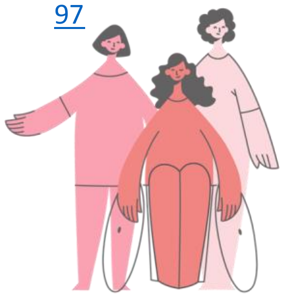

CHAPTER 1

HEALTHY LIVING AND PHYSICAL ACTIVITY

Hasan SOZEN, Abdullah Sinan AKOGLU, Oana RUSU, Veronica POPESCU, Renato Gabriel PETREA, Camelia SOPONARU, Liliana Elisabeta RADU, Andrei BARBIR, Demmys RUSU, Ileana-Monica POPOVICI

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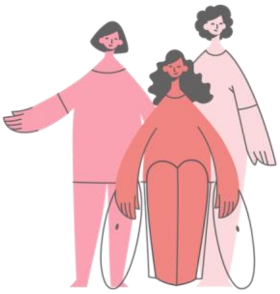


GENERAL INFORMATION

Abdullah Sinan AKOGLU

COVID-19 started in China in December 2019 and affected the whole world in a short time. On March 11, 2020, due to the rapidly increasing number of cases and deaths, the World Health Organization (WHO) described this crisis as a pandemic. WHO emphasized the importance of staying away from crowded environments and staying at home to protect against the virus and drew attention to social isolation. Due to the prolongation of the social isolation period, the stay-at-home policy continued all over the world for a long time. The United Nations has declared that children with disabilities are a vulnerable population and their isolation is mandatory. Considering the impact of the virus on children, it was realized that more attention should be paid to children with special needs. COVID-19 has affected all individuals physiologically and psychologically, whether they have the disease or not. The physical activity levels of individuals decreased with the implementation of the distance education policy of the countries and the length of stay at home.

All children have very high levels of physical activity at home, at school and in social life. The most important of these physical activities is playing games. Before these crisis situations, children could achieve high levels of physical activity by playing games at home, at school and in social life. Children had the opportunity to perform these physical activities with their family, school friends, teachers and new people they met in the social environment. Families have enough information to help their children live a healthy life in normal life (except for unexpected crisis situations such as Covid-19). Especially European countries have education systems designed to suit children's physical activity levels.

WHAT HAS BEEN THE COVID-19 PANDEMIC AND ITS IMPACT ON CHILDREN WITH SPECIAL NEEDS?

Abdullah Sinan AKOGLU

Before the pandemic, children with special needs spent most of the day in special education institutions and institutions providing health services. These institutions offer children with special needs the opportunity to engage in physical activity with their friends, teachers and health professionals. The process of staying at home for children with special needs has

caused disruption of the health services they routinely benefit from, as well as distance education.

Besides children with special needs, their teachers were also affected physically and psychologically by distance education. It is known that this situation affects the musculoskeletal and heart-lung system functions in individuals (Hu et al., 2021). In addition, psychological health problems occur due to social isolation (Meherali et al., 2021). There was an increase in the incidence of anxiety, stress and depression during the stay at home. In crisis situations such as pandemics, these physical, mental and social effects affect children in need of special education much more.

WHAT IS HEALTHY LIVING? WHAT ARE HEALTHY LIVING BEHAVIORS?

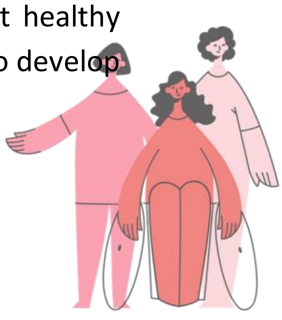
Abdullah Sinan AKOGLU

Healthy lifestyle; It is a state of physical, psychological and mental well-being. A healthy lifestyle is defined as people controlling all their behaviors that may affect their health, being informed about these issues, and adding these behaviors to their daily activities (Marques et al., 2020). For humans, all these parameters are important and interrelated. All parameters necessary for a healthy life become even more important for children in need of special education. Developing healthy lifestyle behaviors in children prevents health problems that may occur in the future (Li et al., 2020). Health professionals and teachers have important roles in helping children develop and maintain healthy lifestyle behaviors.

The parameters of healthy lifestyle behaviors are:

- Health Responsibility
- Physical Activity
- Eating habits
- Spiritual Development
- Interpersonal Relationships
- Stress Management

Family, healthcare professionals and teachers need to work together to develop healthy lifestyle behaviors in students who need special education. In addition, the child's social environment also affects his/her ability to acquire and develop knowledge about healthy lifestyle behaviors. Social isolation in crisis situations makes it difficult for children to develop



healthy lifestyle behaviors. Families have a great role to play in developing all parameters of healthy lifestyle behaviors in children during periods of social isolation. Families must get the support of teachers and health professionals to fulfill this task. They must adapt all parameters of healthy lifestyle behaviors to the child's daily activities. Families should take into account their child's interests and enjoyment when making this adaptation. In addition, families should be role models for children.

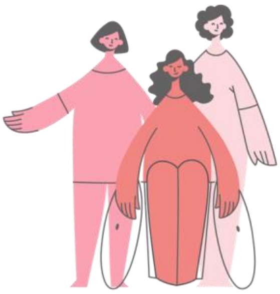
WHAT IS PHYSICAL ACTIVITY?

Abdullah Sinan AKOGLU

Physical activity is the activities that consume energy by using our body in daily life, increase heart and respiratory rate, and cause fatigue at different levels (Janssen et al., 2010). Various sports branches, dance, exercise, games and activities during the day can be given as examples of physical activity. Shopping, cleaning the house, and doing gardening, which are among the activities of daily living, can be given as examples of physical activity. These activities should include some of the movements listed below.

- Arm and leg movements
- Head and trunk movements
- Walking
- Running
- Squat
- Jumping
- Cycling
- Swimming

Physical activity and exercise are different concepts. Physical activity includes the application of games, daily living activities, dance, etc. activities in daily life at different intensities and durations. However, exercise includes activities performed with certain rules, regularly, for a certain duration and intensity, and with a certain number of repetitions.



BENEFITS OF PHYSICAL ACTIVITY IN CHILDREN WITH SPECIAL NEEDS

Abdullah Sinan AKOGLU

We can classify the benefits of physical activity as physical, spiritual and mental (Warburton et al., 2017). Increasing the level of physical activity has all these positive effects together.

Physical benefits of physical activity:

- Correction of posture
- Increasing muscle strength and endurance
- Increasing respiratory capacity
- Regulation of heart rhythm, protection from heart and circulatory system diseases
- Losing weight and preventing obesity

Spiritual and mental benefits of physical activity;

- Prevention of mild cognitive impairment and dementia
- Ability to cope with stress
- Thinking positively
- Increase self-confidence
- Increase social communication skills
- Reducing depression and anxiety

Increasing physical activity levels has physical, spiritual and mental benefits for all age groups. Physical activity is one of the most important parts of health, especially when considering children with special needs. To increase the level of physical activity in children with special needs, families, teachers and health professionals need to make a program together.

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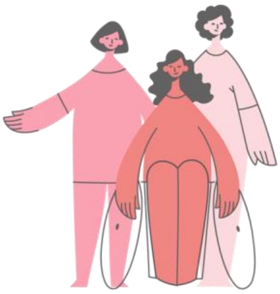

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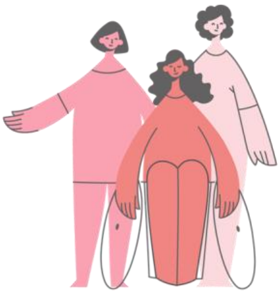


PHYSICAL INACTIVITY IN CHILDREN WITH SPECIAL NEEDS AND ITS EFFECT

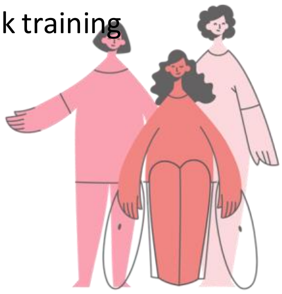
Hasan SÖZEN

The benefits of physical activity are universal for all children, including children with disabilities. Participation of children with disabilities in sports and recreational activities promotes inclusion with peers, minimizes loss of physical fitness, optimizes physical functioning, and improves overall well-being. Despite these benefits, children with disabilities are less likely to participate in sports, have lower fitness levels and higher levels of obesity compared to their non-disabled peers. Experts and parents may overestimate the risks or underestimate the benefits of physical activity in children with disabilities. Well-informed decisions about each child's participation should consider general health status, individual activity preferences, safety precautions and the availability of appropriate programs and equipment. Participation of children with special needs in physical activity can be achieved through programs designed with all stakeholders. Child, family, financial and social barriers to participation should be directly identified. The aim is to include all children with special needs in appropriate activities (Murphy et al., 2008).

Children with special needs have difficulties in adapting to the environment they live in because they cannot perform at the level of society's expectations in terms of cognitive and physical activities. The adaptation disorders they show in various ways cause them to experience various failures in social and academic assignments (Kınalı, 2003; İlhan, 2008). Many studies have shown that the basis of these negativities is developmental disorders.

According to Suveren (1991), sport should not only mean competition. Individuals from all segments of society should participate in sportive activities to the extent that they can. Sportive activities are considered as a method that meets the need for movement by being one of the factors that affect the development and shaping of the child. Within the activity, children must constantly run, jump, climb, pull, push, carry, in short, they must struggle with their body characteristics. This mobility primarily affects the respiratory, circulatory, and digestive systems positively (Suveren, 1991).

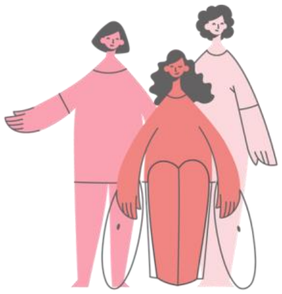
The benefits of active living and exercise many studies on people with special needs have shown the positive effects of participating in physical activity programs: Balic, Mateos, Blasco, and Fernhall (2000) studied people with special needs who participated in the Special Olympics and averaged 4 to 9 hours of physical activity per week for at least one year. These people showed higher aerobic capacity, muscle strength and power compared to sedentary people with the same syndrome. A study by Tsimaras and Fotiadou (2004) also showed improvements in strength and balance in adults with Down syndrome after a 12-week training



program. Rimmer et al. (1995) documented significant improvements in cardiovascular and muscular systems, strength, and endurance in adults with intellectual disabilities with special needs who participated in a specific training program. Other studies have also shown that physical activity increases muscle strength (Croce & Horvat 1992; Carmeli et al., 2002). Draheim, Williams, and McCubbin (2002) showed a reduction in the risk of hyperinsulinemia and abdominal obesity in adults with mental retardation who engaged in moderate to intense physical activity at least five days a week and followed a hypo lipid diet. All these studies show that physical activity can improve physical well-being in people with special needs.

Despite scientific evidence of the benefits of physical activity, there are barriers that limit the participation of children with special needs in physical activity. This is perhaps because their participation is not sufficiently encouraged. Heller, Hsieh, and Rimmer (2003) identified several barriers that limit the participation of individuals with special needs in physical activity. These include high costs, lack of transportation, difficulties in registering at gyms and other facilities, and difficulties in finding experienced staff. Heller, Hsieh, and Rimmer (2004) tried to reduce these barriers by organizing a special program. The experimental group achieved better physical and psychosocial outcomes and experienced fewer emotional and cognitive barriers. These researchers did not include an evaluation of the level of adherence to the program or long-term outcomes in their study. Jobling (2001) identified several common characteristics that can limit participation in active living. These include perceptions of being different and motor difficulties, lack of exercise, obesity, and inactivity. Emphasizing that these characteristics should become a challenge to create opportunities rather than barriers, Jobling described two Australian programs that engage people with Down syndrome in play and sport, activated in sports centers. Frey, Buchanan, and Rosser Sandt (2005) used interpretive ethnography techniques to examine the perception of physical activity in the behavior of 12 individuals with mild intellectual disabilities. Using multiple sources of information, including four parents and two supervisors, two main themes common to the whole group were identified. These were the need for appropriate programs and the need for information about the importance of physical activity to a person's overall well-being.

All children benefit from physical activity and children with special needs are no exception. Participation of children with special needs in sport and physical activity programs promotes physical, emotional, and social well-being. Well-informed decisions about each child's participation should consider general health status, individual activity preferences, safety precautions and the availability of appropriate programs and equipment. Child, family, financial and social barriers to participation should be directly identified and addressed in the context of local laws. Professionals and families are encouraged to promote the participation of children with disabilities in competitive and recreational sports and physical activities (Murphy et al., 2008).



Physical inactivity can have negative effects on the overall health and well-being of children with special needs. Here are some key points regarding physical inactivity in this population:

Increased risk of chronic health conditions: Physical inactivity in children with special needs can contribute to an increased risk of developing chronic health conditions such as obesity, cardiovascular disease, and diabetes. Lack of regular physical activity can lead to weight gain, decreased muscle strength, and reduced cardiovascular fitness (Yazdani et al., 2013).

Impact on motor skills development: Regular physical activity is crucial for the development of motor skills in children. Physical inactivity can hinder the development of gross motor skills, fine motor skills, and coordination in children with special needs. This can affect their ability to perform daily activities and participate in social and recreational activities.

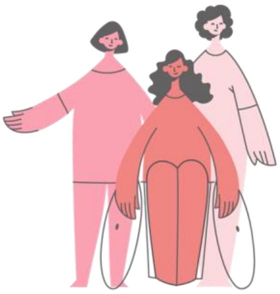
Negative impact on mental health: Physical activity has been shown to have positive effects on mental health, including reducing symptoms of anxiety and depression. Children with special needs may already be at a higher risk of mental health challenges, and physical inactivity can exacerbate these issues. Lack of physical activity can contribute to feelings of isolation, low self-esteem, and decreased overall well-being.

Reduced social interaction and participation: Physical activity provides opportunities for social interaction, inclusion, and participation in group activities. Children with special needs may face barriers to participation in physical activities, which can lead to social isolation and limited opportunities for socialization and peer interaction.

Importance of tailored physical activity programs: It is crucial to provide children with special needs access to tailored physical activity programs that consider their individual abilities, preferences, and specific needs. These programs should be inclusive, adaptive, and provide appropriate support and accommodations to ensure the child's safety and enjoyment.

Benefits of physical activity: Regular physical activity can have numerous benefits for children with special needs, including improved physical fitness, motor skills development, social interaction, self-confidence, and overall well-being. It can also help manage weight, improve cardiovascular health, and reduce the risk of chronic diseases (Gao et al., 2018).

It is important to consult with healthcare professionals, such as pediatricians, physical therapists, or occupational therapists, to develop appropriate physical activity plans for children with special needs. These professionals can provide guidance on suitable activities, adaptations, and safety considerations based on the child's specific needs and abilities.



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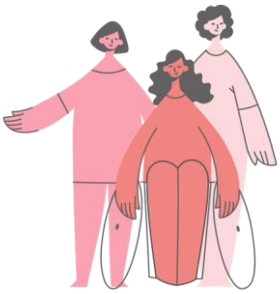

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PHYSICAL ACTIVITY PRESCRIPTION

Hasan SÖZEN

Choice of Physical Activity Type of Physical Activity

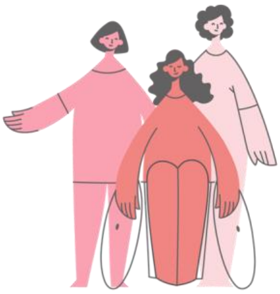
Selecting appropriate physical activities for children with special needs is essential for their overall well-being and development. Here are some key considerations and their importance.

Individualization of Activities: Children with special needs have diverse abilities and challenges. Tailoring activities to their specific needs ensure that they can engage safely and effectively (Rimmer et al., 2007).

Physical Health Benefits: Engaging in physical activities helps improve cardiovascular fitness, muscle strength, flexibility, and coordination, contributing to better overall physical health (Verschuren & Takken, 2010).

Motor Skill Development: Physical activities promote the development of gross and fine motor skills, which are essential for daily living and independence (Provost et al., 2007).

Sensory Integration: Activities that incorporate sensory input can help children with sensory processing disorders regulate their sensory systems and improve emotional well-being (Pfeiffer & Koenig, 2007).



Social Interaction: Physical activities offer opportunities for social interaction, helping children with special needs develop social skills, build friendships, and boost self-esteem (MacDonald et al., 2011).

Emotional Well-Being: Physical activities can reduce stress, anxiety, and depression while enhancing self-confidence and providing a sense of accomplishment (Bailey et al., 2012).

Cognitive Benefits: Physical activities stimulate cognitive development, including problem-solving skills, spatial awareness, and executive functions (Tomporowski et al., 2008).

Inclusion and Acceptance: Inclusive physical activities foster a sense of belonging and acceptance, breaking down barriers and promoting an inclusive society (Block & Obrusnikova, 2007).

Long-Term Habits: Encouraging physical activity in childhood can establish lifelong healthy habits that improve long-term health and quality of life (Strong et al., 2005).

Safety: Ensuring the safety of physical activities is paramount to prevent injuries and provide a positive experience (Schwebel & Brezausek, 2010).

Professional Guidance: Collaboration with healthcare professionals, therapists, and educators who specialize in working with children with special needs ensures informed decisions and adaptations (American Academy of Pediatrics, 2008).

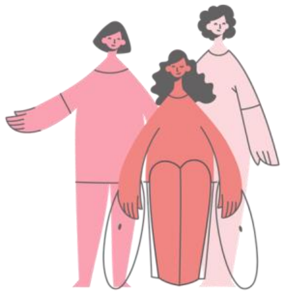
Enjoyment and Participation: Activities that are enjoyable and engaging promote active participation, leading to better physical and emotional outcomes (Martin et al., 2012).

In summary, the choice of physical activities for children with special needs is essential because it directly impacts their physical, emotional, and cognitive development. By considering individual needs and following evidence-based practices, caregivers and educators can create meaningful and beneficial physical activity experiences for these children.

Physical Activity Intensity

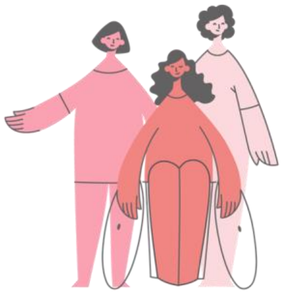
The intensity of physical activity for children with special needs should be personalized based on the individual child's abilities, medical conditions, and goals. It's essential to consult with healthcare professionals and specialists to determine the appropriate level of intensity. Here are some general considerations:

1. ***Individual Assessment:*** Conduct a thorough assessment of the child's physical abilities, limitations, and overall health. Consider any medical conditions, mobility issues, sensory sensitivities, and communication challenges.



2. ***Start Slowly:*** It's often best to start with low-intensity activities and gradually increase the intensity as the child becomes more comfortable and gains strength and confidence.
3. ***Age and Developmental Stage:*** Consider the child's age and developmental stage. Younger children may engage in activities that focus on fundamental movements and play, while older children may participate in more structured activities.
4. ***Goal Setting:*** Set clear, realistic goals for the child's physical activity program. Goals may include improving mobility, balance, coordination, strength, or simply enjoying physical play.
5. ***Incorporate Fun:*** Make sure the activities are enjoyable and engaging for the child. Fun and positive experiences can help motivate continued participation.
6. ***Adapt Activities:*** Modify activities to suit the child's abilities. For example, if a child has mobility challenges, adopt traditional games like tag or hide-and-seek so that they can participate.
7. ***Supervision and Safety:*** Ensure that the child is supervised by trained professionals or caregivers who are familiar with their specific needs and can provide assistance and safety measures as needed.
8. ***Variety of Activities:*** Offer a variety of activities to keep the child engaged and to work on different physical skills. This can include activities such as swimming, adapted sports, dancing, yoga, and sensory play.
9. ***Consider Sensory Needs:*** Children with sensory processing disorders may benefit from activities that address sensory needs, such as sensory breaks or sensory-friendly environments. These can help regulate their sensory input and reduce anxiety.
10. ***Monitor Progress:*** Continuously monitor the child's progress and adjust the intensity and type of activities accordingly. Celebrate achievements and milestones along the way.

Remember that every child is unique, and what works for one child may not work for another. It's crucial to have a personalized approach and involve professionals who can provide guidance and expertise specific to the child's needs.



Types of Exercise

There are several types of exercises that can be beneficial for children with special needs. These exercises can help improve cardiovascular health, flexibility, strength, coordination, and motor skills. Here are some common types of exercises for special needs children:

Aerobic Exercises: Aerobic exercises focus on increasing heart rate and improving cardiovascular health (e.g., walking or jogging, cycling, swimming, dancing, jumping rope, playing active games like tag or soccer).

Strength Training Exercises: Strength training exercises help build muscle strength and improve overall body strength. These exercises can be adapted to suit the needs and abilities of special needs children (e.g., bodyweight exercises like push-ups, squats, and lunges, resistance band exercises, using light weights or medicine balls, modified weightlifting programs).

Flexibility Exercises: Flexibility exercises focus on improving joint mobility and range of motion. These exercises can help reduce muscle stiffness and improve overall flexibility (e.g., stretching exercises, yoga or Pilates, Tai Chi or Qigong, dance or gymnastics).

Balance and Coordination Exercises: Balance and coordination exercises help improve body awareness, coordination, and balance. These exercises can be particularly beneficial for children with conditions like cerebral palsy or autism (e.g., balance exercises like standing on one leg or using a balance board, coordination exercises like throwing and catching a ball or playing Simon Says, activities that involve crossing the midline of the body such as marching or skipping).

It's important to note that the specific types of exercises and their intensity should be tailored to the individual needs and abilities of each child. It's always recommended to consult with a healthcare professional or a qualified exercise specialist who can provide personalized guidance and recommendations based on the child's specific needs and abilities.

When choosing a type of physical activity for children with special needs, it's essential to consider their individual abilities, interests, and any specific medical or developmental conditions they may have. The goal is to create a safe and enjoyable experience that promotes physical fitness, social interaction, and overall well-being. Here are some types of physical activities that can be suitable for children with special needs:

- **Adaptive Sports**: Many sports can be adapted to accommodate children with special needs. Adaptive sports include wheelchair basketball, seated volleyball, and adaptive skiing. These activities focus on inclusion and can be tailored to various abilities.
- **Swimming**: Swimming is often an excellent choice for children with special needs because it provides low-impact exercise and can be adapted for various skill levels. Water therapy

and hydrotherapy pools are also beneficial for children with physical disabilities (Fragala-Pinkham & Haley, 2008).

- **Yoga**: Yoga can help improve flexibility, balance, and relaxation. It can be adapted to suit children with different abilities, and it promotes mindfulness and mental well-being (Jensen et al., 2003).
- **Adaptive Dance and Movement**: Dance classes, including ballet, hip-hop, or creative movement, can be adapted to accommodate children with special needs. Dance encourages self-expression and social interaction (Quiroga Murcia et al., 2010).
- **Physical and Occupational Therapy Activities**: Physical and occupational therapists can provide activities that improve fine motor skills and sensory integration, helping children with tasks like handwriting or self-care (Case-Smith & O'Brien, 2014).
- **Adaptive Martial Arts**: Martial arts programs, such as karate or taekwondo, can help improve focus, discipline, and physical fitness. Instructors can modify techniques to suit individual abilities (Hartman et al., 2016).
- **Gymnastics**: Some gymnastics programs offer adaptive classes for children with special needs. Gymnastics can improve strength, coordination, and flexibility.
- **Cycling**: Adaptive bicycles and tricycles are available for children with mobility challenges. Cycling can be an enjoyable way to build leg strength and cardiovascular fitness.
- **Horseback Riding (Therapeutic Riding)**: Equine therapy, or therapeutic riding, can provide physical and emotional benefits for children with special needs. It helps improve core strength, balance, and sensory integration (Sterba, 2007).
- **Sensory Play**: Sensory activities, such as bouncing on trampolines, swinging, or using sensory equipment like therapy balls and tunnels, can be beneficial for children with sensory processing disorders. Sensory play activities, such as using sensory bins, sensory walks, or therapy balls, can help children regulate sensory input, improve sensory processing, and develop motor skills (Miller et al., 2007).
- **Inclusive Playgrounds**: Inclusive playgrounds are designed with accessibility in mind, allowing children of all abilities to play together. These spaces promote social interaction and physical activity.
- **Aqua Therapy**: Aquatic therapy sessions, conducted by trained therapists, can provide numerous benefits for children with special needs, especially those with mobility challenges.
- **Team Sports**: Some children with special needs may enjoy team sports like soccer, basketball, volleyball, or baseball.

- **Playground Activities**: Many playgrounds have adapted equipment to accommodate children with disabilities. Encourage play on swings, adapted slides, and sensory-integrated play areas.
- **Group Activities**: Group exercises or activities with peers can provide social interaction and motivation. These can include group games, adaptive sports teams, or exercise classes.

Work with a physical therapist to develop an exercise routine tailored to the child's specific needs. These exercises can target mobility, strength, and flexibility. When choosing a physical activity, it's essential to consult with healthcare professionals, therapists, and instructors who have experience working with children with special needs. They can help tailor the activity to the child's specific needs and ensure it is both safe and beneficial. Additionally, always prioritize the child's comfort and enjoyment to make the activity a positive experience. It's essential to adapt activities based on the child's individual abilities and preferences, while also focusing on their overall well-being and development. Consulting with healthcare professionals, therapists, and educators is key to making informed decisions about physical activities for children with special needs.

Duration and Frequency of Exercise

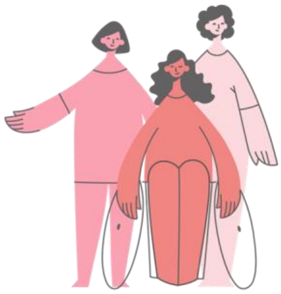
The duration and frequency of exercise for children with special needs can vary widely depending on the child's individual abilities, medical conditions, and goals. It's essential to work with healthcare professionals and therapists to develop a personalized exercise plan. However, some general guidelines can provide a starting point:

Duration: The duration of exercise sessions should be tailored to the child's age, fitness level, and tolerance. Initially, shorter sessions may be more appropriate, and the duration can gradually increase over time as the child's endurance improves. Sessions can range from 10 minutes to 30 minutes or more, depending on the child's ability and comfort.

Frequency: The frequency of exercise sessions can vary, but consistency is key. For most children, aiming for at least 3 to 5 days of exercise per week is a good starting point. Some children may benefit from daily physical activity, while others may require rest days between sessions. Again, this should be determined in consultation with healthcare professionals.

Intensity: The intensity of exercise should be appropriate for the child's fitness level. Low to moderate-intensity activities are typically recommended, but this can vary depending on the child's abilities and goals. Exercises should be challenging but not overly strenuous.

Types of Exercise: The choice of exercises should align with the child's goals and abilities. It can include activities such as walking, swimming, adaptive sports, yoga, stretching, and



strength training, among others. A well-rounded program may include a mix of aerobic, strength, flexibility, and balance exercises.

Supervision: Depending on the child's age and abilities, supervision during exercise sessions is often necessary to ensure safety and proper form. An adult or trained professional should be present when needed.

Adaptations: Exercises should be adapted as necessary to accommodate the child's specific needs and limitations. This may include using adaptive equipment or modifying movements to ensure safety and effectiveness.

As reviewed above, there are many studies on the duration and frequency of exercise for children with special needs (Fragala-Pinkham & Haley, 2008; American Academy of Pediatrics, 2008; Verschuren et al., 2008; Guerra-Balic & Duran-Tauleria, 2016; Getchell & Pabreja, 2018). These studies offer insights into the importance of exercise for children with special needs and the need for individualized programs. However, specific duration and frequency recommendations should be determined in consultation with healthcare professionals and therapists who are familiar with the child's unique circumstances. It's important to note that individualization is key when planning exercise for children with special needs. Each child is unique, and their exercise program should be tailored to their specific circumstances.

ORIENTATION TO REGULAR PHYSICAL ACTIVITY AND PROGRAM

Hasan SÖZEN

Promoting health and well-being for children and youth with special healthcare needs is a critical part of their ongoing healthcare. Too often treating the child's illness or addressing ongoing needs for special services takes the focus off the importance of health promotion issues that need to be addressed in the care of all children. While addressing acute health care needs is necessary, so is assuring good health and well-being across the life span. Physical activity is an important part of every child's development and wellbeing (Janssen & LeBlanc, 2010). It is an integral part of how children and youth learn and stay healthy. For children with special health care needs or disabilities, getting enough physical activity and exercise to grow, learn, and stay healthy can be challenging (Barr & Shields, 2011).

Physical activity plays a pivotal role in the growth and development of every child. For children with special needs, regular physical activity is not only beneficial but also transformative. It can improve their physical health, enhance cognitive abilities, boost self-esteem, and foster

social interaction. In this section, we will explore the importance of orientation to regular physical activity and the creation of tailored programs for special needs children.

Orientation to regular physical activity and the development of a program for children with special needs should be approached with careful planning, consideration of the child's individual abilities and limitations, and consultation with healthcare professionals and specialists. Below is a guide with references to help you establish an effective physical activity program for special needs children:

Assessment and Consultation: Begin with a comprehensive assessment conducted by healthcare professionals and therapists who specialize in the needs of the child (American Academy of Pediatrics, 2019).

Setting Clear Goals: Define specific, measurable, and achievable goals for the child's physical activity program, considering their abilities and needs (Fragala-Pinkham & Haley, 2011).

Individualized Planning: Develop an individualized plan that aligns with the child's goals, interests, and preferences (Block & Obrusnikova, 2007).

Choosing Appropriate Activities: Select activities that are suitable for the child's abilities and goals, encompassing a variety of exercises [e.g., aerobic, strength, flexibility] (Verschuren & Takken, 2010).

Adaptations and Modifications: Customize activities as necessary, using adaptive equipment and techniques to accommodate the child's unique needs (Block & Taliaferro, 2008).

Safety Measures: Prioritize safety by ensuring that the exercise environment is safe and accessible (Schwebel & Brezausek, 2010).

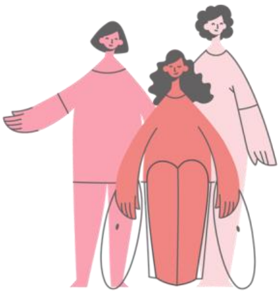
Gradual Progression: Start with manageable exercise durations and intensities, gradually increasing them as the child's fitness level improves (Rimmer & Chen, 2010).

Consistency and Routine: Establish a consistent routine for physical activity sessions to build habits (Tremblay et al., 2011).

Inclusion and Social Interaction: Promote participation in inclusive activities to encourage social interaction and acceptance (Block & Obrusnikova, 2007).

Monitoring and Evaluation: Regularly monitor the child's progress and adapt the program as needed with input from healthcare professionals (Fragala-Pinkham & Haley, 2011).

Family and Caregiver Involvement: Encourage family members and caregivers to actively participate in and support the child's physical activity program (American Academy of Pediatrics, 2012).



Documentation: Maintain records of activities, modifications, and progress to track improvements and inform future planning (Provost et al., 2007).

Professional Guidance: Continue to collaborate with healthcare professionals, therapists, and educators with expertise in special needs to ensure the program remains effective (American Academy of Pediatrics, 2019).

Orientation to regular physical activity and the development of tailored programs for special needs children are investments in their well-being and potential. These programs not only promote physical health but also nurture cognitive development, enhance emotional well-being, and foster social integration. With the right approach, special needs children can unlock their full potential and enjoy the numerous benefits that physical activity brings to their lives. Remember that every child is unique, and what works for one may not work for another. The key is to provide a supportive and inclusive environment that encourages physical activity and promotes the well-being of children with special needs.

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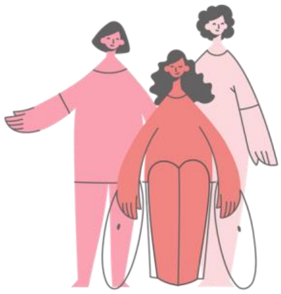

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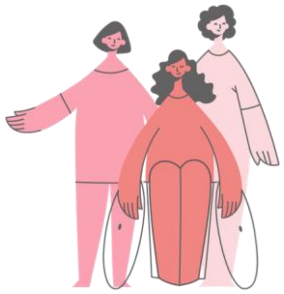

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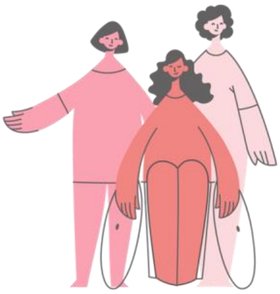


CONSIDERATIONS ON SUGGESTIONS FOR WORKING WITH PARENTS OF CHILDREN WITH SPECIAL NEEDS

Camelia SOPONARU, Andrei BARBİR

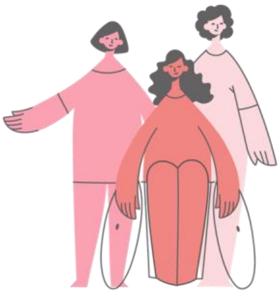
The home is the place where emotional development is built, but often the problems encountered in society reduce the effectiveness of education and support for the child's healthy development on all levels. Some of these problems are caused by social, educational and economic factors (Kibera, 1998). Parenting is a complex task that includes many specific behaviors that together and separately influence the development of the child, whether he or she has special needs or not. We are talking about physical and emotional support, love and guiding the child to develop as an independent and capable adult. (Hamner & Turner, 2001).

The family is a fragile microsystem, which if it presents one or more characteristics as (Farran, 1990 apud Făinaru, 2017), the presence of a single parent (single-parent family); - coming from a disadvantaged socio-economic background; belonging to an ethnocultural minority; - the presence of one or more children in difficulty (delinquent, mentally or physically deficient, drug addicted or with special needs); may suffer and, in the absence of specialized external help, break down or have an irreversible negative impact on all its members.

When talking about families raising children with special needs (SN) Tkacheva B.B. [2014, p.31] argues that the birth of a child with disabilities is perceived by parents as the greatest tragedy. The fact of birth of a child ”different from all others” is the cause of severe stress in parents, especially in the mother. Stress, which is prolonged in nature, also has a strong destructive effect on the psyche of the parents and becomes the main condition for a sudden change in the way of life. All the hopes and expectations that family members had for the child's future collapse in an instant and the understanding of what has happened and the achievement of new values is sometimes stretched over a longer period of time.

Knowing the stages through which the family educating a child with ASD goes through are described by (Platica A, 2012, p. 820), help us to understand the family's reaction to the crisis, to assess the behavior of its members as appropriate to the situation or as pathological and also to provide them with optimal assistance:

1. *Shock and denial* are the parents' first reactions (first stage of grief). Denial diagnosis, seeking other specialists to investigate the child or information about the diagnosis. At this stage denial protects the psyche from excessive pain and anxiety and plays a useful role in alleviating the blow. However, prolonged denial is dangerous for all family members. This is where parents' manifest confusion, disorganization and helplessness. It is important for the



specialist to understand that at this stage parents may not be able to listen to explanations and detailed recommendations.

2. *The stage of miraculous healing* is dominated by aspirations, optimistic thoughts that everything will be all right, the belief that the child can recover completely and will be no different from others. children. It is based on the idea that if you try hard, the child's condition will miraculously improve. This improvement should be a ″reward″ for persistence, or for acts of charity, or for helping others. people, so this stage is characterized by appealing to religion or expecting a miracle.

3. *The anger/wrath stage* occurs as parents begin to realize that healing miracle will not happen. Anger can manifest itself towards the whole world, the universe, self or spouse,and last but not least it is projected onto the specialists for not giving enough help to the child. Blaming oneself for the disability child's disability can manifest itself in self-destructive behavior.

4. *The depression stage* occurs when parents realize the chronic nature of hild's disorders and their consequences for the whole family. Parents show indifference, inability to express emotions, suppression of emotions and as result in alienating family members from each other. This reaction seems to indicate that the parents are beginning to recognize the reality of the child's impairment and that this becomes a starting point in the adaptation process.

5. *The acceptance stage* is characterized by the ability to talk relatively calmly about the child's problems, showing love towards the child and encouraging independence, cooperating with specialists in the child's development programmes and not in lastly, they have personal interests that are not related to the child. The transition to this reflects acceptance of the position of ″parent of the child with educational needs with all its specific tasks and circumstances.

In order to develop the most appropriate working strategies, a specialist must take the pulse of each individual family, knowing that families of children with special needs are often forced to change their daily routines, lifestyle or even their outlook on life, the child's diagnosis becomes, through labelling, a family diagnosis is useful. The parents of children with ASD are unlikely to be able to dialogue with other parents. Opening a channel of communication between professionals and parents can prevent situations from arising where "the negative message (...) reaches the parents and this way parents feel even more alienated, isolated and without any kind of support' (Peeters, T., 2009). Continuing the above author's point, we can (Bernstein,2000), say that therapeutic and social practices can be used as a means of educational practices represent a fundamental social context in which the constitution of a subculture, if we look at people with ASD from this perspective.

In terms of building strong relationships with the families of children with special needs it is necessary to spend time discussing and learning about their wishes and concerns for their

children and learning about meaningful activities and routines they participate in at home. It is essential to maintain this communication throughout the time a child is in your program. Ask questions to learn about strategies that work at home and consider using them in your classroom.

Through your interactions you can build trust so that both you and families feel comfortable sharing children's strengths and whether there are concerns (Sandall, Hemmeter, Smith, & McLean, 2005). Before communicating concerns with families, it may be helpful to discuss with a coach, trainer, or administrator your plan to share this information using family-centered practice. Be prepared for families to respond in a variety of ways and know how you can provide support if they seek assistance from other agencies and resources.

For families already receiving support from other professionals, ongoing communication with both families and professionals is essential to maintain consistency between the program and the family environment. When all caregivers and professionals in a child's life consistently use the same effective strategies to promote development and outcomes, children are more likely to benefit and learn new skills.

In working with families, it is important to recognize and respect their unique strengths and backgrounds while realizing their ability to make decisions that are right for them (Hanson & Lynch, 2004). This means that when a family's wishes and decisions are different from what you would recommend, respond respectfully to the family's decisions. Others (Turnbull, Turbiville, & Turnbull, 2000) suggest the following guidelines when working with the family of a child with ASD:

- Recognize the family as a constant in the child's life; caregivers and service systems can often change

- Facilitate collaboration between families and professionals

- Honoring and respecting family diversity in all dimensions (cultural, racial, ethnic, linguistic, spiritual and socio-economic)

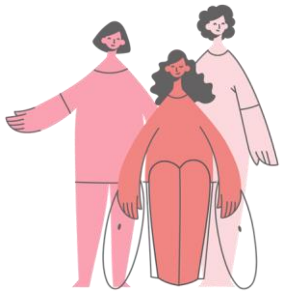
- Recognizing family strengths and the different approaches families can use to cope

- Sharing impartial and honest information with family members on an ongoing basis

- Encouraging inter-family support and networking

- Recognizing and incorporating the developmental needs of the child and other family members into your practice

- Designing and implementing services that are accessible, culturally and linguistically respectful and responsive, flexible, and based on identified family needs.



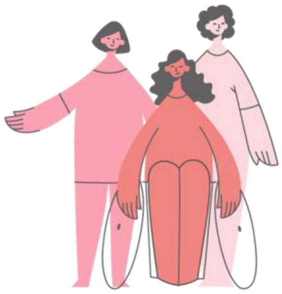
All parents of children with SEN need to have effective channels of communication with the teachers who work with their children. They need information about the services available and they need to understand their rights and responsibilities. Parents also look to teachers for feedback on how their children are doing at school. Parents need to feel that they can contact teachers directly when they have a concern about their child. Teachers can facilitate this by establishing a variety of forms of contact with parents such as through telephone calls and home visits in addition to meeting with parents at school. Teachers, therefore, need to develop effective communication skills, including those involved in written and oral communication with parents.

Teachers also need the organizational skills necessary for maintaining contact with parents through meetings, home visits, letters and telephone calls (Hornby, 2000). Many parents of children with SEN will, at one time or another, be in need of supportive counselling. Although some parents cope extremely well with the demands of raising children with SEN without ever needing such counselling others definitely benefit greatly from it.

Typically, parents will approach teachers who work with their children, rather than professional counsellors, in search of help for the problems that concern them. Teachers in training should, therefore, have a level of basic counselling skills sufficient to be good listeners and to help parents solve everyday problems. They should also have the skills and knowledge to be able to refer parents on to qualified counsellors when problems raised are beyond their level of competence (Hornby et al., 2003).

Teaching practices in schools provide opportunities for preservice teachers to gain experience of working with parents generally and those who have children with SEN in particular. Schools must involve preservice teachers in the full range of aspects of working with parents including: parent–teacher meetings; home–school diaries; home visits; telephone contact; and preparation of newsletters for parents. They should also be involved in any parent education activities such as parent workshops that the school offers. Involvement in such workshops has been found to be a particularly effective way of providing preservice teachers with practical experience of working with parents and an opportunity for using the skills, knowledge andattitudes they have learned (Hornby and Murray, 1983).

Family-centered support services have been defined as “those practices that: include families in decision making, planning, assessment; develop services for the whole family, not just the child; guide families in setting priorities and goals; respect family choices about the extent of participation” (Murphy, Lee, Turnbull, & Turbiville, 1995, p. 25). “Families of children with disabilities must strive to gain control over their lives and must take steps to get what they want and need” (Turnbull, Turnbull, Erwin, Soodak, & Shogren, 2011), with the basis in this context being the application of principles of empowerment and the promotion of family strength and competence.

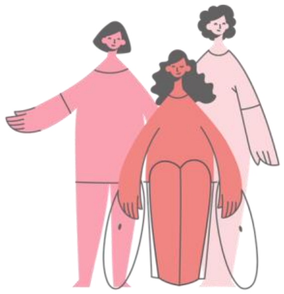


We present a number of strategies that can serve specialists in specialist intervention to support and empower families of children with disabilities but also families directly:

- ⇒ Expressing empathy, understanding and compassion for families. Empathy for families drives professionals' motivation to engage in family support and empowerment activities whereas criticizing, judging families' actions or lifestyle
- ⇒ Recognition of the "expert" role of the family. The assumption of the expert role by families is justified by the fact that they know the child best.
- ⇒ Involving families in open communication. Pugach and Johnson see communication as the cornerstone of any collaborative partnership: between families, professionals, school and even inter-family, providing an open, supportive environment with implications for educational stimulation (Pugach, Johnson, Drame, & Williamson, 2012).
- ⇒ Appreciating families' successes. Recognition of families' successes by professionals is extremely important and stimulating for families, no matter how small they may seem, progress should be appreciated.
- ⇒ Families' sense of self-efficacy. Some authors (Turnbull, Turnbull, Erwin, Soodak, &Shogren, 2011) have proposed an empowerment model in which families fulfill the empowering role when they possess a high degree of motivation and have sufficient knowledge and skills.
- ⇒ Involvement of family members in the implementation of PIP. Lyte and Bordin emphasize the importance of teamwork, of training everyone involved in the educational-rehabilitative-compensatory process, including parents (Lytle &Bordin, 2001).

We can conclude from a brief analysis of the articles listed above that the techniques for working with families of children with special needs must be adapted to the specifics of the family, but at the same time the individual characteristics of the members must be well known.

At the same time, we consider it opportune to deepen some techniques of working with parents of children with SEN and by teachers from special schools and inclusive schools, medical professionals who have the role of diagnosing the child as well as treatment and recovery, specialists from state institutions working with this category. At the same time, we consider it appropriate to hold training sessions for specialists who interact with such families, sessions to be offered by qualified specialist.



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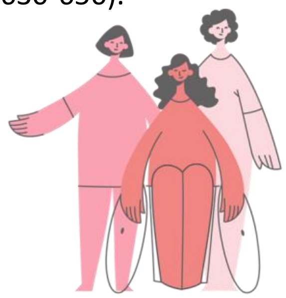

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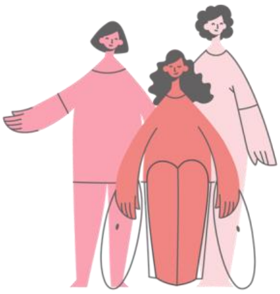
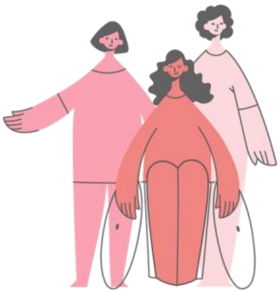


WHAT SHOULD WE PAY ATTENTION TO WHEN EXERCISING?

Renato Gabriel PETREA, Veronica POPESCU

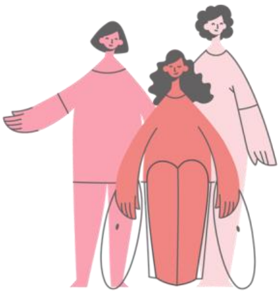
- The objectives and content of the exercises/games are adapted to the level of understanding, the degree of autonomy/functional level, his physical development, the level of psycho-motor skills, the child's needs and interests, previous performances.
- The (initial) assessment is taken into account, as well as the personalized intervention plan. It is individualized, depending on the child's needs, interests, skills, previous performances, current functional level.
- Intervention must begin as soon as possible after diagnosis.
- The child's feedback is taken into account, so that no steps are skipped.
- The assessment is made according to the functional progress recorded, it requires periodic reassessment and review.
- Contraindications are taken into account depending on the health status of the child.
- Volume (dosage), complexity and intensity, as well as breaks are customized. Exercises and games must not tire the child.
- Equipment and materials will be used/adapted so that they are safe for children, but also can be handled according to impairments/age/gender etc.
- The space will be used/set up in such a way that it is safe for children.
- The same exercise/game can have different objectives, on several components: communication – language/vocabulary, interaction, cognitive (memory, attention, understanding, thinking, ability to concentrate, imagination, etc.), different psychomotor components (static and dynamic balance , manual dexterity, general dynamic and eye-motor coordination, spatio-temporal orientation, laterality, body schema, etc.), locomotion motor skills (walking, running, jumping, crawling, climbing, crossing obstacles, etc.) and control of objects (throwing and catching, dribbling, shooting, kicking, etc.).
- Support/insurance is provided so that the exercise can be carried out without the possibility of injuries.
- It is aimed to maintain a position, to go through the phases of the movement, even if it is not performed correctly.
- The aim is to anticipate possible oppositional reactions of the child to the introduction of new movements/exercises/games/materials.
- Observance of the child's rhythm, of the own dynamic stereotype is followed.
- The variability of activities and their frequent change according to the child's concentration power.



WHERE CAN PHYSICAL ACTIVITY BE DONE?

Veronica POPESCU, Renato Gabriel PETREA

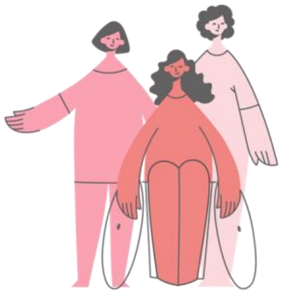
- Spaces for practicing physical and sports activities must be adapted
- The surface must be safe, flat, without unevenness, non-slippery
- Objects that could cause injuries are removed
- For exercises and games in pairs or groups, it is ensured that there is the necessary space, the objects being adapted to the level of motor skills/understanding of the rules/handling the equipment by the practitioners
- Some handy objects from the house (e.g., chair, table, water bottles) can be used but they must be safe
- Certain objects can be used that can replace sports objects (bottles filled with water can be used instead of dumbbells, a broomstick can be used instead of a stick, etc.)
- If working at home, in the room, remove objects that can cause injuries (carpet, table, chair, other objects) or make sure they are stable and useful in the exercise program
- If working on the terraces, work space is ensured, unnecessary objects are removed
- If working in parks, ensure the working surface - flat, without obstacles
- If you work in parks with fitness equipment, assistance is provided (the functioning of the devices and loads is checked beforehand), help in execution is provided, the mode of operation is explained/demonstrated
- For cardio exercises (walking, running) a route is designed, a route map is used (on the streets) or certain devices are used (GPS, online maps, etc.)
- If working in the gym, the safety of the sports equipment in the gym is ensured, it is adapted according to the possibilities and needs (for example, for visually impaired people, the space is demarcated with a rope or phosphorescent adhesive tapes, etc.).
- The equipment used should be appropriate (organization, accessibility) to the space and types of exercises, games (balls, dumbbells, slippers, loose clothes).



WHAT ARE THE OBSTACLES TO REGULAR PHYSICAL ACTIVITY?

Renato Gabriel PETREA, Veronica POPESCU

- The limitations imposed by the pathology/associated pathology (some impairments may have restrictions regarding the practice of certain exercises and games, other impairments may be side effects or associated diagnoses and may limit physical and sports activities)
- Socio-demographic factors: belonging to a disadvantaged group, at risk, disorganized families, race, ethnicity, gender, age, religious orientation, place of residence/origin, income level, parents' education level, etc.
- Cultural factors (for example, in many cultures, girls, even more so with certain impairments, are not encouraged to practice physical activities)
- Financial factors (the degree of accessibility to certain offers of physical and sports programs and activities is conditioned by private offers that involve costs, exceeding the possibilities of the family from which the child with disabilities comes, the cost of home-gym/therapy center transportation, etc.)
- Proximity factors (the distance between the home and the location of the gym or therapeutic/practice centers is too great, assuming transport costs, adapted vehicles, etc.)
- Factors related to government policies (some physical and sports activities, included in the therapeutic programs of children with special needs, do not have costs covered by medical insurance, they are not financed by the institutions that deal with them (different ministries, local, regional authorities), do not support the construction of adapted sports facilities, the lack of social inclusion programs for people with disabilities, etc.)
- Personal factors: lack of motivation of the person with impairments, personality structure, physical and mental health status (fitness condition, BMI, overweight/obesity, etc.), previous experiences, fear of injury, lack of confidence in one's own abilities practice, limited motor skills, lack of information regarding practice opportunities, accessibility to certain service offers and specific programs, etc.
- Environmental factors (insecurity and lack of adaptation of spaces)
- Social factors (stereotypes, prejudices towards people with disabilities, lack of information regarding the awareness of the problem of people with disabilities
- Limited opportunities to practice (limited offer of physical activities, lack or limited number of their specific institutions, including sports clubs and associations, lack of coordination between these institutions; limited number of sports competitions, limited/non-existent financial support of these competitions, visibility reduced to the achieved performances);
- Parents' influences/perceptions (they have their own values, beliefs, expectations, limited knowledge regarding finding an appropriate activity, the benefits of physical and sports activities, fear of injury, hyper-protective approach, etc.);



- The training of professionals (limited number of those who have the competencies/skills to work with these people, lack/limitation of access to knowledge, lack of professional training courses/programs, low number of knowledge dissemination events, lack of financial support and visibility of the profession of therapist/teacher working with people with different impairments, etc.)
- Limited intervention policies and strategies (non-adapted sports facilities, lack of equipment, materials necessary for the practice of physical activities adapted to them, social inclusion programs).

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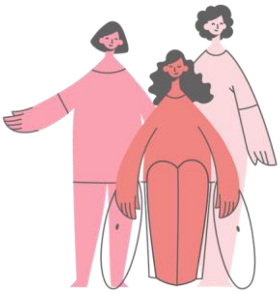


PHYSICAL ACTIVITY IN VISUAL IMPAIRMENTS (VI)

Oana RUSU

The concept of visual impairment (VI) refers to the partial or total loss of vision in one or both eyes. As the sense of sight is an important component of an individual in his interaction with the environment (most stimuli are visual), any impairment produces damage to it, from restrictions and limitations to impossibility or isolation in successfully performing daily, social and professional activities.

The scientific community is divided on the definition and establishment of degrees of visual impairment. According to the International Classification of Diseases (ICD-10) updated and revised in 2013 (WHO, 2013), it classifies VI as follows, based on the assessment of visual acuity (VA) and visual field (VF):

- moderate VI (Category 1)—VA of 6/18–6/60
- severe VI (Category 2)—VA of 6/60–3/60
- blindness (Categories 3–5) – VA of 3/60 to no light perception or VF no greater than 10° in radius around central fixation

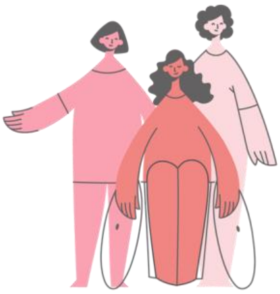
In the official sports competitions for the visually impaired (https://ibsasport.org/growing blind-sports/classification/) another VI classification system is used, which uses the logarithm of the minimum angle of resolution (logMAR), and 3 classes are identified:

- B1 — no light perception in either eye until light perception, but inability to recognize the shape of a hand at any distance or in any direction;
- B2—from the ability to recognize the shape of a hand to VA of 2/60 and/or a VF of less than 5° in the best corrected presenting eye;
- B3 — from VA above 2/60 to 6/60 and/or a VF of less than 20°.

On the other hand, it is considered that there are other factors that contribute to establishing the type and degree of visual impairment: color perception, binocular vision, light sensitivity, contract sensitivity. Usually in many cases the severity of the impairment will progress over time.

There are several criteria for classifying VIs, including:

- depending on the time of the onset of the disorder: congenital, acquired (in the first 2-3 years of life or after 3 years)
- after the degree of VA decrease in relation to the organic substrate: organic amblyopias (caused by organic changes of the eye); relative amblyopias (organic changes do not justify a decrease in visual function; functional amblyopias (without genetic changes)



- according to the level of visual acuity: absolute blindness (the inability to perceive light), practical blindness (visual capacity between 1/200 and 0), severe amblyopia (visual capacity between 1/20 and 0), medium amblyopia (visual capacity between 1/ 20 and 1/5), mild amblyopia (the person perceives 1/5 of the normal ability)
- according to the level of chromatic sensitivity: color blindness (red color confusion), deuteranopia (green color confusion), tritanopia (blue color confusion).

Visual analyzer conditions may also be present in other disorders/diagnoses (eg, Down syndrome) or associated with other sensory system conditions (eg, deafblindness – a condition of auditory and visual analyzers).

The ability to see depends on many factors: physical and human involvement, age at which the disability set in, ability to adapt to the situation, intelligence, personality type, awareness of more or less autonomy, education received and technical support. (Martin & Bueno, 1997, cited by Lima Constâncio, 2010).

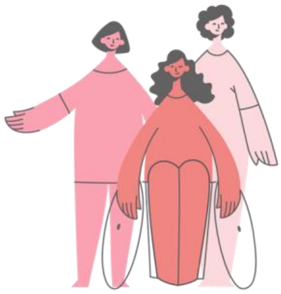
Signs to look out for when interacting with a child who may have a vision problem include:

- problems with vision in low light or bright light
- difficulty recognizing people he/she knows
- he/she has difficulty reading facial expressions
- relies on touch to find and identify objects, more than usual
- must keep books or newspapers close to the face or sit near the television
- has difficulty getting around in unfamiliar places – bumps or trips over things regularly
- does not look directly at the person she/he is talking to and does not have proper eye contact

If a person already has a vision problem (for example, wears glass, uses a cane, or has a condition such as glaucoma or cataracts) they should watch carefully for signs of hearing problems that may arise.

Psycho-motor characteristics in the child with VI

Many studies on school-aged persons with VI show that they are at a higher risk of being inactive than children without disabilities (Ayvazoglu et al., 2006, Houwen et al., 2009, da Cunha Furtado et al., 2015, Haegele et al. al., 2015, Scally & Lord, 2019, Lauren et al., 2019, Qasim et al., 2020, Clements et al., 2022, Harrington et al., 2023). The decrease in the flow of visual information, the blurriness and imprecision of the image, difficulties in discriminating and fixing the images or the impossibility of perceiving them can affect the dynamics of cortical processes and the intervention of some physiological and psychological



mechanisms with a compensatory role for the lack of vision. The younger the age (up to 3 years), the lower the quantity and quality of visual and spatial representations.

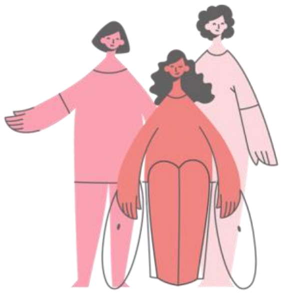
Individuals with blindness are forced to create mental maps, in which the objects and elements of the environment are perceived from their own point of view, taking on their own and unique meaning. The freedom of movement is reduced and a situation of dependence on some factors is created. The other analyzers are hyperactivated (auditory, tactile-kinesthetic, olfactory), taking over the dysfunction of the visual one.

VI has negative influences on psychomotor development (balance, stability, postural control, spatial-temporal orientation, coordination), basic motor skills (walking, running, jumping, throwing and catching), but also physical qualities (muscular strength), which determines negative effects in terms of physical, mental and social health (autonomy, functionality, depression, risk of social exclusion, performance in daily activities, occurrence of some comorbidities (sedentary lifestyle with risk of obesity, overweight, cardio- vascular etc.) (Ayvazoglu et al., 2016, Columna et al., 2016Alcaraz-Rodríguez et al., 2022).

At the level of children with VI, the following can be identified: inexpressiveness in facial expressions and at the level of the eyes, vicious posture (body flexed in all joints, slumped shoulders, narrow chest, flat, kyphotic or round back), weak muscle tone, spine with deviations, reduced joint mobility, lack of coordination, delays in general physical and motor development (changes in the respiratory and circulatory system (deficient circulation, limited lung capacity, superficial), pituitary dysfunctions, carbohydrate metabolism. Certain specific stereotypes (tics) appear: in the head, wrinkling of lips and forehead, head swaying.

Locomotor skills, like mobility, are delayed compared to non-disabled individuals (Haegele et al., 2015). The gait is rigid, uncertain or even hesitant, with a large base of support, no step without rolling, while running is characterized by a reduced gait, slow pace of steps, prolonged support phase. Jumping, going up and down stairs, as well as skills to control objects (dribbling, catching) are also delayed and performed with greater difficulty, which leads to low participation in physical activities, but also in motor development.

Lower levels of health-related fitness and motor skills associated with reduced levels of physical activity can lead to reduced autonomy and less independent movement in daily life (Skaggs & Hopper, 1996, cited by Scally & Lord, 2019). As they go through life, children with VI tend to do less physical activity; thus, it is especially important that they become physically active in childhood to support a prolonged, healthy and active lifestyle (Kozub & Oh, 2004, Scally & Lord, 2019). Positive physical activity experiences in childhood, conducted by someone who understands how to properly adapt activities and use modified equipment, are more likely to lead to sustained healthy physical activity later in life (Lieberman & McHugh, 2001; Lieberman, Ponchillia and Ponchillia, 2013, cited by Scally & Lord, 2019).



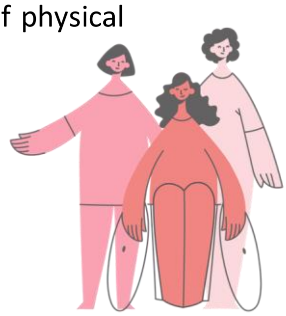
Loss of sight from birth or during life due to an accident has both functional and profound psychological implications. They have diminished educational experiences, employment opportunities, but also interpersonal relationships. Many children are unable to reach the same level of proficiency in a similar amount of time as their peers if they have these vision problems. The time to solve some tasks that involve both memory and creativity must be increased so that students with visual impairments can do them correctly. Characteristic of these people, be they with severe or moderate VI, is the development of the tactile-kinesthetic sense.

Although they have some developed senses, inferiority complexes appear, discouragement in front of the physical environment, fear in front of the human context, retraction, refuge in the shell of the microcosm of equals, i.e., of the other blind. Studies have shown that in some case of VI, evaluating the self-concept one can observe the appearance of emotionality, aggressiveness, but also affective instability and the defensive reaction to all the stimuli in the exercise that they do not control.

From the point of view of cognitive processes, the memory is very well developed, the mental constructions helping to interact with the environment in which the visually impaired child works. The level of attention is also high compared to that of normal children. The earlier the intervention, the more the inhibitory mechanisms of isolation, building inferiority complexes are reduced. The support of the family and other educational actors can facilitate confidence, self-determination, participation in community life, as well as the practice of physical and sports activities.

Several studies (Ayvazoglu et al., 2006, Haegele et al., 2015, Columna et al., 2016, Scally & Lord, 2019, Harrington et al., 2023) show that several factors can contribute to people' physical inactivity with VI:

- personal (motor skills, the child's personality and negative experiences, fear of injury, lack of information regarding accessible physical activity offers, etc.);
- environmental (the insecurity and lack of adaptation of the spaces);
- social (stereotypes, prejudices towards people with disabilities, lack of information regarding the awareness of the problem of people with disabilities, socio-demographic factors: risk group, gender, race, family income, religious orientation, etc.);
- limited opportunities to practice (the offer of physical activities, the lack or limited number of their specific institutions, including sports clubs and associations, the lack of coordination between these institutions; the limited number of sports competitions, limited/non-existent financial support for these competitions, but also of the reduced visibility of the performances obtained);
- parents' influences/perceptions (they have their own values, beliefs, expectations, limited knowledge regarding finding an appropriate activity, the benefits of physical and sports activities, fear of injury, hyper-protective approach, etc.);

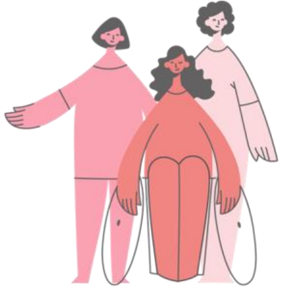


- training of professionals (limited number of those who have the skills to work with these people),
- limited intervention policies and strategies (non-adapted sports facilities, lack of equipment, materials necessary to practice physical activities adapted to them, social inclusion programs).

Children with VI face more barriers to engaging in physical activities compared to their sighted peers (Kozub & Oh, 2004), identifying negative consequences throughout their lives (physical, mental health). The reduced participation in physical activities of children with VI, especially in the early years of development, forms a barrier to peer involvement and the development of important social skills (Clements et al., 2022).

Specific strategies adopted by those working with children with VI

- Perform a preliminary assessment of the child’s functional vision, as well as any contraindications/limitations, but also previous experiences in practicing physical and sports activities. Information can also be obtained from the educational counselor in the school, the child’s family members, doctor, etc.
- Use the child’s name before giving instructions.
- Maintain constant verbal contact.
- Give the child the opportunity to position himself best in the room, in relation to visual acuity.
- Make sure that the working areas are sufficiently lit and safe (the work equipment is positioned so that it is accessible in height, it is well fixed).
- Make sure the rules are known and respected by all children/group
- Use light-colored, bright (phosphorescent) equipment, unless darkness is needed to provide contrast.
- Allow the child to become familiar with the work area, with the longer-term maintenance of the position of objects and equipment necessary for practice.
- Use sound cues for guidance (whistle, bell, bell balls, running guide ropes, etc.) or counting/clapping to enforce a rhythm of movement.
- Limit and signal the working space (highlighted lines drawn on the ground, placement of cones, etc., reduce the distance between the child and the teacher,)
- Provide help when needed for different exercises, preventing injuries.
- Use tactile modeling (touch, raised boards) to demonstrate body movements.
- Use clear, concise, descriptive explanations, providing precise action-oriented information (“Stand on your left leg, lift your right leg”), towards a certain direction (establish and use conventional phrases: “Turn to the right, at 3 o’clock “)
- Use adapted rules (for example, do not take into account the rules regarding technical execution, “double-dribble”, rolling ball instead of dribbling, etc.)

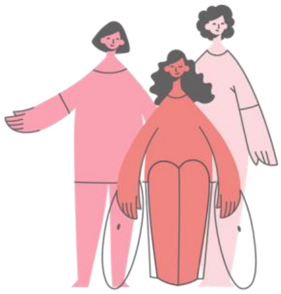


- Adapt the equipment to the needs and possibilities of the children (objects of different sizes and textures, spaces with different textures, exercises and games in pairs, hand-held, linked together, one being a guide).
- Encourage and praise independent work.
- Share with other professionals (teachers, therapists, coaches), parents experiences, knowledge with visually impaired children.

Physical and sports activities adapted to children with VI

Studies show that people with VI are significantly more sedentary than others normal or with other impairments (for example, those with physical impairments), being the most limited of those with disabilities in participating in physical activities. Moreover, the blind is even more inactive than those with VI including in daily activities (Pérez-Tejero et al., 2012, Úbeda-Colomer et al., 2018, Haegele et al., 2016, cited by Alcaraz-Rodríguez et al., 2022). This fact determines a low level of physical condition of these individuals. Although the opportunities to practice are less, there is a variety of physical activities (exercises, games) as well as sports adapted for them, which lead to physical and psycho-social benefits (improvement of self-perception, increase of social skills, social (re)integration and of their importance in the social environment, increasing the quality of life (Alcaraz-Rodríguez et al., 2022). Among the objectives of physical activities adapted to people with VI, organized both within the formal educational system and in therapeutic centers or leisure sports activities, we can identify:

- correcting/improving postural control,
- general physical development (increasing muscle tone, developing cardio-respiratory capacity)
- learning daily activity skills (ADL)
- the development of autonomy in daily and motor activities
- development of motor skills of locomotion and control of objects (walking, running, jumping, crawling, throwing at a target, throwing and catching, kicking)
- the development of psycho-motor components (general dynamic coordination, oculo-motor, laterality, body scheme, spatio-temporal orientation, static and dynamic balance, manual dexterity)
- the development of the tactile-kinesthetic and auditory senses
- motor agility development
- developing confidence and self-esteem
- development of social skills (communication, cooperation, teamwork, acceptance of others, acceptance of success/failure, competitive spirit, etc.)
- the acquisition of specific knowledge and skills for certain sports.

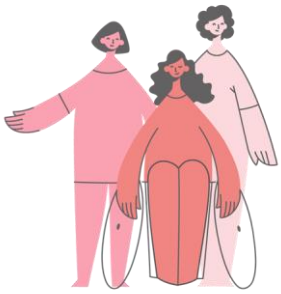


Cristea et al. (2014) identify a number of elements of visual perception in the practice of motor activities:

- dynamic visual acuity is responsible for the perception of the movement speed of objects;
- eye control or visual coordination is responsible for binocular vision, in sports games or reading-writing activities;
- visual discrimination - involves recognizing the shapes and sizes of both objects used in motor activities and those used in classroom activities;
- peripheral vision plays an important role in anticipating events, children with a narrow visual field will encounter difficulties in practicing sports games;
- the depth of perception - is the one that allows the appreciation of the shape and consistency of objects, depending on the distance from which they are perceived;
- visual perception – shape – background – allows the child's attention to be focused on a visual stimulus; the lack of this perception will make it difficult to perform motor acts such as catching the ball, hitting the ball with the racket, etc.
- the oculo-segmental coordination (manual and foot) is also a factor of success in motor activities; it depends on the precision of the motor actions, the appreciation of the hitting force of the objectives.

Physical and sports activities adapted to children with VI

- exercise programs to improve fitness level, motor skills for daily life, mobility, coordination, postural control, weight loss, locomotion skills (correction/learning to walk, run, jump, jump over obstacles, crawl, climbing, etc.), muscle tone, balance, coordination, etc.
- exercises and games in the water
- games to music (learning choreographies to music, in pairs, one being the guide)
- orientation games by sounds (for example, "Hot, cold" - find the object by the sounds produced, estimating the distance from it) - in pairs, in groups ("Find the groups" – the groups must be found, each receiving an identification code by a distinct beep)
- exercises and games with different objects (balls with bells of different sizes, textures, hoops, ropes, flying discs, etc. to learn handling, carrying objects, throwing and catching, throwing at a target,
- guided routes for spatio-temporal orientation
- sports, including for the blind (see the sports with adapted rules included in the program of the Paralympic Games, by adapting to the interests, needs and potential of children):



- goalball, football for the blind, judo, athletics, tandem cycling, swimming, martial arts, rowing, gymnastics, skiing, riding, climbing, etc. (http://www.paralympic.org/sports)
- extreme sports (climbing mountain peaks, water skiing, snowboarding, parachuting, mountain climbing, kayaking, scuba diving, etc.).

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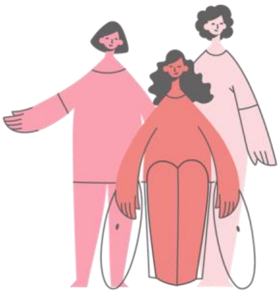

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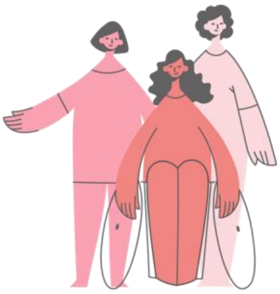


PHYSICAL ACTIVITY IN DEAF IMPAIRMENTS (DI)

Demmys RUSU, Oana RUSU

When we refer to the deaf community, the following situations can be encountered:

- deaf child with deaf parents
- deaf child with hearing parents
- person who was born deaf
- a person who acquired deafness
- people with different degrees of hearing loss.

What is meant by “d/deaf” or “hard of hearing”?

◊ Deaf: Those who identify themselves as deaf (with a capital D) communicate through sign language. These are often those who have been deaf for most of their lives.

◊ deaf: the small d is for those who do not identify themselves as part of deaf culture. These may include those who became deaf later in life.

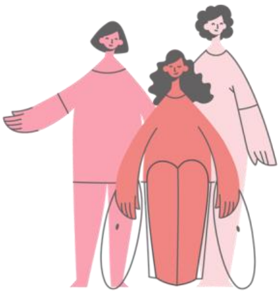
◊ Hard of Hearing (HoH): This describes those who have some hearing loss, but not a total hearing loss.

Hearing impairment is a sensory deficiency in the auditory system with consequences on the activities carried out by the individual, as well as on his interaction with the environment. The typology and etiology of Deaf Impairments (DI) include several criteria for classification according to the factors that determine them:

- according to consequences: o transmission deficiencies or conductive deafness– arising as a consequence of difficulties in the channel for transmitting sound waves from the outside to the inner ear; include malformations of the external or middle ear, defects of the tympanum, obturation or blocking of the external auditory canal, or by the appearance of middle ear conditions - otitis, mastoiditis, infections accompanied by purulent secretions, which block the transmission of sound waves and have a destructive effect on the bone and cartilage structures at this level;

o perception deficiencies – are injuries to the inner ear, the auditory nerve or nerve centers at the level of the cerebral cortex, followed by the total or partial loss of the function of the receptor organ in the inner ear of the auditory nerve;

o mixed impairments – include both types of impairments presented, transmission and perception, arising in connection with conditions such as otosclerosis, surgical sequelae, trauma, etc.



- according to the degree of deficit (classification made according to the International Bureau of Audio-Phonology – BIAF, https://www.biap.org/en/international-bureau- for-audiophonologie)

o mild hypoacusis – slight hearing loss – a hearing loss of 20-40 dB;

o medium hypoacusis – medium hearing loss – a hearing loss of 40-70 dB;

o severe hypoacusis – severe hearing loss – a hearing loss of 70-90 dB;

o anacusia/cophosis – profound hearing loss, deafness – hearing loss of more than 90 dB.

- according to the laterality:

o one-sided deficiencies;

o bilateral impairments.

- depending on the moment of occurrence

o hereditary deficiencies (chromosomal abnormalities, genetic transmission);

o acquired deficiencies

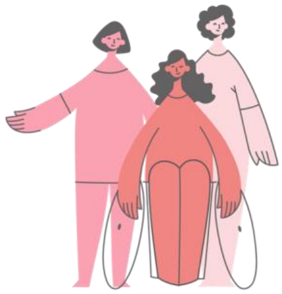
o prenatal deficiencies caused by viral or bacterial infections (rubella, mumps, hepatitis, syphilis, cytomegalovirus, etc.), ingestion of toxic or narcotic substances, alcohol, drugs (tranquilizers), irradiation, diabetes, endocrine and metabolic factors, circulation disorders placenta, Rh incompatibility between mother and fetus, trauma during pregnancy

o perinatal or neonatal deficiencies are determined by obstetric traumas that cause hemorrhages in the inner ear or at the level of the cerebral cortex; anoxia or asphyxia followed by insufficient oxygenation in the cerebral cortex; bilirubinemia or nuclear jaundice;

o postnatal deficiencies resulting from infectious diseases (otitis, mastoiditis, meningitis, encephalitis, scarlet fever, measles, convulsive fever, mumps, etc.), cranio-cerebral trauma, abuse of antibiotics and other medicinal substances, noise trauma, which can also cause some occupational diseases, dystrophic conditions, intoxications, vascular diseases, etc.

These impairments develop, over time, various specificities related to:

- the development of vocabulary
- using the voice or signs
- the ability to understand a written or spoken message
- preferences for verbal communication or sign communication.



Not all hearing-impaired people have similar needs. Depending on the degree of hearing loss and the way of communication, children may develop peculiarities that require the teacher to use different methods of approach in education:

- it is necessary to use sign language for deaf children,
- for children with partial hearing loss or with a cochlear implant, it is necessary to use an adapted message, corresponding to the ability to understand and develop language.

Difficulties in language acquisition, even serious consequences meaning the lack of language, are registered in people with congenital hearing impairment or which appeared in the first years of life. If the deficiency appears after the process of acquiring knowledge has begun, there is a setback in the individual's development process on several components – cognitive, social, psychological, motor, etc.

Typically, hearing loss is a slow, painless process. Therefore, detection and intervention must take place as quickly as possible to prevent unfavorable situations (the appearance of muteness if the language is not acquired to be able to communicate with others, the appearance of speech disorders, the appearance of other delays in cognitive development, Professional training, the occurrence of disadvantageous situations for the person with hearing disorders).

Stereotypes and misconceptions about deaf people are to be avoided!

1. All deaf people sign

The ability and willingness to sign varies from individual to individual. It depends on whether the deaf person was encouraged or discouraged to sign during their formative years and whether they learned to sign later in life.

2. Hearing aids and cochlear implants allow them to hear normally

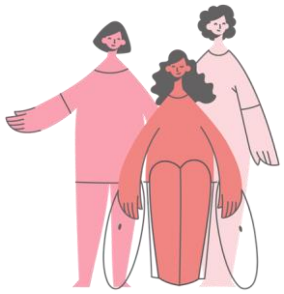
Hearing aids and cochlear implants cannot restore hearing or completely repair hearing loss.

3. Most deaf people cannot speak

Not all deaf people are the same. Some deaf people speak very well and clearly, while others choose not to use their voice, especially if their speech is unintelligible or they have a "deaf accent" or "deaf voice".

4. All deaf people can lip-read

Some deaf people are very skilled lip readers, but many are not. This is because many speech sounds have identical mouth movements.



5. All deaf people understand and participate in the Deaf Culture

Not all deaf people choose to take part in deaf culture. Deaf culture requires a shared language, shared values, beliefs, norms, behaviors, etc. Not all deaf people use sign language. Some deaf people prefer to assimilate into the hearing world as much as possible and avoid associating with other deaf people.

Psychomotor characteristics in the child with DI

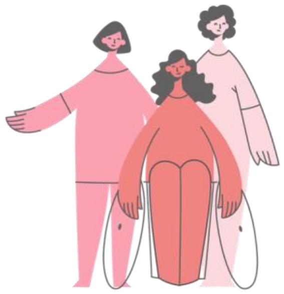
Heredity, social environment and, above all, education direct and condition the psycho-physical development of any person, including those with sensory impairments. Early education, when carried out in all its aspects, can prevent the negative consequences that can exist in the physical and, obviously, mental development of the hearing impaired. Some consequences of speech/oral language underdevelopment of the hearing impaired can be overcome (Anderson et al., 2000, Florea, 2010, Napoli et al., 2015).

There are some opinions that have shown that people with DI show certain motor and balance disorders, that they are physically weaker than hearing people. According to Daicicov (quoted by Popa, 2002b), who fought the opinions of doctors who tended to shed light on these aspects, to the extent that there is the possibility that some consequences of developmental disorders due to the lack of hearing can be removed.

If there are certain physical disorders of the hearing-impaired child, they would be due, first of all, to the fact that they are not trained enough or receive inadequate food or due to isolation from the social micro- and macro-group.

Slight coordination deficiencies, poorer static balance, low indices of resistance to exercise (especially long-term) should be mentioned, also some low indices of respiratory capacity. Research in this sense was carried out by Moțet (2001) who highlighted the fact that these disorders are remedied in the educational process. Some disorders persist especially in those with associated impairments because the same causes that damaged the auditory system also damaged the nervous system.

Erwing and Herren (cited by Popa, 2002a, p. 220) noticed delays in the motor, postural and even affective domains, but the tests or questionnaires they used required mostly verbal answers, which caused difficulties in analyzing mental capacity. They state that the hearing impaired take their first steps later than the hearing due to the lack of verbal and auditory stimulation. In general, the hearing impaired have a destroyed vestibular apparatus, therefore spatial-temporal orientation with the help of hearing is diminished or even non-existent (for example, if they dive into deep water, they have no sense of orientation to the surface and could drown).



For simple deafness, Fourgon mentions disorders only at the level of the vestibular apparatus (cited by Stănică et al., 2001).

Mental development (memory, cognition, analysis and synthesis, understanding, imagination, representation, generalization, etc.) is determined by the particularities and the degree of acquisition of sign language, which can be devoid of nuances and with simplistic rules of the topic of the sentence, which may lead to confusion in the understanding of the received and/or sent message. These traits can also have negative consequences in motor actions.

Delays in speech can cause negative consequences in the psycho-social development of the child with hearing impairment, increasing the gap with other “normal” children, negatively affecting their social integration, but also the appearance of some negative phenomena (feeling of inferiority, depressive states, isolation social, lack of interest, low self-esteem, etc.) (Stevenson et al., 2015, Stănică et al., 2001, Rozorea, 2003).

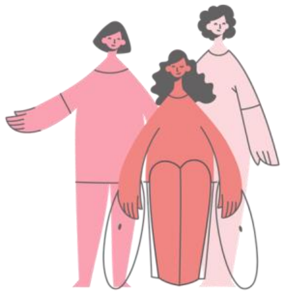
Nemček (2017) postulates that self-esteem (SE) is considered an integral part of the self-concept and can be defined in terms of positive feelings about oneself. It is an integral part of an individual’s sense of self-worth, a primary component of mental health, a strong indicator of a healthy lifestyle, and an important indicator of well-being.

Studies of self-esteem in people who are deaf or hard of hearing (D/HoH) suggest that the dominant hearing culture has relegated them to less valued social categories such as disabled and foreign (Kent, 2003, Theunissen et. al., 2014, Warner-Czyz et al., 2015, Limaye, 2004). Such prejudice, discrimination and stigma are likely to be psychologically damaging, a view echoed by Bat-Chava (2000) who found that deaf people had reduced self-esteem due to stigmatization of the deaf community.

Teachers, parents, therapists, and other specialists have focused their efforts on increasing self-esteem, based on the premise that high self-esteem will cause many positive outcomes and benefits (Vaccari & Marschark, 1997, Rozorea, 2003, Marschark, 2007, Anderson et al., 2000, Rusu & Rusu, 2017, 2019). One way to boost self-esteem is to participate in physical activities and sports.

Cristea et al. (2014) identify a number of objectives of these motor activities adapted to people with hearing impairments:

- the development of the musculature of the chest and its elasticity;
- educating the respiratory act and increasing the vital capacity;
- educating the ability to coordinate the sense of balance and rhythm;
- contribution to the demutization process;
- developing the acuity, precision of the senses, the ability to perceive space and time;
- educating attention, will, decision-making capacity, imagination and the ability to act in the integrative group;



- the development of confidence in individual possibilities, the desire for social integration and participation in group actions.

The website www.professionals.cid.edu/top-6-physical-education-considerations-for-students-with-hearing-ss/ proposes a top 5 considerations for practicing motor and sports activities for students with hearing loss who to respond to the following concerns of those who work with them (teachers, therapists, etc.):

- will his/her device break?

- should I be worried about static electricity?

- the gym is so noisy. Will he/she be able to hear me?

1. Student's hearing loss and devices used

- It is important to be familiar with the degree of the students hearing loss, as well as what type of device(s) they are using.

- We need to familiarize ourselves with the devices they wear and the basics of troubleshooting (e.g., how to change a battery, how to insert an ear mold, how to attach a cochlear implant magnet, etc.).

- Moisture can also cause problems with hearing aids. If the student becomes excessively sweaty, it is necessary that the device can be inserted into a dry-aid kit to absorb the excess moisture.

2. The noise level in the gym and/or outside

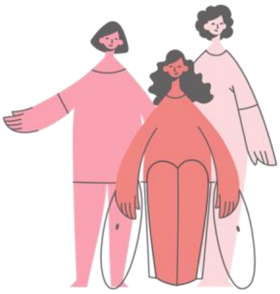
- Gyms and outdoors are naturally noisy environments and it is important to know this for all students, but especially for a student with hearing loss. It can be easy for a deaf or hard of hearing student to miss important aspects of the lesson. Here are some ways to minimize this:

o Using an FM system. FM systems reduce the effects of background noise and send the speaker's voice directly to the student's device(s).

o It is advisable to watch the student when he is speaking and try to slow down his speech rate.

o We must repeat the instructions and, if necessary, pull the student aside to ensure that he has heard and understood the message conveyed or the expectations we have in the motor reproduction of the given directions.

3. The vocabulary used



- Deaf and hard of hearing students often need support and direct instruction when learning new words.

- When introducing a new game or sport, we need to think of all the words/terms that are possibly unfamiliar.

4. Safety

- While hearing-impaired students can participate in most physical activities, there are some safety concerns to be aware of:

o Head injuries and blows: If a student with a cochlear implant is hit with a ball, bumped by a friend, or falls and hits their head, the students parents, teachers, and audiologist should be notified.

o Static: Static electricity produced by plastic slides and playground equipment can be harmful to a cochlear implant.

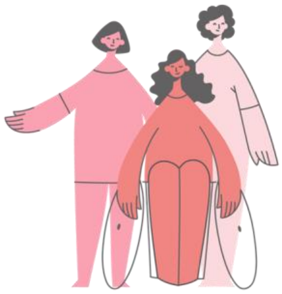
o Device retention: Although not necessarily a safety issue, teachers should be aware of the risk of a device falling during activities. The retention clips that your child's audiologist can provide are a great solution to this problem.

5. Communication

- Regular communication with the student's educational team and parents is essential. It is important to be aware of any changes in the student's hearing loss and/or devices, and it is also important to keep the team informed of any behavioral changes we notice in the student.

Rules of communication with people with DI:

- The discussion should only take place when we are face to face with the person we want to communicate with.
- Reducing the distance to the hearing-impaired person.
- It is not advisable to cover our lips and not turn our head when we speak.
- Reduction of background noises, especially during explanations.
- We need to make sure that the person has understood the message.
- To use facial expressions appropriately / complementary.
- It is preferable that when we communicate with a hearing-impaired person, and not only, that we stop from other activities (any movement disturbs him in terms of focusing attention, understanding the message, etc.)
- The use of helpful materials to facilitate understanding (plans, lines, arrows and drawings drawn on the ground).



- If supporting materials are used (for example, speakers or loudspeakers they should be placed on the ground so that the vibrations produced by them can be perceived; percussion instruments to impose the rhythm of the movement).
- Establishing and using conventional signs for certain movements, exercises, etc.
- It is useful to demonstrate the exercise/game after the explanation to have a better representation of the motor action to be performed.
- If several people (both deaf and hearing) participate in discussions, we should not communicate with hearing people without including the deaf person in the discussion.

During the instructional-educational process, a hearing-impaired child will learn to communicate with the help of sign language, with the help of dactylems (a system of manual signs that replace the letters of the verbal language, respecting certain grammatical rules in formulating the message), he will learn to read lips (llip reading). Generally, the child will use a combination of these forms of communication.

In order to prevent muteness, the child will be subjected to a demutization process, on three components: phonetics (the correct articulation of phonemes/sounds and phonetic structures), lexical (enriching the vocabulary by acquiring as many words as possible) and grammatical (learning some rules in the correct and intelligible construction of sentences).

In order to obtain the most favorable results, the intervention is recommended to be done as early as possible (at the time of diagnosis), preferably at a young or preschool age.

Physical and sports activities adapted to children with DI

Given the abilities of the hearing impaired, being the closest to the "normal" the range of types of motor activities is very wide:

- exercises aimed at developing the cardio-respiratory muscles (respiratory muscles (pectoral, abdominal, intercostal, diaphragm) are targeted to facilitate learning the articulation of phonemes and the production of sounds;
- exercises aimed at developing strength (calisthenic exercises - with your own weight,
- with small loads), taking into account individual characteristics (age, gender, level of development, other associated deficiencies);
- exercises aimed at developing balance (static and dynamic) performed from different
- positions: standing, moving, on flat, stable surfaces, inclined planes, on the bench, on the ball, etc.
- exercises aimed at acquiring basic motor skills (walking, running, jumping, throwing and catching) and applications (crawling, crossing obstacles, carrying objects, climbing)
- individual exercises and games can be used, in pairs and in groups, with competitive character, using combinations of skills (the use of these combinations of skills implies their

previous acquisition and mastery), etc. Applicative paths can also be introduced, including several skills, adapted to the needs and level of development of the child/children with hearing impairments.

- exercises and games aimed at learning to fall, taking into account the contraindications
- specific to the pathology (for example, whether or not he has a cochlear implant, falls or blows to the head that can cause injuries will be avoided).
- the acquisition of specific skills for certain sports (individual and team, even extreme), with rules (acoustic signals are replaced by light signals), adapted material and organizational conditions. All sports have adapted versions so that they can be played by people with hearing impairments and more.

Motor and sports activities can be adapted, having different purposes. On the one hand, we can identify sport-therapy, as a means complementary to physical therapy techniques in the process of functional re-education and reaching the functional optimum, increasing the level of physical condition and health of the individual with deficiencies. On the other hand, elite sport, which aims to achieve sports results by participating in sports competitions at different levels (Rusu & Rusu, 2016). For this category of people, there are sports competitions at differen levels (local, regional, national), as well as a major international competition with a history of almost 100 years - the Deaflympics - recognized by the International Olympic Committee, which it takes place every 4 years, in several sports branches. The Games program includes sports events from over 25 sports branches for the summer edition and from 6 disciplines for the winter edition (https://www.deaflympics.com/sports). The eligibility conditions for this major sporting event are not only for the athletes, who must be hearing impaired, but also for the referees. There are even extreme sports adapted for the deaf.

In conclusion, people who are deaf and those who live actively with hearing loss are able to do things just like most other people.

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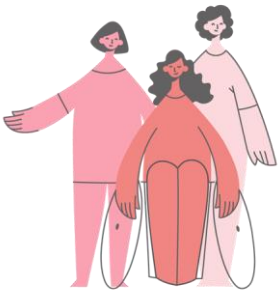

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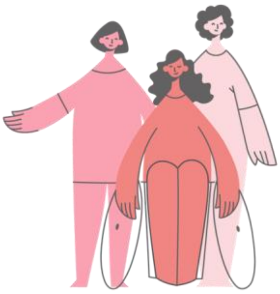

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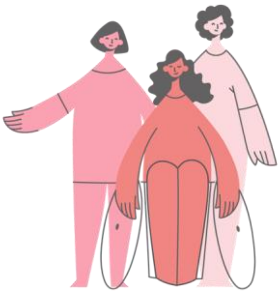


PHYSICAL ACTIVITY IN MENTALLY IMPAIRMENTS

Oana RUSU, Renato Gabriel PETREA

Over time, several concepts have been used, as well as several definitions to delineate intellectual disability. If the use of the term "mental retardation" has now been abandoned (for several reasons, not only for terminological consistency, but also for putting the diagnosed person in a lower situation), the concept of intellectual disability refers to certain limitations in intellectual functioning and in the adaptive behavior of a person that begins to manifest itself before the age of 18 (American Association on Mental Retardation (AAMR), 2002, p. 1, WHO; 2018).

According to the American Association on Intellectual and Developmental Disabilities (AAIDD, 2010) a person can be considered to have an intellectual (mental) impairment if intellectual functioning is below average (IQ test scores are between 70-75, indicating a limitation , if there are significant limitations in two or more areas of adaptive skills (conceptual skills - language and literacy; concepts of money, time and number; self-direction; social skills - interpersonal skills, social responsibility, self-esteem, gullibility, prudence, problem-solving social issues and the ability to follow rules/follow the law and avoid victimization; practical skills – activities of daily living/personal care, occupational skills, health care, travel/transportation, schedules/routines, safety, behavioral limitations adaptive), if the condition manifests itself before the age of 18.

In recent years, the tendency to diagnose a person with an intellectual disability and to place him in a certain degree of impairment no longer takes into account only the measurement of intellect, but also the limitations in these adaptive behaviors.

4 types of intellectual deficiency are identified (Sattler, 2002, p. 337, cited by Shree & Shukla, 2016), taking into account the scores obtained when testing the intelligence quotient (IQ):

- *borderline intellect or mild mental deficiency* with an IQ between 55-69; mental age in adulthood is between 8 years and 3 months – 10 years and 9 months; (most individuals diagnosed with intellectual disability fall into this category);
- *moderate mental deficiency* includes individuals with an IQ between 36-51, the mental age when reaching adulthood is between 5 years and 7 months – 8 years and 2 months; (10% of those diagnosed are registered); they need special educational interventions;
- *severe mental deficiency* includes people with an IQ between 25-35, the mental age when reaching adulthood is between 3 years and 2 months - 5 years and 6 months; (3.5% of those diagnosed are registered); these people are partially recoverable, able

of assimilating a minimal amount of knowledge but insufficient to ensure a totally independent activity, they are "instructable up to a certain point";

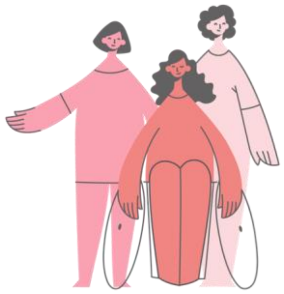
- *profound mental deficiency*, the most serious form, targets the person who has an IQ < 20 (the mental age reached as an adult is < 3 years and 2 months); 1.5% of those diagnosed are included in this category, not having the ability to self-control, to communicate with others through language.

Studies highlight multiple factors in the etiology of intellectual disability. McLaren & Bryson (1987, cited by Shree & Shukla, 2016) postulate that approximately 70% of people with severe intellectual disabilities and 50% of people with mild intellectual disabilities have an organic or biological basis for their disorder. On the other hand, the interaction between genetic and environmental factors can cause cognitive deficits in children at the lower end of the normal IQ distribution (Achenbach, 1982, cited by Shree & Shukla, 2016).

AAMR (2002, p. 127) identifies the following types of factors that influence the occurrence of intellectual deficiency: *biomedical* (biological processes – genetic disorders, nutrition); *social* (social and family interaction – stimulation and receptivity of adults); *behavioral* (factors that refer to potentially causal behavior – dangerous/harmful activities or maternal substance abuse; *educational* (factors that refer to the availability of educational supports that promote mental development and the development of coping skills). These factors can influence at different times of life of the person diagnosed with intellectual deficiency: during the prenatal period - during the intrauterine period, the child can be affected by different viruses and parasites - rubella, syphilis, toxoplasma), metabolic disorders (Rh incompatibility between mother and child), toxic factors (food poisoning, tobacco, alcohol, drugs); in the perinatal period - trauma, hemorrhages, apoxia, obstetric trauma during childbirth, premature birth; postnatal period - brain trauma, intoxication and poisoning, meningitis, abuse, malnutrition, etc.

In general, the less severe the delay, the greater the likelihood that a particular cause cannot be determined. No two children with intellectual disabilities are the same, even if they have the same etiological factor (Shree & Shukla, 2016). Intellectual disability can co-exist in combination with physical, sensory and/or psychiatric impairments (autism spectrum disorders/ASD, attention deficit/hyperkinetic/ADHD) (NDS, 2016, cited by Kapsal, 2019).

In an adaptation of the Association on Intellectual and Developmental Disabilities (AAIDD), Shree & Shukla (2016) propose a four-level support system, depending on the child's potential: a) intermittent – support is given as needed, occasionally and over time short; limited – the support is consistent, for a limited period, sometimes more consistent; c) extensive – support is provided daily, through regular involvement and without time limit; d) pervasive – permanent, constant and high-intensity support is required in all tasks (and daily,



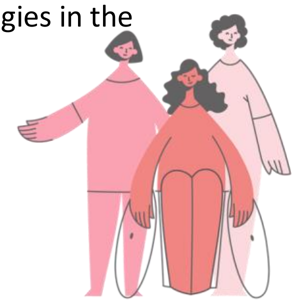
personal activities, but also other types of activities in which he/she is involved, for example, motor ones).

Psychomotor characteristics in the mentally retarded child

Children diagnosed with intellectual disability have significant difficulties in intellectual and adaptive functioning, their quality of life being affected, in terms of development and performance in daily, academic, motor and socio-professional activities. Several executive and non-executive processes are affected, depending on the degree of impairment with which it is diagnosed: thinking, language, perception and memory with negative consequences on learning impairment and behavioral control. The effects are even more visible if the child or adolescent is diagnosed with attention deficit hyperactivity disorder (ADHD) or/and autism spectrum disorder (ASD) with ADHD, with unnecessary or exaggerated motor reactions, uncoordinated movements (Fotiadou et al., 2020).

Physical activity has been analyzed as a method to improve the physical and psychosocial health of children and young people with intellectual disabilities. Several studies highlight the existence of the relationship between the motor ability and the cognitive development of children, the motor and cognitive functions being coupled at the level of the cerebellum, the neural connections at the level of the pre-frontal cortex being important in expression, as well as the fact that both develop at the same time in - an accelerated rithm (5-10 years), having common underlying processes (Diamond, 2000, Ahnert et al., 2003, Anderson, 2002; Gabbard, 2008, Hartman et al., 2010, cited by Westendorp et al., 2011). Thus, brain dysfunctions generate motor and cognitive difficulties, and intervention programs in primary school can bring benefits. There are studies that have shown that children with intellectual disabilities have a lower level of gross motor skills compared to typical children. Furthermore, lower level of motor skills is related to lower level of academic achievement (reading, maths, spelling) for children aged 6-12 with learning difficulties: dyslexia in children was associated with lower scores on skills of locomotion (e.g., walking, running, jumping, balance, etc.), math difficulties with balance difficulties and objects control skills (Westendorp et al., 2011).

It is proven that people with intellectual disabilities are less physically active than typical people, rarely reaching the level of daily physical activity recommended by the WHO (WHO, 2018). This trend strengthens in adulthood (Dairo et al., 2016; Robertson et al., 2017; Hinckson & Curtis, 2013, cited by Maïano et al., 2022). Therefore, several physical indicators are recorded that show a deteriorated state of physical health: higher body mass index (BMI), obesity, weaker cardiovascular capacity, high blood pressure, endocrinological problems (hypothyroidism, diabetes), oral disorders, muscle-skeletal (very low muscle tone especially in those with Down Syndrome), early menopause, (Yanardag et al., 2013, Walsh et al., 2018, Wallén et al., 2013, cited by Hansen et al., 2023). To these are added other pathologies in the



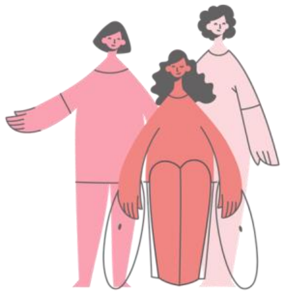
field of mental health: dementia, depression, anxiety, epilepsy, mood changes (NDS, 2016; Straetmans, van Schrojenstein Lantman-de Valk, Schellevis, Dinant, 2007; WHO, 2018, cited by Kapsal, 2019). All of these have negative effects on motor skills: difficulties in controlling balance, low gross and fine motor skills, etc. (Pitetti et al., 2017, Collins & Staples, 2017, cited by Hansen et al., 2023.

Among the psycho-social features of individuals with intellectual disabilities are recorded in studies: difficulties in social interactions, in communication and language, dependence on those in their care (family members), limited participation in daily and physical and sports activities, esteem low self-esteem, low motivation to participate in competitive physical and sports activities, difficulties in group integration. Due to their cognitive, social and sometimes physical limitations, young people with intellectual disabilities tend to show lower levels of independence (Nota et al., 2007; Wehmeyer, 2005, cited by Kapsal, 2019), as well as in the communication of attitudes, feelings and emotions through suitable gestures.

The factors that condition the level of psychomotor development of children with intellectual disabilities (Marquis & Baker, 2015, Dairo et al., 2016, Sundahl et al., 2016, Robertson et al., 2017, Robertson & Emerson, 2010, Klang et al., 2019, Laxton et al., 2022, Carbone et al., 2021, Maïano et al., 2022):

- the severity of the condition (in mild mental deficiency there are delays in motor coordination and control of movements, in precision, balance, etc., while in the case of severe deficiency, the movements are totally devoid of meaning and precision, they are without any coordination or control, appear stereotypes such as trunk swaying, arm waving, tiptoeing, etc., muscle tone is very low, etc.; those with mild and moderate disabilities are more active than those with severe impairments)

- associated diagnoses (some diagnoses can have negative consequences at the motor level)
- gender (girls are much more inactive and have lower gross and fine motor skills than boys)
- of age (children with intellectual disabilities are more active than adolescents in the same condition, and children and young people with intellectual disabilities are more active than their adult peers, who reach a very low level of practicing physical activities)
- environmental (socio-economic aspects - poor neighborhood, disorganized, single-parent families, family-type houses, low family income, coming from a rural environment, harassment, stereotypes and prejudices from the community, transport costs, lack of knowledge of options etc. can influence access to physical activities)
- the system of values and conceptions of family members, friends

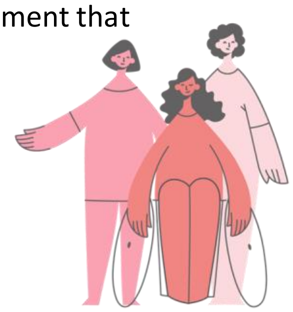


- lack of opportunities to practice physical and sports activities (lack of adaptation of sports facilities, equipment and materials, types of exercises and games to the level of their motor skills, interests and needs)
- the lack of programs and policies at community level (schools, organizations and sports clubs, etc.) that facilitate knowledge of the problems of this group, but also of social inclusion.

Specific strategies adopted by those working with children with intellectual disabilities

- Carry out a preliminary assessment of the child's cognitive functionality, as well as any contraindications/limitations, but also previous experiences in practicing physical and sports activities. Information can also be obtained from the educational counselor in the school, the child's family members, doctor, etc.

- Use the child's name before giving instructions.
- Maintain constant eye contact.
- In the case of a child with ASD and ADHD, alert the child to make eye contact throughout the explanation and demonstration.
- The explanation should be short, with simple words familiar to the child. Repeat and ask for repetition of newly introduced concepts.
- Demonstrate the exercise. Repeat the demonstration if necessary.
- Use multisensory learning strategies (if the first movements are performed with help, by leading through the movement, in the end, he must perform on his own, even without demonstration, to become aware and coordinate segmentally, generally).
- Work together with the child, as in the mirror.
- Encourage independent work
- Gross motor skills are taught, which ensure balance/stability of the body in motion (movement skills – walking, running, jumping)
- Using equipment and materials that do not cause injuries in use.
- Objects (eg large balls) are used when practicing object control skills (throws and catches, kicking, handling objects, etc.)
- Limit and signal the work space (highlighted lines drawn on the ground, placement of cones, etc., reduce the distance between the child and the teacher)
- Technical details are less important, at most 1-2 technical elements.
- Use equipment that prints the rhythm of the movement (whistle, clapping, drums, counting, etc.)
- Provide help and support in the execution of the movement, as needed, to prevent injuries
- Allow the child to become familiar with the work area/equipment used.
- Ensure that the area is safe and does not have access to materials and equipment that can cause injury or that you do not use.

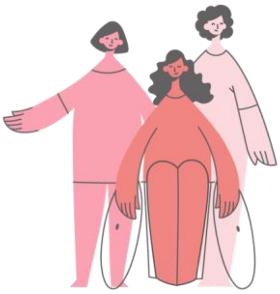


- Make sure he understands what he has to achieve, what he should/shouldn't do.
- Set simple rules. Make sure they respect them.
- Use simplified rules for different sports (for example, no penalty if the ball falls twice on the tennis table or on the tennis court, double-dribble in basketball, etc.).
- Adapt the equipment and materials, the work space to the child's needs, interests and level of psycho-motor development.
- Encourage and praise any response (intention or execution of the requested movement)
- Encourage and praise independent work.
- Reinforce successful executions by giving them the opportunity to practice more.
- Use intuitive materials (boards, drawings, etc.) choose exercises and games that involve them constantly, without being taken out of the game if they make a mistake.
- Use adapted rules (for example, rules regarding technical execution, "double-dribble", ball rolling instead of dribbling etc. are not taken into account).
- Share with other professionals (teachers, therapists, coaches), parents the experiences, the knowledge with children with intellectual disabilities.

Physical and sports activities adapted to children with intellectual impairment

The practice of physical and sports activities by children and young people with intellectual disabilities aims to achieve some objectives, which can be specific to the formal educational or leisure environment:

- developing the level of physical health by following some indicators: educating body posture, increasing muscle tone, increasing aerobic capacity, educating breathing, educating body weight control
- training of locomotor skills and control of objects
- education of psychomotor components (body scheme, laterality, static and dynamic balance, coordination of general and segmental dynamic movement, spatio-temporal orientation, manual dexterity, etc.)
- educating behavioral control by adapting reactions to environmental stimuli and limiting unnecessary, exaggerated movements
- learning specific sports skills, adapted to the level of motor skills, needs and interests of the child with intellectual disabilities
- learning some knowledge about motor actions and from the regulations of some sports.
- developing the level of psycho-social health: educating the motivation for movement, facilitating social integration and inclusion, facilitating social interactions and relating to others, reducing the level of negative behaviors (depressive states, isolation, anxiety, etc.).

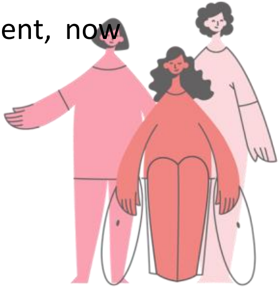


Types of adapted motor and sports activities

Depending on the severity of the disability, motor activities can have different objectives and forms, from the simplest exercises (gross movements), games (simple passes in two players), to exercises and games with more complex rules or even sports with adapted rules. In general, motor activity programs include:

- exercises aimed at increasing muscle tone and muscle strength (exercises can be performed individually, in pairs, in groups, with and without objects, with and without weights)
- exercise programs to improve aerobic capacity (cycling exercises, walking, running at different paces, over different distances, cycling, swimming, hiking, etc.), in the gym or outdoors.
- exercises and games aimed at learning locomotor skills (walking, running, jumping, crawling, crossing obstacles, etc.) and object control skills (throwing, catching, throwing at a target, kicking, etc.)
- exercises and games (individual, in pairs, in threes, in groups) for learning some psychomotor elements (general and segmental motor coordination, laterality, body scheme, spatio-temporal orientation, static and dynamic balance, manual dexterity) under stimulating conditions sensory
- learning choreographies to various music to learn rhythm, concentration and memory, coordination of movements (musical dances and games to folk, modern music, etc.).
- exercises and games in the water for getting used to the water, for learning some swimming styles.
- exercises and games that follow social interactions (awareness of the other, cooperation, coordination of the actions of the two) – passes in pairs, game in 2, in the mirror, physical activities in the open air as occupational therapy activities (fishing, hiking, caring for animals such as horses or walking a dog, gardening, etc.)
- exercises for attention, for controlling actions and maintaining the task for a longer period of time (routes in which they must perform sequences of motor actions)
- breathing exercises (different yoga breathing techniques are useful).

Sports activities have different purposes: sports-therapy, which uses certain specific skills from certain sports in order to (re)educate functional and reach the functional optimum, increase the level of physical condition and health of the person with deficiencies; performance sport, which aims to achieve sports results by participating in sports competitions at different levels (Rusu & Rusu, 2016). In this sense, a sporting event, now



global Special Olympics, was established in the mid-60s in the USA, by President Kennedy's sister, for people with Down Syndrome and intellectual disabilities (https://www.specialolympics.org/what-we-do/sports/sports-offered?locale=en). Over time, this event became an institution, being adopted in many countries, being involved in addition to athletes, a large number of volunteers, but also international public figures from different fields of activity. Rules are adapted for over 30 sports, several for summer (athletics, dance, basketball, volleyball, handball, softball, swimming, badminton, bocce, bowling, cricket, table tennis, field tennis, competitive cheer, horse riding, golf, artistic and rhythmic gymnastics, judo, swimming and open water swimming, motor activity program, triathlon, sailing, roller skating, rugby, football). Winter sports are fewer in number (snowshoeing, speed skating, alpine skiing, country skiing, snowboarding, figure skating), although there are also some prohibited sports branches and events (athletics - javelin, discus, hammer, pole vault, triple jump, swimming - platform jumping, gymnastics - trampoline, cross-country skiing, biathlon, jumping, fencing, archery, shooting). All sports have adapted rules, athletes entering the competition after assessments of abilities and degree of impairment, with medical advice required. There are also several sports called unified sports (https://www.specialolympics.org/what-we-do/sports/unified-sports?locale=en) which promote social inclusion by being played in teams of people with and without intellectual disabilities (teams are similar in age and abilities), being clear rules for the role of those without disabilities in the team (Mumpuniarti et al., 2021).

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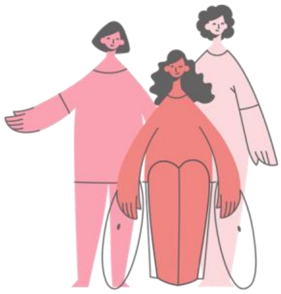

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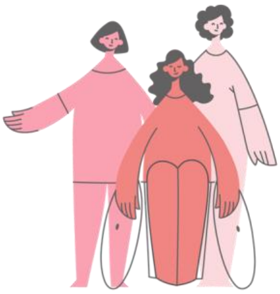

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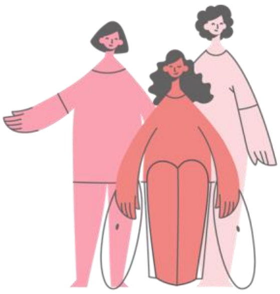


PHYSICAL ACTIVITY IN PHYSICAL IMPAIRMENTS (PI)

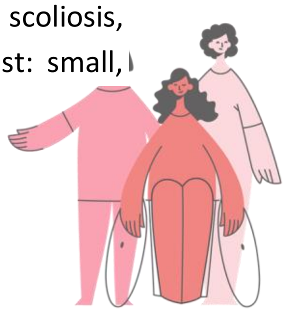
Liliana-Elisabeta RADU, Ileana-Monica POPOVİCİ, Oana RUSU

Physical disabilities/impairment (PI) are disorders that affect the physical form and functions of the body. It is characterized by more or less pronounced morphological changes, produced in the shape and structure of the body and manifested by a slowness or excessive growth, by a developmental disorder or disproportionate development, by deviations, deformations or other structural defects, followed by or preceded by functional disorders. They are the result of hypo- or hyperfunctions, imbalances or incoordination of the functions of the locomotor apparatus.

In general, they look like bodily disabilities that weaken the body's strength and mobility through external or internal pathological changes located in the whole body or only in some of its segments.

The criteria for classifying PI are multiple:

- by affected structures: deficiencies given by morphological structures (structural changes of bones, muscles, joints); deficiencies given by functional aspects (muscle tonicity, muscle mobility, postural and balance reflexes, static and dynamic strength)
- depending on their evolution, they can be: static (definitely fixed, very difficult to correct); evolutionary (progressing or regressing).
- by prognosis: stationary, non-evolving, evolving
- from the point of view of severity, there are: mild physical deficiencies - first degree (they can be corrected quite easily by performing corrective movements: kyphotic deficiency, neck tilted sideways or forward, shoulders brought forward or asymmetrical, chest in flexion); medium grade - grade II deficiencies (partially corrected or remain unchanged: kyphosis, lordosis, deformations of the abdomen or chest, hyposomia, disproportions between segments); pronounced deficiencies - of the III degree (most deficiencies of this type are determined in intrauterine life (for example, malformations of the locomotor apparatus) or as a result of paralysis, bone and joint trauma, infections of the bones, muscles, joints or blood vessels; grade IV deficiencies (bone collapse and exaggerated changes in the body that threaten the individual's life).
- from the point of view of the included area: global deficiencies, segmental deficiencies (at the level of the head and neck – large head, thick neck or head and neck tilted forward, sideways, twisted, torticollis; at the level of the spine: kyphosis, scoliosis, lordosis, kypholordosis; at the level of the back; at the level of the chest: small,



atrophic, protruding, sunken chest; at the level of the abdomen: protruding abdomen; at the level of the pelvis: tilted forward, sideways, backward; at the level of the upper limbs (asymmetric shoulder blades/shoulders, distant, changes of the shape and size of the arms and forearms, deformations of shape, mobility, motility in the hands/fingers) and lower (hip asymmetries, genu varrum, genu valgum), flat foot, equine varus, hollow, etc.).

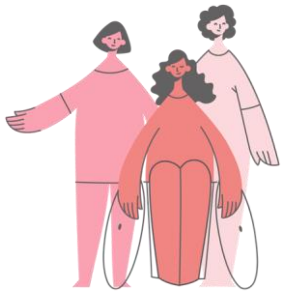
Some PIs can be caused by neurological or locomotor disorders. Sometimes it is difficult to establish the boundary between the neurological and the locomotor level. It is necessary to correct them in order to establish whether they are in the stage of defective attitudes determined by a functional disorder of the locomotor apparatus or are deformations resulting from changes in the shape and structure of the body.

According to Piera (1987, cited by Cristea et al., 2014) the appearance of PIs is due to: neurological conditions (cerebral motor disability (cerebral palsy), trauma and cerebrovascular accidents, multiple sclerosis, peripheral neurological conditions, sequelae of poliomyelitis, epilepsy, myasthenia, spinocerebellar heredo-degenerations); osteoarticular conditions (arthrosis, postural deviations, bone fragility); muscular disorders (muscular dystrophies, myopathies); amputations of the lower and or upper limbs (in different proportions).

There are a multitude of causes that can determine the appearance of PIs, which can be determined in different periods of life (prenatal, perinatal, postnatal) by multiple factors: genetic (genetic malformations, hereditary and non-hereditary anomalies); biological (infectious-contagious diseases, metabolic diseases, tumors, etc.), accidents; environmental factors (toxic environment, substance abuse, etc.).

It is necessary that both the family members of the child with PI, as well as the medical or school staff, pay attention to the detection, prevention and correction of these deficiencies that can negatively influence, not only the state of physical health (normal growth and harmonious development of the body, changing the appearance externally, reducing the skills and power of adaptation to physical effort, diminishing work capacity), but school, professional performance, quality of life, as a whole. Periodic medical examinations carried out in the school found that at this stage of life there are few students who have a correct body attitude, a large percentage of them presenting morphological and functional defects, located at the level of the locomotor apparatus.

Stopping, ameliorating and correcting is done through a special lifestyle, according to the prescriptions of the doctor and the physiotherapist, the physical education teacher, according to a well-established program, alternating effort with rest and in which corrective physical exercises are at the forefront.



Children with pronounced deficiencies, with pathological changes that have reached an advanced stage of evolution, are different from other healthy children, physical effort not being recommended, exemption from physical education being recommended. They should be referred to recovery centers, where specialized corrective and restorative treatment should be applied.

The thresholds between deficiencies are easily crossed if educational factors do not intervene in time, through a careful and periodic observation of groups of students. It is recommended that the school teacher and nurse have knowledge of the biological and medical data of each child, thus establishing the possibilities of integration in the instructional-educational process, establishing the measures that are required to prevent and correct these deficiencies.

The level of physical inactivity of people (children, youth, adults alike) is known and of interest to typical people. Even more alarming is the reduced level of physical activity, associated with the increase of comorbidities (obesity, diabetes, cardiovascular diseases, depression, etc.), in people with deficiencies, regardless of their type. It is proven that they are much more inactive than healthy ones, regardless of the socio-demographic factors and the severity of the disability. Adults with PIs are much more inactive than children and adolescents with the same type of impairment, but this is also true for those with other types, and they are much more inactive than typical ones. The greater the degree of impairment, the more these individuals with impairments become very inactive, the degree of autonomy is greatly reduced, social isolation having major influences (especially for those in wheelchairs).

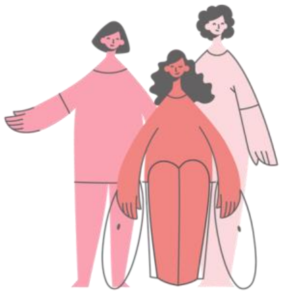
Although the benefits of physical activities are known for all categories of individuals, but especially for those with PIs, the active lifestyle remains at a low level. The positive effects can be found on physical health (weight loss, physical functionality, increase in muscle tone, cardio-respiratory fitness, etc.), quality of life, psychological well-being, societal participation, prevention of non-communicable diseases (Bloemen et al., 2017).

The nature of the physical disability usually limits children from regularly participating in physical activity, their overall health can be compromised.

As in the case of the other deficiencies, several studies show that the determining factors in engaging in physical activity are multiple (Li et al., 2016):

- personal (severity of the condition, associated pathologies, fear of injury, gender, age, motivation or enjoyment of the practice)

- social (prejudices and stereotypes of others, value system of family members, standard of living, family income, single-parent or disorganized family, lack of support or acceptance from others, etc.)



- environmental (lack or insufficient adaptation of facilities and equipment, costs, lack of knowledge about opportunities to practice physical activities, lack of adapted physical activity programs, professionals to work with them, etc.).

Regular physical activity helps to maintain health and quality of life, including preventing and reducing the risk of chronic diseases (US Department of Health and Human Services, 2018). Promoting a physically active lifestyle has become an increasingly important issue in health policy in many countries. An active lifestyle is accompanied by several benefits, such as improving physical condition, in addition to strengthening health. In people with various conditions, an active lifestyle reduces the risk of secondary health conditions and positively influences the body's functional capacity (van der Ploeg HP, 2004).

Physical activities to prevent and correct PIs

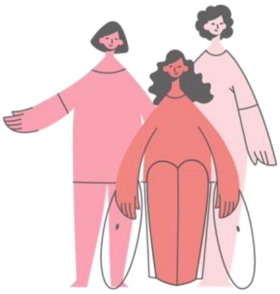
The objectives of corrective physical exercises are aimed at:

- toning the muscles of the deficient segment to maintain it in the correct attitude
- correcting secondary deficiencies that appear either in the same segment or in immediately adjacent segments;
- recovery and conscious maintenance in normal attitude, followed by creation of the correct reflex for this position.

We will further refer to physical activity directed at people who have been diagnosed with various conditions, such as cardiovascular disease, obesity, diabetes, asthma and cancer. These are among the most widespread diseases worldwide. Also, people suffering from these diseases are frequently recommended to participate in physical activities to contribute to obtaining positive effects following the specific treatment (Bushman, 2011).

Types of motor activities adapted for persons with Pıs

- The basic means for the correction of PIs is the corrective exercise which represents a static or dynamic bodily action, included in the general requirements for practicing physical exercises in compliance with the rules: anatomical, physiological, biomechanical, used to prevent or correct physical deficiencies. The exercise must tone the muscles that provide the necessary force to maintain the affected segment in the correct position and attitude, acting, at the same time, on the nervous system at the level of which the stereotype of recovery and the automation of the correct movement and posture are achieved.



- Corrective elements of gymnastics - many elements of basic gymnastics can contribute to the correction of PIs. Gym equipment provides the opportunity to perform corrective exercises with high therapeutic efficiency (for example, fixed ladder, gymnastic bench, fixed bar, rings, grid ladder). Various corrective exercise complexes can be performed.

- Various sports (swimming has the greatest corrective value through the variation of movements required; rowing can correct thoracic deficiencies; cycling corrects pelvic deficiencies, basketball, volleyball, table and field tennis in a wheelchair).

- Exercises and games that involve learning skills specific to certain sports, but that follow compensatory movements, controlling posture.

- Different games in pairs, trios or groups that can facilitate social integration, communication and awareness of different positions of segments or the whole body compared to others.

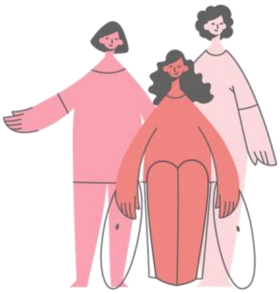
- Exercises that improve aerobic capacity (fast walking, jogging, pedaling a stationary bike, etc.)

- Exercises to develop muscle strength

- Breathing exercises (breathing techniques from yoga)

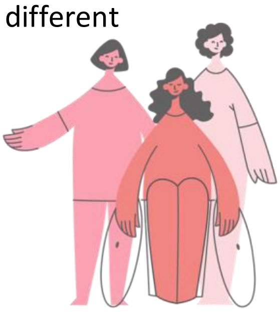
- Exercises to increase muscle tone (stretching exercises).

- Competitive sport (many sports have adapted rules for which sports competitions are organized at different levels - local, regional, national, international - for different categories of people with physical and related impairments. The Paralympic Games is the major sports event, which is organized from 4 to 4 years from 1960 (Summer Games) and 1976 (Winter Games) respectively at the same location and 3 weeks after the Olympic Games (https://www.paralympic.org/) Sports events are organized for 22 sports adapted from summer (in a wheelchair - athletics, basketball, rugby, table tennis, fencing, field tennis, sitting volleyball, bocce, powerlifting lying down, para canoe, rowing, taekwondo, etc.) and 6 adapted winter sports (snowboard , para alpine skiing, cross country skiing, biathlon, ice hockey, wheelchair curling) (https://www.paralympic.org/sports). Athletes are medically assessed and placed in special categories before the competition (https: //www.paralympic.org/classification), being eligible athletes with visual impairments, people with physical disabilities, athletes with amputations, people with cerebral palsy, people with spinal cord injuries and other categories (Les autres – athletes with a physical, which do not appear in any of the previously mentioned categories (for example, people with muscular dystrophy) (Rusu & Rusu, 2016).



Specific strategies adopted by those working with children with Pıs

- Carry out a preliminary assessment of the child's motor functionality, as well as any contraindications/limitations, but also previous experiences in practicing physical and sports activities. Information can also be obtained from the educational counselor in the school, the child's family members, doctor, etc.
- Use the child's name before giving instructions.
- Set the right goals for the skills (realistic, progressive goals, adapted to the child's current possibilities
- The explanation should be short, with simple words familiar to the child. Repeat and ask for repetition of newly introduced concepts.
- Demonstrate the exercise. Repeat the demonstration if necessary.
- Use multisensory learning strategies (if the first movements are performed with help, by leading through the movement, in the end, he must perform on his own, even without demonstration, to become aware and coordinate segmentally, generally).
- Work with the child in the mirror or use a mirror to become aware.
- Maintain constant eye contact, especially during explanation and demonstration.
- Use equipment that prints the rhythm of the movement (whistle, clapping, drums, counting, etc.)
- Using equipment and materials that do not cause injuries in use.
- Adapt the equipment, the work space to the child's psycho-motor potential, needs and interests.
- Use assistive equipment (pillows, rolls, tubes, rafts, etc.)
- Provide help and support in the execution of the movement, as needed, to prevent injuries
- Allow the child to become familiar with the work area/equipment used.
- Ensure that the area is safe and does not have access to materials and equipment that can cause injury or that you do not use.
- Secure the child in the equipment (for example, the wheelchair must be equipped with straps to secure the lower limbs, the wheels must be equipped with a bar and auxiliary wheels, etc.; protective equipment for those who have amputations of different



segments of the upper / lower limbs - pants with protection, for example if you practice sitting volleyball)

- Set simple rules. Make sure they respect them.
- Make sure he/she understands what he/she has to achieve, what he/she should/shouldn't do.
- Encourage and praise any response (intention or execution of the requested movement)
- Encourage and praise independent work.
- Reinforce successful executions by giving more practice.
- Use simplified rules for different sports
- Use intuitive materials (boards, drawings, etc.) choose exercises and games that involve them constantly, without being taken out of the game if they make a mistake.
- Share with other professionals (teachers, therapists, coaches), parents experiences, knowledge with children with PIs.

PHYSICAL ACTIVITY IN CHRONIC DISEASES

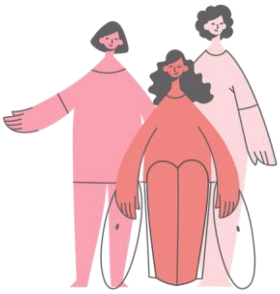
Physical activity in cardiovascular diseases

Cardiovascular diseases are a class of diseases that are related to the heart or blood vessels, including stroke, heart failure, high blood pressure, coronary heart disease, cardiac arrhythmia, peripheral arterial disease, or atherosclerosis (Yong, Lin & Tan, 2017). With the aging of the population, cardiovascular diseases are the leading cause of death globally. A study published in 2015 stated that approximately 17.9 million deaths worldwide were caused by cardiovascular diseases (GBD, 2015).

Regular physical activity and exercise favorably influence many of the risk factors for cardiovascular diseases, a fact also emphasized by Tian & Meng (2019).

Physical Activity recommendations (Bushman, 2011)

- aerobic exercise at least three times per week, preferably daily for those who want to lose weight;



- aerobic exercise at least five days a week for those with high cholesterol, to maximize calorie consumption;
- aerobic exercises performed 5-7 times a week can help people with blood pressure;
- the duration of a session is between 20-60 minutes, in the beginning a session can be 5-10 minutes, then it can gradually increase;
- a reasonable goal would be to burn around 1000 calories in a week by participating in aerobic activities (walking, running, cycling, swimming);
- to reduce the risk of injuries, a 5-10 minutes warm-up with low intensity (for example stretching exercises or walking with a low intensity) is recommended before starting the actual program;
- exercises to develop muscle strength, to be performed with moderate intensity (avoid the use of isometric exercises).

For those who want to reduce the risk of heart attack and stroke, 40 minutes of moderate-to-vigorous aerobic activity 3 or 4 times per week is recommended (Lobelo et al., 2018).

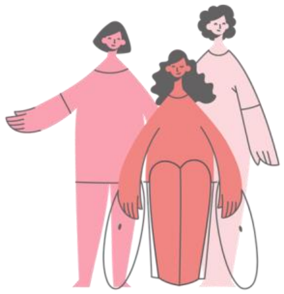
Physical activity in patients with obesity

Obesity, determined by calculating the body mass index, refers to a BMI greater than 30, and overweight includes people with a BMI greater than 25. Obesity among children and adults has reached 50% of the world's population and is trending to increase from one decade to another (Ortega, Lavie & Blair, 2016).

Physical activity recommendations

Rahl (2010) encourages 30 minutes of moderate-intensity physical activity daily. People aiming to manage body weight and prevent weight gain are encouraged to participate in 60 minutes of moderate-to-vigorous activity each day. For sustained weight loss, the goal is 60-90 minutes of moderate-intensity activity daily. Exercises for the development of muscle strength, joint mobility, as well as cardiovascular exercises bring additional benefits, i.e., improving the level of physical condition.

In order to promote health and control weight, in addition to physical exercise, diet and eating habits play an important role.



Physical activity in people with diabetes

Diabetes is a common disease characterized by elevated blood sugar (American Diabetes Association, 2016).

Physical activity recommendations

Exercise plays an essential role in the prevention and management of diabetes, especially in preventing the complications often associated with diabetes. The benefits of exercise for those with diabetes are well documented. Most people diagnosed with diabetes were characterized as physically inactive, ie less than 10 minutes per week of moderate or vigorous physical activity (Salwa et al., 2023).

Among the most recommended activities we find: walking with low and moderate intensity, cycling, running, walking during breaks at work, gardening, doing housework, etc.

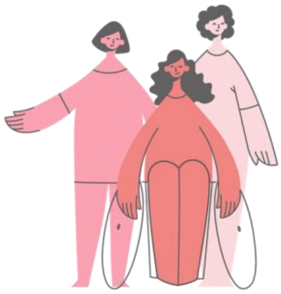
Physical activity in people with asthma

Chronic lung diseases are significant causes of morbidity and mortality worldwide. There is compelling evidence that pulmonary rehabilitation improves exercise tolerance, reduces symptoms, and increases quality of life (Bădeanu and Popescu, 2019).

According to AMCS (2011) and Baylea et al. (2018), among the benefits of practicing physical activities by people identified with asthma, we mention: reducing symptoms of depression and associated anxiety, increasing quality of life, decreasing the number and severity of crises; increasing the number of symptom-free days; increasing the maximum volume of oxygen per unit of time; increasing lung ventilation per minute; improving tolerance and resistance to exercise.

Physical Activity recommendations (Bushman, 2011)

- Aerobic exercises, with a frequency of 3-5 days a week and a duration of 20-60 minutes. Activities types: walking, cycling, swimming.
- Exercises for the development of muscle strength, with a frequency of 2-3 days per week (non-consecutive), 8-10 free exercises, with elastic bands, machines, 8-12 repetitions. Exercises for the large muscle groups: glutes, abdomen, back, arms, lower limbs.
- Exercises to develop joint mobility and muscle elasticity, ideally 5-7 times a week. Stretching is done by maintaining the stretching position for 15-30 seconds, repeating 2-4 times. It can be done in the closing part without causing discomfort.



Physical activity in cancer patients

Exercise is now prescribed as part of standard cancer care because it can help manage the toxicity and side effects of cancer therapy, as well as fatigue and depression. Physical activity provides many benefits for cancer patients both during and after treatment. Due to the improvement of cancer treatments, the population of cancer survivors is increasing, so it is important to emphasize the benefits of physical activity in reducing the risks of other chronic diseases. Additionally, there are improvements in quality of life for cancer survivors who participate in physical activities.

Physical activity recommendations

- At least 150 minutes of moderate-intensity exercise or 75 minutes of vigorous-intensity aerobic exercise (e.g., walking, jogging, cycling, swimming) each week
- 2-3 resistance exercises (e.g., weight lifting) each week involving moderate to high intensity exercises targeting the main muscle groups.
- Exercises must be adapted to the patient's abilities, the adverse effects related to the treatment he is undergoing, the progress of the disease and his general state of health (Cormie et al., 2018).

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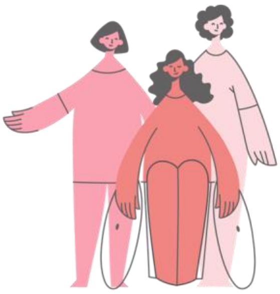

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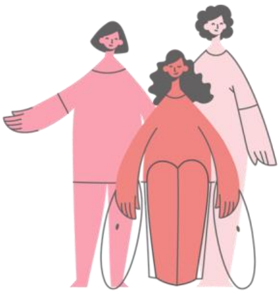

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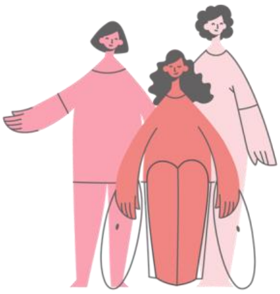


PHYSICAL ACTIVITY IN AUTISM SPECTRUM DISORDER (ASD)

Oana RUSU, Demmys RUSU

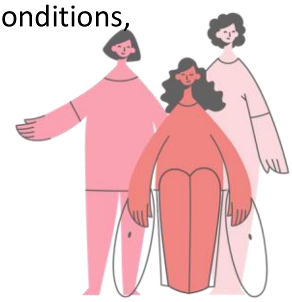
Autism spectrum disorders (ASD) refers to the group of neurodevelopmental disorders (according to DSM-V) or pervasive developmental disorders (according to DSM-IV, 2014) characterized by two types of symptoms: communication and social interaction deficiencies and behavior, interests, limited and repetitive activities. It manifests itself throughout life, negatively influencing physical, mental, academic, social functioning and performance. Usually, the onset of ASD occurs from 1 to 2 years of age, while some symptoms can be seen in the first year after birth (Peeters, 2009).

The concept of autism spectrum disorders (ASD) is used because there is variety in the manifestation of autism, in different degrees of impairment, from the minor form to the severe form of manifestation; symptoms in the complete or partial version in the clinical picture. The World Health Organization (WHO, 2021) indicated that children with ASD show deficits in cognitive functions, characterized by social disturbances, abnormalities and repetitive stereotyped behavior. The severity of ASD varies from mild to severe, depending also on their association with various levels of intelligence which, in turn, vary from profound learning difficulties to average intelligence or, in rarer cases, to superior intelligence (the so-called "autistic savants", people who have a special talent - "islands of genius", in certain fields: mathematics, astronomy, music, graphics, etc.). The term spectrum refers to the fact that there are widely varying degrees of impairment from one child to another and within the same child over time.

Autism is found more frequently in boys than in girls (3-4 times higher). The key elements in the case of a child with ASD are diagnosis at an early age and early initiation of educational intervention and appropriate treatment, if required (psychiatric care is not necessarily required as in mental illness, but rather, an intervention is approached specialized education to develop the child's skills for his social integration). The type and severity of symptoms experienced by individuals with ASD can cause delays in the diagnostic assessment process (Male et al., 2023).

Neurodevelopmental disorders may include autism, attention deficit hyperactivity disorder/ADHD, intellectual/learning disabilities, developmental language disorder, and developmental coordination disorder and may be associated with an increased risk of developing mental health conditions (anxiety, depression, low motivation, stress, eating and sleeping disorders, etc.) (Male et al., 2023, Muneer & Sultana, 2019).

The cognitive function, with its forms – executive and non-executive, manifests as the ability to process, learn and solve different situations. It is altered in neurodevelopmental conditions,



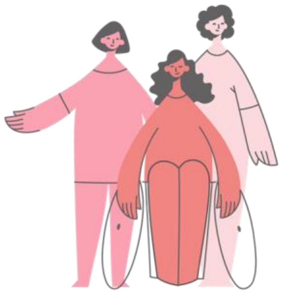
both in autism and in ADHD. Executive functions refer to adaptive skills and the individual's ability to direct actions toward achieving goals, while non-executive functions include attention, learning, memory, visual, language, and social function (DSM-V, 2013).

Qualitative changes in the behavioral and communication areas of the individual with ASD are based on unbalanced information integration processes - contextual and/or sensory perception. Thus, the context can be perceived differently, fragmented, and the information obtained with the help of the sensory systems is entered into the brain as separate puzzle pieces. Thus, the individual will have difficulties in perceiving the whole and assigning the correct meaning, difficulties in planning and organizing activities, difficulties in understanding his own behavior and that of others. The child with ASD needs more time to process the information received from the sense organs and arrange them into a whole so that they can react adaptively, functionally. The risk of making a mistake in matching the parts is much higher, especially when the amount of information is large. When he can no longer manage this processing, the child "explodes".

It is scientifically proven that people diagnosed with ASD have sensory processing disorders, in a wide spectrum (from differences that represent mild impairment, difficulties - a more pronounced form, to dysfunction, the severe form of impairment) (Ayres, 2005, Stock Kranowitz, 2022, Oster & Zhou, 2022). The brain of a child with ASD adjusts the adaptive, functional reactions differently to various information received on the 7 sensory systems (proprioceptive, vestibular, visual, tactile, auditory, gustatory, olfactory). The degree of sensitivity determines different behaviors, some of the children being hyperreactive, others hyporeactive, while others are looking for sensations from the stimuli received from the environment.

Under the TSA umbrella are:

- *Early infantile autism* - includes severe disorders of social functions, language skills and repetitive behaviors, often associated with mental retardation and convulsive phenomena. Among the clinical symptoms, necessary for diagnosis, are included: extreme autistic loneliness, with onset in early childhood; obsessive and anxious desire to keep things the same, any kind of change in routine or environment leading to severe auto and/or hetero-aggressive seizures; in some cases, special mechanical memory, without obvious practical utility; echolalia (repetition of heard words and expressions), without the possibility of using language for authentic communication; hypersensitivity to stimuli manifested by strong reactions to noises, to certain foods, to certain textures; the absence of the diversity of spontaneous activities with the limitation of actions to stereotyped and repetitive movements and interests; quasi-absence of language; depending on the severity of the condition, those with severe autism are unable to acquire language.

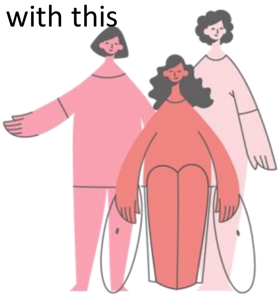


- *Asperger's syndrome* - is the most common form, a less severe form, which appears after the age of 3, often at 5-6-7 years, which manifests itself in a specific way at the level of the "triad of disabilities". People with such disorders have fewer speech problems; tend to have average to very high intelligence; have less learning disabilities that might be associated with autism; in some children, however, forms of dyslexia, dyspraxia or attention deficit hyperactivity disorder (ADHD) may appear; it is difficult to accept changes in the daily routine, which is why the syndrome can initially be confused with obsessive-compulsive disorder; frequently, they present an underdevelopment of motor capacities, being perceived as clumsy; often shows a special sensitivity to bright light and certain noises; as a rule, they become obsessively interested in a single subject / object; they learn all about their favorite subject and then talk non-stop about it only; in adulthood, they have a higher risk of developing anxiety and depressive disorders.

Although people diagnosed with Asperger syndrome usually have some disability, they often have exceptional intelligence and talent in an area where they excel in mathematics, memory for numbers or text, event or spatial memory, musical or graphic talent).

- *The disintegrative disorder of childhood* - is the most severe but also the rarest form of disorders in the autistic spectrum. After a period of normal development, most frequently between 2 and 4 years, children with TDC ("childhood disintegrative disorder" - CDD) quickly lose skills, especially in the following areas: social, language, intellectual. Frequently, these children develop a seizure disorder. Cases of TDC present severe impairments that cannot be recovered. During the first two years after birth, the development is apparently normal (communicates verbally and non-verbally specific to the age, establishes social relationships, plays and has adapted behavior). Later, before the age of 10, significantly loses previously acquired abilities (for example, delay or lack of spoken language, stereotyped and repetitive use of language, absence of creative play, unable to develop relationships with others, lack of social and emotional reciprocity, motor difficulties, bladder or bowel control, repetitive and stereotyped patterns of behavior, interests and activities, including motor stereotypes, appear).

- *pervasive developmental disorder not otherwise specified (PDD-NOS)* or *atypical autism* - can apply to most children with ASD. Children with autism of higher severity than Asperger's syndrome, but not meeting the criteria for typical autism, are diagnosed with PDD-NOS ("pervasive developmental disorder, not otherwise specified"). The child has disorders of social interaction; language skills more developed than in children with typical autism, but inferior to children with Asperger's syndrome; less repetitive behaviors than children diagnosed with Asperger's or those with typical autism; a later age of onset. The symptoms of autism in children with this



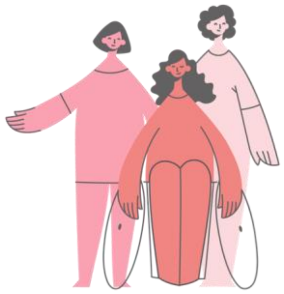
diagnosis are very varied, being difficult to specify. Compared to other forms of ASD, in children with atypical autism, no two children with PDD-NOS have exactly the same symptoms. The diagnostic criteria for this disorder are not established consensually, so if for the specialized evaluators a child has an autism spectrum disorder, without meeting all the criteria for the diagnosis of autism itself, the diagnosis of pervasive developmental disorder (PDD) is made or atypical autism.

There is scientific evidence that proves that ASD can be determined by genetic factors (multigenic interactions or spontaneous gene mutations) (Junaid & Pullarkat, 2001, Kazilbash et al., 2017), environmental (viral infections, medications or complications during pregnancy, atmospheric pollutants, etc.) and physiological (dysfunctions in the connections of the frontal and prefrontal cortex and with other parts of the brain) (Bremer et al., 2020, Just et al., 2007, Wass, 2011, cited by Li et al. , 2023).

The measures of actual intervention, described by Crăciun et al. (2017), aims at 1. Establishing an intervention plan with a graph on the main areas of development (language, autonomy, socialization, cognitive, motor skills) - what is missing or deficient, what requires more effort and the actual intervention by an interdisciplinary team according to these needs (pediatrician, psychiatrist/neurologist, psychologist, ABA therapist, speech therapist, physical therapist, occupational therapist, etc.). 2. The choice of therapies (applied behavioral analysis – Applied Behavioral Analysis /ABA, TEACCH – treatment and Education of Autistic and Communication Handicapped Children, PECS – Picture Exchange Communication System, HANEN programs, Son-rise, sensory integration therapy, Floor Time, therapy occupational therapy, physiotherapy 3. Compliance with the personalized intervention plan (PIP) developed by the interdisciplinary team within the educational system (integrative school, special school) 4. Constant communication with educators/teachers and the correlation of the educational program applied at school with the one at home. 5. Adherence to psycho-pharmacological treatment and/or diet. 6. Collaboration with the professionals of the intervention team in order to generalize the behaviors acquired in the therapy sessions aimed at improving the quality of life of the child with ASD. 7. Education and training of parents (adapting the approach of the parent - attitude, behavior, etc.) in order to collaborate effectively with one's own child.

Motor activities in children with ASD

The complex rehabilitation program for children with ASD contains, in addition to other activities, movement therapy, focused on the development of movement skills and handling of objects (gross and fine motor skills), psychomotor development through the acquisition of psychomotor components: static and dynamic balance, laterality, body scheme, general dynamic coordination and oculo-motor, manual dexterity, etc.



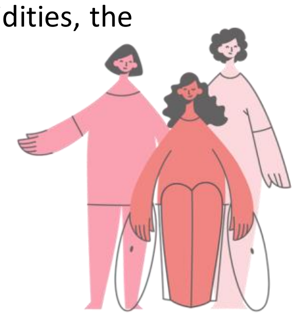
Positive effects have been reported in children with ASD on physical health: maintain/reduce body mass index near normal, improve cardiovascular function increase muscle tone, aerobic capacity, regulate certain internal functions (e.g., intestinal transit), brain oxygenation and brain development, improves sleep in terms of duration and quality (Arkesteyn et al., 2021, Nacario, 2016, Lee & Hodge, 2017, Carbone et al., 2021, Yu et al., 2018).

In addition to the positive effects in the motor area, motor activities have social and emotional effects that contribute to the improvement of the quality of life, the child transferring the skills learned in physical education lessons/physiotherapy sessions/training sessions in physical and sports activities in free time, such as and in other sequences of their life, thus being able to cope with the demands of social life. Like motor skills, social, emotional, cognitive, communication skills are practiced during motor activity sessions (Jia et al., 2023, Muneer & Sultana, 2019, Ferreira et al., 2018). Vigorous exercise has also been shown to decrease aggression and self-aggression, self-stimulation, hyperkinetic behavior, and stereotypies (Bahrami et al., 2012, Alhowikan, 2016). By reducing these elements, children will fit better into their environment. Other effects of physical activities aim at improvements in mental health (reducing the level of anxiety and depression, establishing a work schedule by creating routines that confer a feeling of well-being, self-control of emotions, especially in social interaction situations, reduce or avoid isolation social etc.) (Yu et al., 2018, Zhao & Chen, 2018). Physical activities and sports are beneficial for social interactions – establishing and maintaining friendships, acceptance from others, etc. (Li et al., 2023, Kocak et al., 2021, Muneer & Sultana, 2019).

Children with ASD in mild and moderate forms have poor development and delays in gross and fine motor skills. There are studies that show that they are affected: muscle strength, body posture, coordination, balance, the acquisition of basic skills (moving - walking, walking in balance, running, jumping, crossing obstacles, climbing, crawling and controlling objects – throwing, catching, hitting, kicking, rolling, throwing at a target), fine motor skills (manual dexterity), the ability to relax and control body movements, sensory-motor functions (maladapted and dysfunctional reactions to different stimuli perceived with the help of sensory systems – hyper-reactivity, hypo-reactivity, sensation seeking) (Muneer & Sultana, 2019, Sorensen & Zarrett, 2014).

The positive influences of physical activities on cognitive function, both executive and non-executive, are highlighted, including improvements in academic and behavioral performance (Pan et al., 2017, Milajerdi et al., 2021). Thus, improvements in attention, memory, of cognitive flexibility, inhibitory control of body movements (Bass et al., 2009, Ward et al. 2013, cited by Li et al., 2023, Tan et al., 2016, Hassani et al., 2020a, 2020b, Srinivasan et al., 2014, Rech et al., 2022).

Arkesteyn et al. (2021) postulate that although they are at higher risk of comorbidities, the level of severity of autism does not influence participation in physical activities.



Why are motor activities and sports useful for children with ASD? Because I can contribute to:

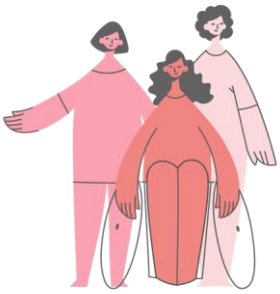
- improving the ability to generalize some learned notions
- training/strengthening the habit of following some rules
- improving the ability to receive and analyze short and medium messages
- communication development
- improving the ability to pay attention during an activity
- the development of personal autonomy
- the formation of motor skills that will be useful in certain activities specific to social inclusion
- a harmonious physical development of the child who spends many hours at the table for various therapeutic activities.

Even if, basically, the exercises and games used have the same structures, they look different and have different objectives for each individual child, being adapted according to the level of development of motor, cognitive, social skills, interests and needs. Individual therapy sessions, including motor therapy, are generally organized for children with ASD. Sowa and Meulenbroek (2012) note several advantages of individual treatment: personalized adaptation, avoiding the feeling of not being understood by the child with ASD by others, unpredictability of others' actions.

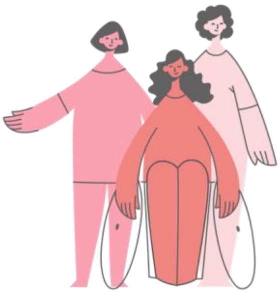
When the child is used to the specifics of the activity, team activities can be introduced, with another child of an appropriate level, the objectives here being also communication and collaboration during the performance of the work task (team work). Group sessions can also be successfully organized (Breedved et al., 2010, Lox et al., 2010, Walker et al., 2010, cited by Sowa & Meulenbroek, 2012).

Work strategies for those working with children with ASD

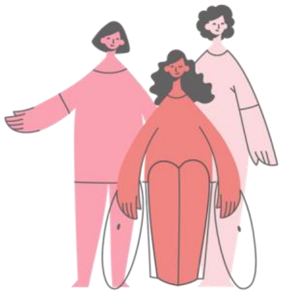
- In the case of motor agitation / aggression / anger it is recommended (Crăciun et al., 2017):
  - Avoiding unannounced, sudden changes (the child must be notified, warned about the change). Use the visual diagram to prepare the changes.



  - Controlling the level of sensory stimulation, by reducing the overload (for example, if they cover their ears with their palms to noises, use an antiphonic headset or earplugs).
  - Matching the tasks to the child's potential.
  - Identifying the signs that precede agitation / anger / crisis of aggression and the situation in which such behaviors occur. Apply functional analysis to that behavior.
  - Change the environment and factors that can create stress and anger, as much as possible.
  - Distracting the child's attention towards one of his favorite activities.
  - Stopping the problem behavior using a calm but firm tone and clarity in expression (what, where, when, who, how). ("Stop! Now we both sit on the sofa, play for five minutes with ... something the child likes; after five minutes, we go back to work and do ... x 3 times.
  - Create a safe, supervised area where the child can retreat if they have trouble coping with certain moments or situations.
  - Encourage and support him for physical activities (jumping on the gymball, running on the stationary bike, dancing, water exercises, etc.).
- Establish clearly the work objectives and what are the priorities in the intervention (the skills with the greatest difficulties, but also the skills where they perform). Get information from the personalized intervention plan, from members of the interdisciplinary team, from parents or other relatives.
- Use the child's name before giving instructions.
- Request and maintain eye contact when stating any requirement. For a child with ADHD, alert the child to make eye contact throughout the explanation and demonstration.
- The explanation should be short, with simple words familiar to the child. Repeat and ask for repetition of newly introduced concepts.
- Demonstrate the exercise. Repeat the demonstration if necessary.
- Work together with the child, as in the mirror.
- Provide help and support in the execution of the movement, as needed, to prevent injuries

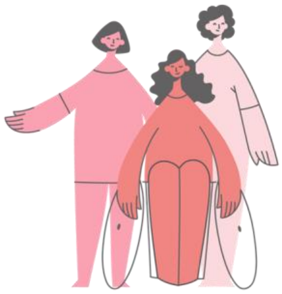


- Reinforce successful executions by giving more practice.
- Encourage and praise any response (intention or execution of the requested movement)
- Encourage and praise independent work.
- Use multisensory learning strategies (if the first movements are performed with help, by leading through the movement, in the end, he must perform on his own, even without demonstration, to become aware and coordinate segmentally, generally).
- Gross motor skills are initially taught, which ensure balance/stability of the body in motion (movement skills – walking, running, jumping)
- Clear the space of unnecessary equipment.
- Using equipment and materials that do not cause injuries in use.
- Adapt equipment and objects to the child's motor potential, interests and needs
- Limit and signal the work space (highlighted lines drawn on the ground, placement of cones, etc., reduce the distance between the child and the teacher)
- Technical details are less important, at most 1-2 technical elements.
- Use equipment that prints the rhythm of the movement (whistle, clapping, drums, counting, etc.).
- Allow the child to become familiar with the work area/equipment used.
- Set simple rules. Make sure they respect them.
- Make sure he/she understands what he/she has to achieve, what he/she should/shouldn't do.
- Use simplified rules for different sports (for example, no penalty if the ball falls twice on the tennis table or on the tennis court, double-dribble in basketball, etc.).
- Use intuitive materials (illustrated panels, drawings, films, etc.), choose exercises and games that involve them constantly, without being thrown out of the game if they make a mistake.
- Share with other professionals (teachers, therapists, coaches), parents experiences, knowledge with children with ASD/ADHD.



Types of motor activities adapted to children with ASD

- games in the company of animals (therapy with animals – dolphins, trained dogs)
- 3C therapy (coordination, awareness, concentration) (http://www.sportautism.ro/)
- before the start of the educational activity, to increase the proportion of correct answers and work tasks completed in school environments - it is recommended to walk or run
- for self-control of breathing - yoga
- for positive results in social relations and decreasing the level of irritability and hyperactivity, of stereotypical behaviors – horse riding, martial arts, swimming, yoga
- for controlling body movements – mirror exercises.
- for coordination, learning rhythm, spatial-temporal orientation – exercises in different planes, with different objects, different choreographies to music
- routes that include different sequences of actions (walking in balance, going over obstacles, walking between cones with an object in hand, manipulating objects, etc.); the transitions from one task to another are announced initially, later, executing in autonomous conditions.
- learning some elements (technical skills) from sports with rules adapted, simplified to the level of understanding, degree of cooperation, etc. - basketball, football, table tennis, field tennis, etc.
- to increase the level of fitness (muscular, cardiovascular) - calisthenics, running, cycling, walking on various terrains, etc.
- for memory and attention – games with changing the place, with associations, etc.
- for balance – walking on different surfaces, at different heights, going up and down stairs, jumping on two and one leg, with alternation, jumping in different planes and combinations.



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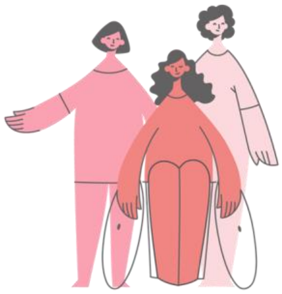

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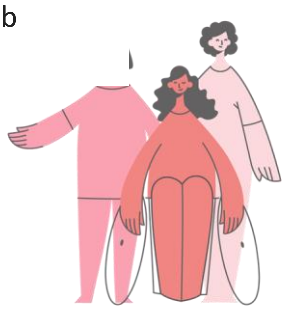

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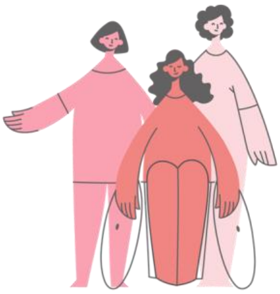

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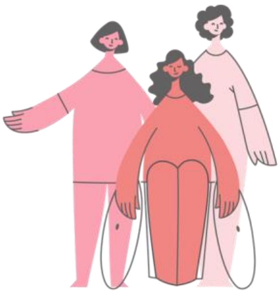


CHAPTER 2

HEALTHY LIVING AND NUTRITION

Duygu DEĞİRMENCİ MATARACI

Sections

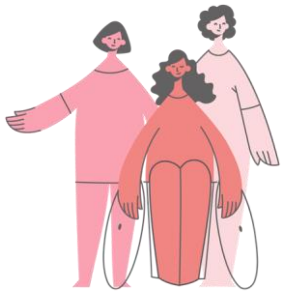
- General Information
- What is Healthy Eating? What are the Nutritional Elements?
- What Should Be Considered in Nutrition in Children with Special Needs?
- What are the Nutritional Recommendations for Children with Special Needs?
- What Can Be Done for Healthy Eating in Schools?

GENERAL INFORMATION

Nutrition is a central and foundational place in a healthy life. It is one of the most influential factors that determine your overall well-being. Proper nutrition provides the essential nutrients your body needs to function optimally. These nutrients include **carbohydrates, proteins, fats, vitamins, minerals, and water**. When your body receives the right balance of these nutrients, it can maintain its physical health, repair tissues, regulate bodily processes, and resist diseases. Nutrition provides the energy required for everyday activities and exercise. Carbohydrates are a primary source of energy, while proteins and fats also contribute. The right balance of these macronutrients ensures you have the stamina and vitality to lead an active and fulfilling life.

★ A well-balanced diet rich in fruits, vegetables, whole grains, lean proteins, and healthy fats can help prevent chronic diseases like heart disease, diabetes, obesity, and certain types of cancer. The nutrients in these foods promote cardiovascular health, regulate blood sugar levels, and reduce inflammation.

★



Nutrition plays a critical role in maintaining a healthy weight. By making mindful choices about what you eat and controlling portion sizes, you can achieve and sustain a weight that supports your overall health. This is essential for preventing obesity-related health problems.

★Research suggests a strong connection between nutrition and mental health. Nutrient-dense foods can positively affect mood, cognitive function, and mental well-being. Conversely, a poor diet high in processed foods and sugar may increase the risk of mental health issues like depression and anxiety.

★Fiber-rich foods, found in fruits, vegetables, and whole grains, promote healthy digestion. A diet high in fiber can prevent constipation, promote regular bowel movements, and support the gut microbiome, which is essential for overall health.

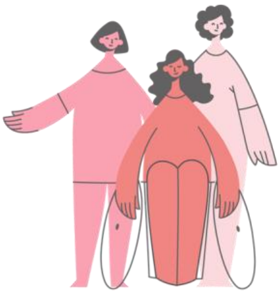
★Proper nutrition provides the vitamins, minerals, and antioxidants needed to strengthen the immune system. A robust immune system can defend against infections and illnesses, helping you stay healthy.

A balanced diet that supports good health can contribute to a longer, more vibrant life. By reducing the risk of chronic diseases and age-related health issues, nutrition plays a significant role in promoting longevity. After illness or injury, the body requires specific nutrients for healing and recovery. Adequate nutrition can speed up the healing process and minimize complications. Nutrition directly impacts your daily life. It affects your energy levels, your ability to engage in physical activities, your cognitive function, and even your mood. A diet that prioritizes nutrition can enhance your overall quality of life.

In summary, nutrition is not just one aspect of a healthy life; it is the foundation upon which a healthy life is built. What you eat has a profound and lasting impact on your physical health, mental well-being, and overall longevity. Therefore, making informed and balanced choices about your diet is essential for achieving and maintaining a healthy and fulfilling life.

WHAT IS HEALTHY EATING? WHAT ARE THE NUTRITIONAL ELEMENTS?

Healthy eating refers to the practice of consuming a variety of foods that provide essential nutrients to support overall health and well-being while maintaining an appropriate calorie balance. A balanced and nutritious diet can help prevent chronic diseases, promote optimal growth and development, and sustain energy levels throughout the day.



Key nutritional elements in healthy eating include:

1. Macronutrients

Carbohydrates: These are the body's primary source of energy and are found in foods like grains, fruits, vegetables, and legumes. Complex carbohydrates, such as whole grains and fiber-rich foods, are preferred over simple sugars.

Proteins: Essential for growth, repair, and the production of enzymes and hormones, proteins are found in sources like lean meats, poultry, fish, beans, tofu, and dairy products.

Fats: Fats provide energy, support cell growth, and assist in the absorption of fat-soluble vitamins. Healthy fat sources include avocados, nuts, seeds, and olive oil. Limit saturated and trans fats found in processed and fried foods.

2. Micronutrients

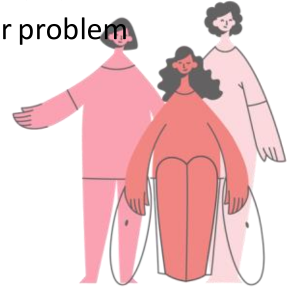
Vitamins: Essential for various bodily functions, vitamins can be obtained from a well-rounded diet that includes fruits, vegetables, whole grains, and lean proteins. For example, vitamin C is found in citrus fruits and broccoli, while vitamin D can be obtained from sunlight and fortified foods.

Minerals: Minerals like calcium (found in dairy products and leafy greens), iron (in lean meats and beans), and potassium (in bananas and sweet potatoes) are crucial for maintaining good health.

Fiber: Dietary fiber is essential for digestive health and can be found in foods like whole grains, fruits, vegetables, and legumes. It helps prevent constipation, regulates blood sugar levels, and supports heart health.

WHAT SHOULD BE CONSIDERED IN NUTRITION IN CHILDREN WITH SPECIAL NEEDS?

Adequate and balanced nutrition is of utmost importance for children with special needs, as it plays a crucial role in their overall physical and mental development. However, it is worth noting that children with special needs are more vulnerable to certain nutritional problems than their typically developing peers. One of the most common issues encountered in this population is obesity, which can be caused by a number of factors such as a lack of physical activity, medication side effects, and unhealthy eating habits. Malnutrition is another problem



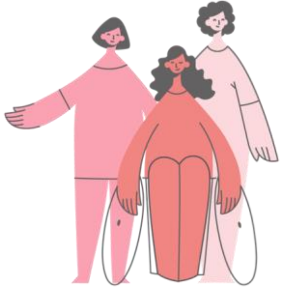
that can arise, especially in children with sensory or behavioral issues that affect their ability to eat and choose healthy foods. In addition, children with special needs may also be at risk of developing vitamin and mineral deficiencies due to their limited food intake or absorption issues. Constipation and diarrhea are also frequently reported, often as a side effect of the medication used to manage their conditions. Furthermore, some children with special needs may experience difficulty in chewing and swallowing, which can lead to further nutritional problems. Dental caries is another issue that affects this population, as children with special needs may have difficulty maintaining proper oral hygiene or may consume high-sugar foods and drinks that can contribute to tooth decay. Thus, it is important to pay special attention to the nutritional needs of children with special needs and address any issues that may arise in a timely manner.

It is widely recognized that children with special needs often experience significant nutritional problems that can negatively impact their growth, development, overall health, disease symptoms, and cognitive performance. These challenges can be particularly daunting for parents and caregivers, who may struggle to identify and manage the complex array of medical and nutritional issues that can arise. However, by providing children with special needs with proper nutrition, it is possible to help mitigate some of these concerns and improve their overall quality of life.

In addition to ensuring that children with special needs receive the necessary daily nutrients, a nutrient-rich diet can also play a critical role in reducing the incidence and severity of disease symptoms. For example, research has shown that a diet rich in fruits, vegetables, and other nutrient-dense foods can help reduce inflammation and oxidative stress, both of which can contribute to a range of health problems in children with special needs.

Moreover, proper nutrition can also help improve cognitive performance and support healthy brain development. This is particularly important for children with special needs, who may be at increased risk for cognitive delays and other developmental challenges. By providing a diet that is rich in essential nutrients, such as omega-3 fatty acids, iron, zinc, and vitamin B12, parents and caregivers can help support healthy brain function and promote optimal cognitive development in children with special needs.

Parents and caregivers of children with special needs should have a wealth of knowledge about nutrition. This knowledge is extremely important because it can help reduce potential problems that may arise in unexpected crisis situations. Moreover, this knowledge can play a significant role in improving the overall quality of life of these children. With proper nutrition information, parents and caregivers can ensure their children receive all the essential nutrients and vitamins necessary for their well-being. This, in turn, can reduce the likelihood of future health problems or complications. Additionally, having a strong understanding of nutrition can help parents and caregivers advocate better for their children's health and



nutritional needs. It is clear that a high level of nutritional knowledge is an incredibly valuable asset for anyone caring for a child with special needs.

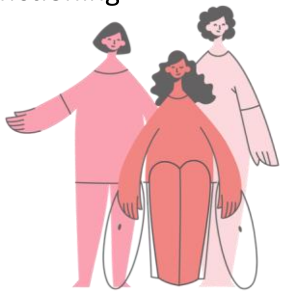
In short, while the challenges facing children with special needs can be significant, proper nutrition can play a critical role in promoting their overall health and well-being. By prioritizing a nutritious diet and working closely with healthcare providers and nutritionists, parents and caregivers can help provide children with special needs with the support they need to thrive.

WHAT ARE THE NUTRITIONAL RECOMMENDATIONS FOR CHILDREN WITH SPECIAL NEEDS?

1. Obesity: Obesity is a common nutrition-related health problem in children with special needs, caused by both a lack of physical activity and poor appetite control. This problem is frequently experienced by children with physical disabilities, visual impairments, Down syndrome and autism. In addition, unexpected crisis situations such as Covid-19 can cause an increase in time spent at home, leading to a decrease in physical activity and an increase in consumption of high-energy foods such as bread, cake, pastry, and pastries, which further contribute to obesity.

During unexpected crisis situations, stress can lead to an increase in the consumption of sugary foods and beverages, as well as high-fat and carbohydrate foods, resulting in weight gain. To prevent or treat obesity, a low-energy balanced diet should be planned, and foods containing high energy should be avoided. Skipping meals should be avoided, and adequate and balanced nutrition programs should be followed. Foods should be cooked using healthy cooking methods. Energy expenditure should be increased by increasing physical activity. To increase physical activity at home during unexpected crisis situations such as Covid-19, one can exercise with exercise videos, use sports equipment at home (such as an elliptical bike or treadmill), dance, and jump rope.

2. Malnutrition: Malnutrition is a common problem encountered by mentally and physically handicapped individuals as well as children with ADHD. The main reasons are lack of hunger-fullness control in mentally retarded individuals, nutritional needs being met by a caregiver, difficulty in chewing and swallowing in children with physical disabilities, and high energy requirements due to excessive activity in children with ADHD. Malnutrition results in reduced functional capacity, decreased physical activity, reduced gastrointestinal tract functions, adverse effects on the immune system, deterioration in psychological functioning



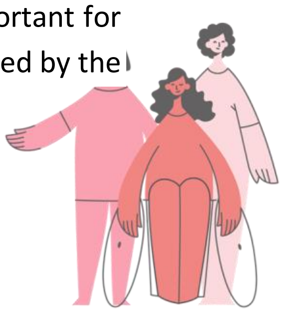
and quality of life, slowed growth and development, and increased disease costs. To prevent or treat malnutrition, the following should be done:

- Increase the number of meals per day.
- Consume a balanced diet containing sufficient energy, macro, and micronutrients.
- Provide nutritional support at night.
- Provide foods containing quality protein and vitamin and mineral support.
- Feed children with special needs through tubes inserted from the stomach or nose when necessary (as decided by a doctor) due to difficulty in food intake.
- Feed children with chewing and swallowing problems semi-solid foods such as puree.
- Do not insist on food for children with lack of appetite; be patient and allow the child to eat when hungry.
- Wait at least 3-4 hours between meals, and keep children away from junk food with low nutritional value.
- Explain the importance of nutrition in growth and development, and make mealtime attractive for children with lack of appetite.
- Eat meals as a family and allow children to help with food preparation and table setting.
- Provide a suitable environment for children to sit comfortably at the table with appropriately sized chairs and utensils.
- Add vegetables to their favorite dishes, and introduce them to different fruits and alternatives for consumption.
- Do not insist on finishing the meal when a child is full.

It is essential for parents to be role models for children in nutrition, encouraging them to eat vegetables and consume fruits. By following these guidelines, malnutrition can be prevented or treated effectively.

3. Vitamin-mineral deficiency: Insufficient and unbalanced nutrition can lead to many vitamin and mineral deficiencies. Children with special needs are particularly at risk for deficiencies in vitamins A, C, D, B12, iron, and calcium.

Proteins of animal origin, such as red meat, chicken, fish, and eggs, are important for preventing and treating iron deficiency. Animal-based proteins are more easily utilized by the



body. Plant-based foods containing iron include dried fruits, whole grains (including whole wheat bread), nuts, green leafy vegetables, seeds, and legumes. These should also be included in the diet. Additionally, vitamin C consumption is important for increasing iron absorption.

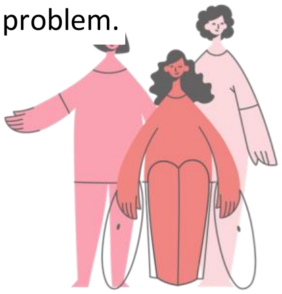
Vitamin D plays many important roles, particularly in the bone and skeletal system. Due to extended periods of being indoors, children with special needs are at risk for vitamin D deficiency. The daily requirement for vitamin D cannot be met by food alone. Sunlight is the best source of vitamin D, with 15-30 minutes of sun exposure per day sufficient for daily vitamin D synthesis. Fatty fish, milk and dairy products, eggs, and liver are dietary sources of vitamin D. It is important to exercise caution when taking vitamin D supplements, as excessive intake can have toxic effects on metabolism.

4. Constipation: One of the most common nutritional problems encountered in children with special needs is insufficient fiber consumption, which often results in constipation. To increase fiber intake in these children, it is important to consume adequate amounts of vegetables, fruits, whole grains, and legumes. Daily consumption of 6-11 servings of whole grain products and 5-9 servings of vegetables and fruits is recommended. Dried fruits with a laxative effect, such as prunes, dried apricots, dried figs, and dried dates, should be preferred. Additionally, it is important to increase water consumption.

5. Diarrhea: Diarrhea may occur in children with special needs due to various reasons, such as medication usage. The primary objective in treating diarrhea is to prevent it and to replace lost fluids and electrolytes. Therefore, it is essential to maintain adequate fluid intake during diarrhea. Drinking plenty of water, mineral water, and fruit juice is recommended. Additionally, foods such as bananas, peaches, boiled potatoes, and boiled rice should be included in the diet to prevent diarrhea. Oily foods should be avoided. It is also important to avoid fruits with a laxative effect (such as prunes, dried apricots, dried figs, and dried dates), cruciferous vegetables, legumes, and whole grain foods. Milk and dairy products, as well as beverages containing caffeine, should also be avoided during diarrhea treatment due to their lactose content.

6. Chewing and swallowing difficulty: Chewing and swallowing difficulties are a common nutritional problem in children with cerebral palsy, Down syndrome, mental retardation, and neurological diseases. Impaired oral motor function and weakened muscles can cause chewing problems and affect swallowing. These patients can usually consume pureed or semi-solid foods. If necessary, medical nutrition products with suitable energy and nutritional content should be used for the child's needs. The doctor and dietitian should jointly decide if a medical nutrition product is necessary and which one should be used.

7. Digestive problems: Inability of the muscles and nerves responsible for chewing and swallowing to perform their functions can cause difficulties in eating and swallowing. Insufficient chewing, due to tooth decay or missing teeth, can also contribute to this problem.



Children with special needs are particularly vulnerable to tooth decay and tooth loss due to their limited mobility, low awareness, and insufficient calcium intake. Additionally, individuals who require assistance with eating and drinking may not benefit from the tooth-cleaning effect of liquids since they consume less liquid than normal, increasing their risk of tooth decay.

Poor oral and dental health can lead to nutritional deficiencies in children. Because they have difficulty chewing, they may not consume enough food to meet their nutritional needs. Children with special needs who have difficulty chewing and swallowing may experience nutrient deficiencies due to inadequate food intake. Insufficient energy intake can lead to malnutrition, inadequate protein intake can cause physical and mental retardation, inadequate vitamin and mineral intake can cause various symptoms, inadequate fiber intake can lead to digestive problems and dysbiosis, and inadequate chewing can cause digestive problems due to incomplete mechanical digestion in the mouth.

8. Tooth decays: Tooth decay can happen quickly and easily, especially due to sugary foods such as milk, ready-made foods, and fruit juices, which are often consumed by bottle-fed children with special needs. As a result, it is important to clean teeth after each feeding and avoid nighttime feedings unless absolutely necessary.

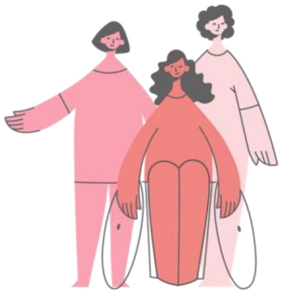
The main cause of tooth decay is sugary and acidic foods that easily stick to teeth and gums. It is best to avoid foods that are high in sugar and simple carbohydrates, unless a special diet is recommended. If these foods must be consumed, they should be eaten during main meals and not between meals.

If it is difficult to brush teeth, individuals with special needs should rinse their mouth after meals or wipe away any food residue.

WHAT CAN BE DONE FOR HEALTHY EATING IN SCHOOLS?

Promoting healthy eating in schools is crucial to the overall well-being of students and can help instill healthy habits throughout life. Various strategies and actions that can be taken to promote healthy eating in schools include:

1. Nutrition Education: Nutrition education can be included in the curriculum to teach students the importance of a balanced diet, the benefits of different food groups, and how to make healthy food choices.



2. Healthy Meal Options: School cafeterias can offer a variety of nutritious and appealing meals. This can include fresh fruits and vegetables, whole grains, lean proteins and low-fat dairy products. The availability of sugary snacks and beverages should be limited.

3. School Gardens: School gardens can be created where students can learn to grow fruits and vegetables. This hands-on experience can increase their interest in healthy foods and create a sense of ownership for what they eat.

4. Breakfast Programs: Breakfast programs can be implemented at school to ensure that students start the day with a nutritious meal. This can improve concentration, focus, and overall academic performance.

5. Lunch Environment: A pleasant and inviting lunch room environment can be created that promotes healthy eating. Consider using colorful signage, creating a calm atmosphere, and involving students in cafeteria design decisions.

6. Cooking Education Activities: Activities such as cooking classes, taste tests, and cooking demonstrations can be organized to introduce students to new and healthy foods. These activities can make healthy eating more exciting and accessible.

7. Healthy Vending Machines: Vending machines stocked with healthier snack options such as nuts, seeds, yogurt, and whole grain products can be installed in schools. Sugary and unhealthy snacks should be limited.

8. Access to Water: Easy access to clean drinking water during the school day can encourage students to drink water instead of sugary drinks.

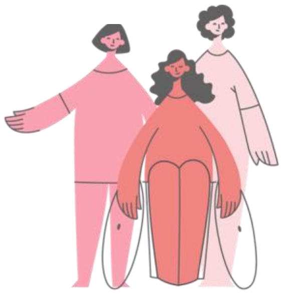
9. Policy Development: School health policies that prioritize healthy eating can be developed and implemented. Parents, teachers, students, and nutritionists can be involved in the policy development process.

10. Physical Education: Regular physical education classes and physical activity breaks can be added during the school day to balance healthy eating with regular exercise.

11. Role Modeling: Teachers and staff should model healthy eating behaviors by setting a positive example for students. Schools can also invite nutritionists to talk to students about healthy eating.

12. Peer Influence: Peer support for healthy eating can be encouraged. Students can form clubs or committees focused on promoting healthy lifestyles within the school community.

13. Reward Systems: Non-food rewards can be given for academic and behavioral achievements instead of using unhealthy snacks or sweets.



14. Regular Evaluation: The effectiveness of school nutrition programs and policies should be evaluated on an ongoing basis. Feedback should be gathered from students, parents, and staff to make improvements.

15. Community Partnerships: Collaborate with local organizations, farmers, and businesses to supply fresh, locally grown food for school lunches.

16. Cultural Sensitivity: Be sensitive to students' diverse cultural backgrounds and include culturally appropriate healthy food options.

Promoting healthy eating in schools requires a holistic approach that includes students, parents, teachers, administrators, and the wider community. Strategies regarding nutrition should be appropriate to the needs and resources of the school and students with special needs.

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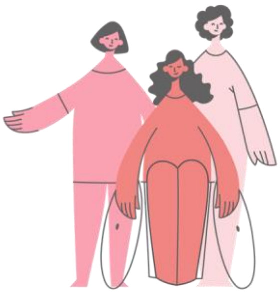

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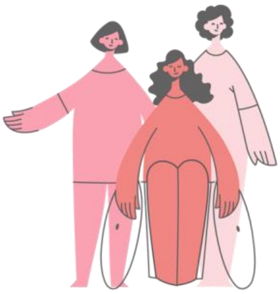

CHAPTER 3

HEALTHY LIVING AND STRESS MANAGEMENT

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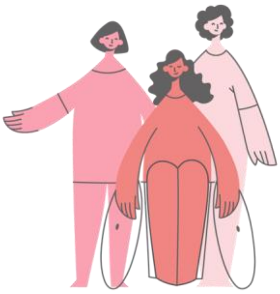
WHAT IS STRESS?

Belgin DEDE

The Latin word for stress is 'estrictia'. It was used in the sense of disaster in the 17th century, and in the sense of grief, distress, pressure and difficulty in the 18th and 19th centuries. Hans Selye (1956) defines stress as 'the body's response to any pressure on itself'. Cüceloğlu (1994), on the other hand, uses the expression "the effort an individual spends beyond his physical and psychological limits due to incompatible conditions in the physical and social environment" for stress. Stress is a real part of our daily lives that affects people's lives. Many factors in the environment are stimulating for humans and cause a reaction. However, not every stimulant creates stress in people. Stimulants that disrupt the physical and psychological



balance of the individual are stressors. For example, a sunny day is a good stimulus for most people, but for the photosensitive migraine sufferer it is a stressful stimulus.

Stress affects the emotional, physical and cognitive behaviors of individuals and affects their relationships with other individuals. The same source of stress does not cause the same reaction in everyone. Some are affected very slowly, while others are affected more quickly. Personality traits of individuals are effective on their degree of influence.

WHAT ARE THE EFFECTS OF STRESS ON THE HUMAN BODY AND MIND?

Belgin DEDE

Effects of stress on the body

Stress can have significant effects on the bodies of children with special needs, amplifying the challenges they already face due to their unique circumstances. Here are some common physical effects of stress on children with special needs:

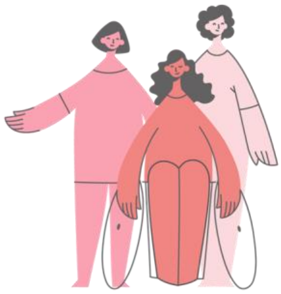
1. Increased muscle tension: Stress can lead to increased muscle tension throughout the body, resulting in physical discomfort and potential difficulties with mobility and coordination.

2. Gastrointestinal issues: Stress can impact the digestive system, leading to problems such as stomachaches, constipation, diarrhea, or changes in appetite.

3. Sleep disturbances: Stress can disrupt sleep patterns, causing difficulties falling asleep, frequent waking during the night, or restless sleep. Inadequate or poor-quality sleep can further impact a child’s overall well-being and functioning.

4. Weakened immune system: Chronic stress can suppress the immüne system, making children more vulnerable to illnesses, infections, and slower recovery from health issues.

5. Increased heart rate and blood pressure: Stress triggers the release ofstress hormones, which can elevate heart rate and blood pressure. Over time, prolonged stress can contribute to cardiovascular problems and increase the risk of heart disease.



6. Compromised overall health: The cumulative effects of stress on the body can weaken a child's overall health, making them more susceptible to various health conditions and impairing their ability to bounce back from illnesses or injuries.

It's important to note that the effects of stress can vary from child to child, and individuals with special needs may already have specific physical challenges. Identifying and managing stress levels is crucial in minimizing these physical effects and promoting the overall well-being of children with special needs. Implementing stress reduction techniques, creating a supportive environment, and seeking appropriate medical care can all contribute to better physical health outcomes for these children.

Effects of stress on the mind

Stress can have profound effects on the minds of children with special needs, exacerbating the cognitive and emotional challenges they may already face. Here are some common mental and emotional effects of stress on children with special needs:

1. Increased anxiety: Stress can trigger or intensify feelings of anxiety in children with special needs. They may experience excessive worry, fear, or unease, often related to their specific challenges or uncertainties about the future.

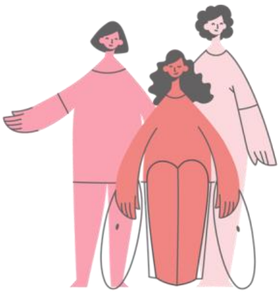
2. Difficulty with emotional regulation: Children with special needs may struggle with regulating their emotions even under normal circumstances. Stress can further disrupt their emotional regulation, leading to frequent mood swings, emotional outbursts, or difficulty managing and expressing their feelings appropriately.

3. Reduced concentration and attention: Stress can impair cognitive functioning, making it difficult for children to concentrate, pay attention, and engage in learning or other activities. This can affect their academic performance and overall ability to focus.

4. Impaired problem-solving and decision-making: High levels of stress can hinder a child's ability to think critically, problem-solve, and make sound decisions. They may have difficulty evaluating options or finding effective solutions to challenges they encounter.

5. Low self-esteem and self-confidence: Chronic stress can erode a child's self-esteem and self-confidence. They may internalize their struggles and perceive themselves as inadequate or different from their peers, leading to a negative self-image and diminished self-worth.

6. Increased risk of mental health issues: Children with special needs may already be at a higher risk for mental health conditions such as anxiety, disorders, depression, or behavioral disorders. Stress can further increase this risk and worsen the symptoms of existing conditions.



It is essential to recognize and address the mental and emotional effects of stress in children with special needs. Providing a supportive and understanding environment, implementing stress management strategies, and ensuring access to appropriate mental health support can help mitigate these effects. By addressing stress and promoting emotional well-being, we can support these children in developing resilience, coping skills, and a positive mindset.

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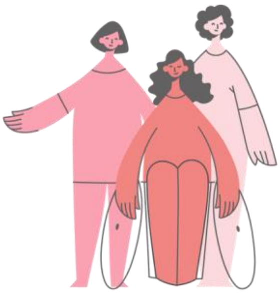


WHAT ARE THE REACTIONS TO STRESS IN CHILDREN WITH SPECIAL NEEDS?

Emine Özlem GEMİCİ

Stress is a concept that affects individuals and affects their behavior and relationships with other people. Stress does not happen out of the blue or spontaneously. In order for stress to occur, changes in the environment and environment in which a person lives or lives must affect the person. Every individual is affected by changes in the environment, but some individuals are affected by these changes more or more slowly. Stress is related to the effects of a change in the environment in which a person lives or a change in the environment on a person.

Selye named the body's three-stage response to stressful situations as "General Adaptation Syndrome". According to this theory, the organism's response to stress develops in three stages.

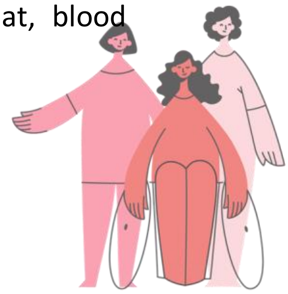
These are: alarm response, resistance and exhaustion stages (Johnstone, 1989; Baltaş and Baltaş, 1999; Balcı, 2000).

Alarm Response Stage: When an individual encounters a source of stress, the body shows a "fight or flight response" due to the activation of the sympathetic nervous system. As a result of the physical and chemical changes that occur in the body during the fight or flight response, the person becomes ready to confront or escape the source of stress. income.

The stress reactions observed in students with special needs and mild learning disabilities vary from person to person. While some may completely cut off their connection with the outside world, others may exhibit aggressive behavior. For example, some students may not even answer the question asked, while others may resort to physical and verbal violence. These may be reactions such as door slamming, throwing objects, scribbling in notebooks, tearing books, disconnected and irrelevant answers and questions.

This situation develops in the form of an acceleration of the heartbeat, an increase in blood pressure, an acceleration of respiration and a sudden release of adrenaline. The stage in which the fight-or-flight response emerges is called the "alarm stage." In the stress alarm stage, the stress curve rapidly rises above the normal resistance level as the sources of stress and their intensity increase, and the first signs of deviation from normal behavior begin to appear.

Resistance Phase: The alarm phase is followed by the "adaptation or resistance phase". If the source of stress is adapted, everything returns to normal. At this stage, the lost energy is tried to be regained and the damage to the body is eliminated. When stress is dealt with, the parasympathetic nervous system begins to become active. Heartbeat, blood



pressure and breathing are regulated, muscle tension is reduced. In the resistance stage, the individual makes every effort to resist stress and displays the behavior of a stressed person. This situation can be observed in the individual's behavior and life for a certain period of time.

Observed in special needs students with mild learning disabilities begin, they return to their previous state and continue their lessons and behaviors in their normal course. Now the stressors have disappeared.

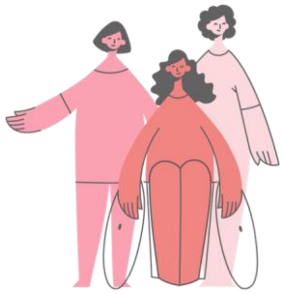
Exhaustion Phase: As long as the sources of tension in the adaptation phase and their intensity levels do not decrease or if they increase, the individual's efforts are diminished and a phase is entered in which serious deviations and disappointments are experienced in their behavior. If the source of stress cannot be coped with and adaptation cannot be achieved, physical resources cannot be used and the exhaustion phase begins. During the exhaustion stage, the parasympathetic nervous system is active. A person is exhausted and the source of stress is still present. At this stage, long-term stressors cannot be combated and the person becomes vulnerable to the effects of other stressors.

Special needs and those with mild learning disabilities, the burnout phase may generally occur in the form of getting tired of the reaction and leaving the environment.

STRATEGIES FOR TEACHING STRESS MANAGEMENT SKILLS

Emine Özlem GEMİCİ

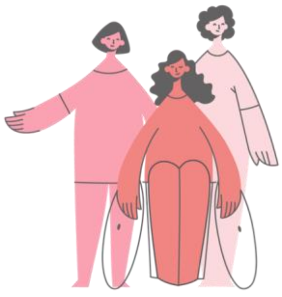
Stress Management, changing the situation or reactions to the situation in order to cope with stress and improve the quality of life is called stress management (Güçlü, 2001). Some strategies used individually have a very necessary and important place in coping with stress. The common aspect of these strategies is that almost all of them envisage taking personal habits and physical, psychological and behavioral structures under control. Thus, the harmful stress response that begins in the body is tried to be neutralized by taking counter measures. Individually, physical movements (exercise), breathing exercise, meditation, biotechnology are used to cope with stress. Techniques such as feedback (biological feedback), relaxation, nutrition and diet, receiving social support, participating in social, cultural and sports activities, massage, prayer and worship, and time management may be useful (Pehlivan, 1995). Erdoğan (1999), on the other hand, lists effective time management, relaxation practices, positive imagination, exercise and body movements, behavioral self-control, communication, meditation, food control and massage, individual's unique strategies as individual strategies for coping with stress. It suggests taking up a hobby and being extroverted.



On the other hand, healthy nutrition is very important in coping with stress in individuals with special needs. Consuming nutrient-rich foods helps support the body's physiological processes, increase energy levels, and improve overall well-being. A balanced diet with plenty of fruits, vegetables, lean protein and whole grains can help reduce stress levels. For example, foods rich in omega-3 fatty acids like salmon and walnuts can improve brain function and mood, while foods high in vitamin C like oranges and strawberries can help fight stress by supporting the immune system. For this purpose, healthy snacks and food preparation practices were made in the eating and drinking workshop so that our students could get to know the nutritional practices that will help them overcome stress.

Additionally, physical activity is a proven stress management technique. Exercise can improve mood and reduce stress by helping to release endorphins, the body's natural mood enhancers. Regular physical activity can also improve sleep quality, increase energy levels and support overall health. Within the scope of our project, sports activities such as archery, badminton and rope skipping are carried out with our students with special needs, accompanied by teachers from the Provincial Youth and Sports Directorate. In addition, sports competitions such as volleyball and football, which are team games, are also organized within the school facilities.

Likewise, participating in leisure activities is a stress coping strategy that helps reduce stress and relax. Activities such as reading, gardening, or taking up a hobby can provide a mental break from stress and promote feelings of accomplishment and fulfillment. For example, painting or learning a musical instrument can enhance creativity and provide a sense of accomplishment, contributing to stress reduction and personal development. Within the scope of our project and the work we carry out in our school, we provided practical training to our students with special needs on fine arts and handicraft activities such as folklore, painting, stone painting, guiling and bead embroidery, so that they can cope with stress.



EMOTIONAL REGULATION TECHNIQUES FOR CHILDREN WITH SPECIAL NEEDS

Emine Özlem GEMİCİ

Improved Organizational Techniques for Students with Special Needs:

a. Relaxation Techniques:

The primary relaxation technique for students with special needs is to acquire appropriate hobbies. Examples:

- ⇒ Playing a musical instrument; Our students who play an instrument adapt better to society, make friends and adapt to the social environment more easily.
- ⇒ Singing a song; Our singing students share their own videos on social media and gain the pleasure of achieving success, thus improving their self-confidence. In addition, he can establish high-quality friendships on social media and as a popular person in society.

b. Physics Techniques:

Are included in the rehabilitation programs implemented primarily to ensure their adaptation to society and to reveal a sense of self-sufficiency. Private and official competitions and Olympics for the disabled have started to be held at regular intervals.

Physical Education activities to be planned for children in need of special education should be capable of providing development in psychomotor, affective and cognitive areas. Because with effective development in these areas, the long-term goals specified will be achieved. The psychomotor domain has an important value in the acquisition of motor skills that play an important role in the social and emotional development of the child.

a) To improve the individual's physical and motor fitness levels by participating in physical activities,

b) To ensure the development of the basic components of the body structure,

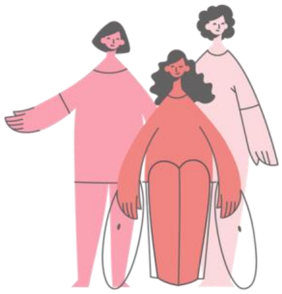
c) Gaining coordination,

d) Building muscle endurance and muscle strength,

e) To provide the body with features such as balance and flexibility,

f) Reinforcement of perceptual motor functions,

g) To allow the development of kinesthetic and tactile perception, as well as perceptual motor abilities.



Regular sports activities for disabled people, whether it is Physical Education and Sports classes or recreational sports schools opened in certain periods, are all arrangements that will enable disabled people to become self-sufficient, healthy and happy individuals. Studies to ensure these arrangements must be organized continuously. For this purpose, projects should be produced and organizations should be organized to provide financial support from local governments and organizations through good promotion. Our aim should be to give every individual the habit of doing sports and to live in a society made up of healthy individuals. For this reason, with the idea that there is no one to lose in education, the necessary sensitivity and social inclusion activities should always be given to disabled individuals (Koparan, 2003).

c. Cognitive Techniques:

It is an activity that has positive benefits in the mental, emotional and physical fields and increases the quality of life, rather than just recording memories or improving self-expression. Although there are many recent scientific studies that reveal all these, it is also clear that just keeping a diary is not enough for a healthy lifestyle and mental health in terms of managing stress and anxiety.

To get the most benefit, you should eat a balanced and healthy diet, as well as move regularly every day, meditate for relaxation, etc. adding rituals to daily practice, getting enough and quality sleep, staying away from harmful habits, etc. It is also a fact that it should be done together.

Keep a diary; It reduces stress and anxiety, strengthens the immune system, improves mood, improves memory, develops gratitude, increases creativity, improves awareness, helps quality sleep, improves communication skills, and helps learn from experiences.

(https://www.aysetolga.com/gunluk-tutmanin-one-cikan-10-faydasi)

Planning the work to be done in advance and being able to use time better makes life easier and reduces stress.

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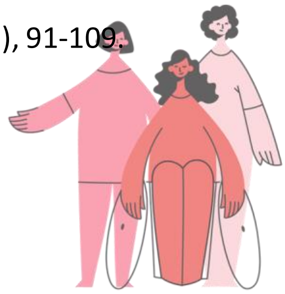

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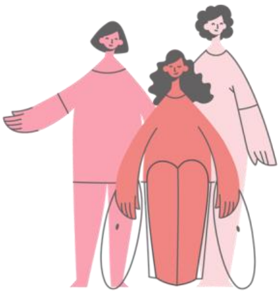


BUILDING RESILIENCE AND SELF-ESTEEM IN STUDENTS WITH SPECIAL NEEDS

Aleksandra KRSTOVSKA

It’s crucial to remind children with special needs or disabilities that their disability doesn't define them as a whole person, on the contrary we should encourage them to focus on their abilities, strengths, and potentials rather than solely on their limitations.

The following strategies aim to foster self-confidence and self-esteem in children with special needs, creating a positive foundation for personal growth and well-being.

Quality Time: Spending quality time with the children is essential for building self-esteem. While being physically present is important, it's equally crucial to engage in one-on-one activities that show the children their world matters. By giving them undivided attention in activities they enjoy, we send a powerful message of love and care.

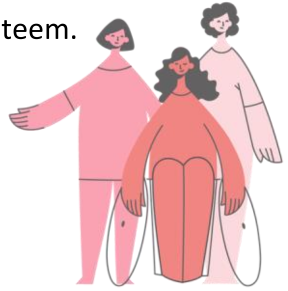
Positive Reinforcement: Encouraging tasks that are within the children's capabilities can work wonders for their confidence. When they complete a task successfully, we should celebrate their achievements with phrases like "Great job!" or "Way to go!" Positive feedback triggers the release of "feel-good" chemicals in the brain, reinforcing their desire to achieve more.

Teach Problem-Solving Skills: Self-confidence often stems from being adept at problem-solving. Instead of providing solutions, encourage the children to think about how to solve their problems. This approach empowers them to handle daily struggles and dilemmas.

Celebrate Small Victories: It's essential to recognize that not every child excels academically. Teachers and parents should actively identify and highlight the children's strengths, whether it's artistic talents, musical abilities, or exceptional social skills. Displaying their artwork, attending their activities, and complimenting their positive character traits can create a counterbalance to their perceived shortcomings, bolstering self-esteem.

Shared Activities: Children with special needs can experience frustration more readily than others, making seemingly simple tasks challenging. Engaging in activities they enjoy, such as drawing or listening to music, sends a powerful message that their preferences matter. By showing genuine interest and appreciation for their interests, we reinforce their sense of importance and uniqueness.

Realistic Expectations: Recognize the children's capabilities and accept their special needs. By having realistic expectations and embracing their unique qualities, we create a supportive environment where they can flourish. Children take cues from adults, so accepting their disabilities can help them accept themselves, ultimately nurturing their self-esteem.



Encourage Independence: Independence is a valuable trait that can boost self-esteem. Support and nurture the children's ability to handle tasks and make decisions on their own. By empowering them to take charge of their lives, they develop a sense of self-worth and confidence.

Talent Recognition: Everyone has unique talents and skills. Help children with special needs or disabilities discover and harness their talents. Whether it's a talent in art, music, sports, or any other area, recognizing and nurturing their abilities can significantly enhance their self-confidence.

Set Realistic Goals: Encourage children with special needs or disabilities to set realistic and achievable goals. By breaking down larger objectives into smaller, manageable steps, they can experience a sense of accomplishment and steadily build their self-esteem.

Embrace Individuality: Celebrate their individuality and uniqueness. Praise their qualities, achievements, and the contributions they make to their communities. Creating an environment that values their differences and strengths fosters a positive self-image and boosts their self-esteem.

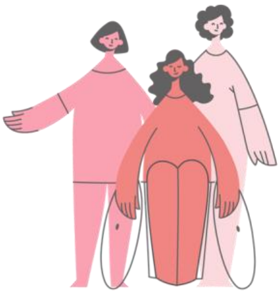
WHAT ARE THE METHODS OF COPING WITH STRESS IN CHILDREN WITH SPECIAL NEEDS?

Aleksandra KRSTOVSKA

Resilience is the process of adapting well in the face of adversity, trauma, tragedy, threats or even significant sources of stress. Literally it means ‘to bounce back’ to normal or a healthy mental functioning after facing a significant stressor.

Building resilience can help the children manage stress and feelings of anxiety and uncertainty. However, being resilient does not mean that children won’t experience difficulty or distress. Emotional pain, sadness, and anxiety are common when we have suffered major trauma or personal loss, or even when we hear of someone else’s loss or trauma.

2020 has so far been the year of challenges. The world was hit by a pandemic, altering and significantly affecting the lives of many across the globe. Children, in these circumstances, are one of the most vulnerable populations to the social and emotional strain caused by the pandemic.



Children with special needs and genetic conditions are further at greater risk of marginalization. Home confinement, social isolation, child abuse and neglect, poverty, parental conflicts, disruption in receiving the necessary medical and special education services, adapting to the new lifestyle, changed method of schooling are just a couple challenges and uncertainties that children with special needs may be facing.

By building resilience in children with special needs we can help buffer the damage caused by these adversities. It can help children cope better with the long-term impact and flourish despite the hardships faced.

The following ways must be taught to children taking into account their specific condition, severity of their concerns, age, abilities and the gauged effectiveness of developing resilience:

1) Needs of safety and security are met

Sensitive and responsive parenting becomes a very strong protective factor, especially for children with special needs. Research also confirms that the presence of a caring adult is one of the primary factors that aids in recovery of children who have suffered trauma. Given the need of social isolation, parents and caregivers have an added responsibility of providing the child with the social interaction that they are thus missing on.

Besides, encouraging children to participate in any cultural or religious practices that they find a sense of security from will be very helpful in their optimal development amid the pandemic.

2) Normal family routines restored

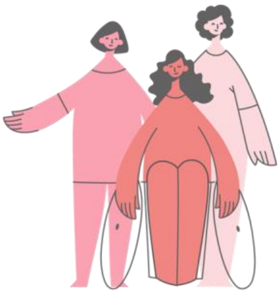
Another way of feeling safe and cared is to ensure that the regular family routines remain unchanged as much as possible. Most children with special needs are sensitive to change so the parents should try to maintain a near-similar home schedule as was before. Routines – As also mentioned above, maintaining a set home routine of sleeping, eating, schooling etc. helps in having some predictability and thus a sense of control.

3) Promote self–efficacy

Self-efficacy refers to the confidence someone has in their own abilities to solve problems or manage situations. This belief in one's capacity to handle tasks gives children the assurance that they can overcome challenges and find solutions.

It's commonly advised that parents encourage their children to independently handle problems and situations, as this can foster self-confidence. However, when raising children with special needs, parents or caregivers often lean towards being protective. While this protective instinct is understandable, it's beneficial to strike a balance between providing protection and allowing the freedom to learn and grow.

4) Giving Children choices



Grant children the freedom to make choices regarding their preferred activities, fostering a sense of independence.

For instance, you can design a daily plan of activities, resembling a school timetable. Then, encourage the child to label each activity as 'immediate' or 'later,' allowing them to decide the sequence in which they want to engage in these tasks, all while adhering to the predetermined schedule of activities you've established. This approach empowers them to exercise their decision-making abilities within the framework you've provided.

5) Positive praise

Appreciation gives us an assurance that we actually performed well and that our significant others liked it. For students with special needs, praise is extremely vital. It could just be a verbal ‘Very good!’ but you must praise your child for every little thing they do right. And even if they go wrong or fail, make sure you praise their efforts or their approach.

6) Promote a sense of hope and optimism

Maintaining a hopeful and optimistic mindset is advantageous in handling stress, as it provides motivation to persevere, particularly when nurturing resilience in children with special needs. Guiding kids to reframe negative self-talk or statements is crucial. Instead of saying, "I can never get this," encourage your child to say, "I will give it another try tomorrow." This skill can be imparted through various methods.

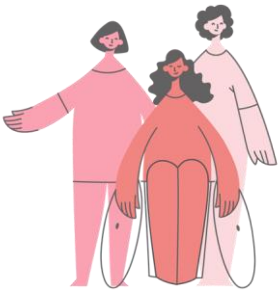
Setting an example of optimism is also important. Children are keen observers. When they witness their parents or caregivers forgiving themselves for mistakes or adopting a positive perspective, they tend to emulate the same behavior.

7) Foster social connectedness

While physical contact may be restricted, it's crucial to prevent social isolation from transforming into emotional distance for your child. Make an effort to facilitate connections between your child and their peers or extended family members through video chats or phone calls. Encourage your child to bond with others who share common interests or hobbies. For instance, you could explore opportunities for your child to participate in engaging and fulfilling online group activities. This sense of companionship and support will contribute to strengthening resilience in children with special needs.

Furthermore, endeavor to maintain the medical or special education services and ongoing therapies that your child was receiving. Continuity in these essential services can significantly benefit their development and well-being.

8) Emotional support for kids



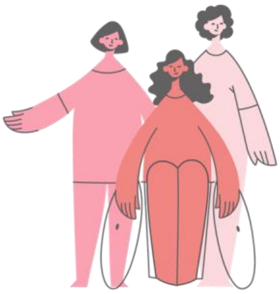
Reassurance involves comforting children with special needs by assuring them of their safety and the safety of those around them. Offering both physical reassurances, like a gentle hug, and verbal communication is highly effective.

Teaching children’s methods to manage their emotions is also crucial. This includes simple techniques such as breathing exercises, physical activity, or having some alone time. We should also encourage them to express their feelings, ask questions if they have any or even seek a professional psychological help if the need arises.

Childhood is often idealized as carefree, but it doesn't shield children from emotional challenges and difficulties. Children may grapple with issues like adjusting to new classrooms, online learning, dealing with peer bullying, or facing challenges at home. Moreover, the uncertainties of growing up in a complex world compound these challenges. The ability to thrive despite such obstacles is rooted in resilience skills.

Aleksandra Krstovska- Her educational background includes a Bachelor's degree in English Language and Literature, which she pursued at the University, Ss Cyril and Methodius’’, Faculty of Philology “Blaze Koneski” in Skopje, Macedonia (2000 to 2005). She completed her secondary education at State Secondary school ”Kocho Racin’’- Veles between 1996 and 2000.With over two decades of professional experience, Aleksandra has excelled in various roles. She started her career as an English language teacher at the Center for foreign languages in Veles (2002 to 2004) and later at the Private English School - Lingva Planet from 2004 to 2005. Since 2009, she has been serving as an Official Court Translator at the Basic Court in Veles. Her dedication to education led her to work as an English language teacher at the Primary school “Vasil Glavinov” in Veles from 2005 to the present.

Aleksandra's commitment to professional development is evident in her roles as a teacher trainer. In 2011, she became a teacher trainer for the course "English language for teachers." She also served as a teacher trainer in the school staff training program, "Implication of innovative interactive approaches in teaching" in 2022. In 2020, she took on the role of Coordinator for the Erasmus project titled "Improving health through modern sports and changing the approach to nutrition," followed by her role as Coordinator for the Erasmus project "Stay at home healthy through the use of innovative methods" in 2021. She has also participated and collaborated in many Etwinning projects (Web 2.0 tools, Spin the wheel, English on the go) and has been teacher counterpart to many Peace Corps volounteers that had their service in the primary school Vasil Glavinov in Veles, North Macedonia.



WHAT WAYS SHOULD BE FOLLOWED DURING TANTRUMS IN CHILDREN WITH SPECIAL NEEDS?

Sevim ACARÖZ

Children with special needs, like all children, can experience tantrums. Tantrums are often an expression of frustration, communication difficulties, sensory overload, or a desire for control. Understanding and effectively managing tantrums in children with special needs requires patience, empathy, and a tailored approach. In this chapter, we will explore various strategies and techniques that parents, caregivers, and educators can use to navigate tantrums in a sensitive and supportive manner.

Understanding Tantrums

1. Recognizing Triggers

The first step in managing tantrums in children with special needs is to identify the triggers. Every child is unique, and the triggers for tantrums can vary widely. Common triggers may include:

Communication Challenges: Many children with special needs struggle to express themselves verbally. Frustration over not being understood can lead to tantrums (Paul et., 2007).

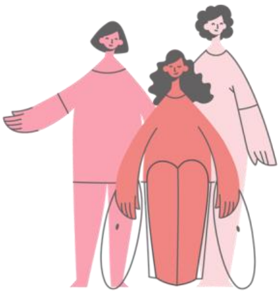
Sensory Sensitivities: Children with sensory processing disorders may become overwhelmed by sensory stimuli, such as noise, lights, or textures, leading to meltdowns (Baranek et al., 2006).

Routine Disruptions: Changes in routines or transitions between activities can be particularly challenging for some children with special needs (Estes et al., 2011).

Physical Discomfort: Pain or discomfort, such as hunger, fatigue, or sensory discomfort, can contribute to tantrums.

2. Individualized Approach

Children with special needs often have unique profiles of strengths and challenges. It's essential to understand the child's specific diagnosis, preferences, and sensory sensitivities. This knowledge will help caregivers tailor their approach to managing tantrums effectively (Matson et al., 2013).



Strategies for Managing Tantrums

1.Calm and Consistent Responses

Remain Calm: It's crucial to stay calm when a child is having a tantrum. Your calm demeanor can help de-escalate the situation.

Consistency: Establish consistent routines and expectations. Children with special needs often thrive on predictability (O'Neill et al., 1997).

2. Communication Strategies

Visual Supports: Utilize visual supports like picture schedules, social stories, or visual communication boards to enhance understanding and reduce frustration (Charlop-Christy & Daneshvar, 2003).

Use Simple Language: When communicating with the child, use simple and clear language to minimize confusion (Kagohara et al., 2013).

3. Sensory Regulation

Provide Sensory Breaks: If sensory overload is a trigger, create a quiet and calm space where the child can take a sensory break (Carr et al., 2002).

Sensory Tools: Offer sensory tools such as fidget toys or noise-canceling headphones to help the child self-regulate (Miller et al., 2007).

4.Reinforce Positive Behavior

Positive Reinforcement: Praise and reward positive behavior to motivate the child to use appropriate communication and coping strategies.

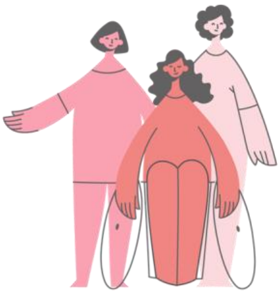
Teach Emotional Regulation: Help the child learn to recognize and manage their emotions through techniques like deep breathing or progressive muscle relaxation (Smith et al., 2000).

5. Collaborate with Professionals

Consult Specialists: Seek guidance from therapists, educators, and specialists who have experience working with children with similar needs. They can provide valuable insights and strategies.

Individualized Education Plan (IEP): If the child is in a school setting, work with the school to develop an IEP that addresses their unique needs and challenges.

6. Patience and Empathy



Empathetic Listening: Listen to the child's feelings and frustrations. Sometimes, merely acknowledging their emotions can be calming.

Patience: Recognize that progress may be slow, and setbacks are common. Celebrate small victories along the way.

In conclusion, managing tantrums in children with special needs requires a multifaceted and individualized approach. By understanding the child's unique needs, triggers, and communication styles, caregivers and teachers can provide the support necessary to reduce the frequency and intensity of tantrums. Patience, consistency, and a focus on positive reinforcement can help children with special needs develop better emotional regulation and communication skills, ultimately improving their quality of life and relationships with caregivers and peers.

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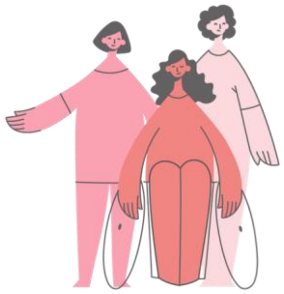

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ADVICE ON COPING WITH STRESS IN CHILDREN WITH SPECIAL NEEDS

Sevim ACARÖZ

Coping with stress in children with special needs can be challenging, but it's essential to help them build resilience and develop healthy ways to manage stressors. Here are some valuable pieces of advice for parents, caregivers, and teachers:

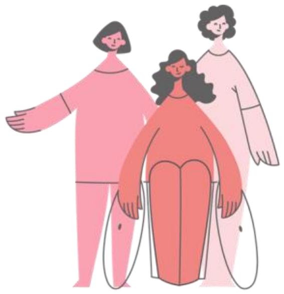
Recognize Signs of Stress: Understand that stress can manifest differently in children with special needs. It may include behaviors like increased agitation, withdrawal, meltdowns, or changes in sleep and appetite. Pay attention to non-verbal cues, as some children may have difficulty expressing their stress verbally.

Open Communication: Encourage open and honest communication. Create a safe and non-judgmental environment where the child feels comfortable sharing their feelings. Use age-appropriate language and visuals if needed to help them express their emotions.

Establish Routines: Children with special needs often benefit from structured routines and predictability. Consistent daily schedules can provide a sense of security and reduce stress. Prepare the child in advance for any changes or disruptions to their routine.

Teach Relaxation Techniques: Introduce relaxation techniques like deep breathing exercises, mindfulness, or guided imagery. These strategies can help children self-regulate and manage stress.

Provide Sensory Support: Understand the child's sensory sensitivities and provide sensory tools or breaks when needed. This can help them cope with sensory overload and reduce stress.



Encourage Physical Activity: Engage the child in physical activities they enjoy. Exercise can help reduce stress, improve mood, and promote overall well-being.

Offer Social Support: Facilitate social interactions and friendships. Positive relationships can act as a buffer against stress. Teach social skills and provide opportunities for social engagement.

Set Realistic Expectations: Understand the child's abilities and limitations. Set achievable goals and expectations to reduce pressure and stress.

Advocate for Support Services: Seek out support services, therapies, or interventions that can address the child's specific needs. Early intervention can often prevent or mitigate stressors.

Self-Care for Caregivers: Caregivers and parents must prioritize self-care. Caring for a child with special needs can be emotionally and physically demanding, and taking breaks and seeking support is essential.

Promote a Positive Mindset: Encourage a growth mindset where challenges are viewed as opportunities for learning and growth. Help the child focus on their strengths and successes.

Seek Professional Help: If stress is persistent or severe, consult with a healthcare professional, therapist, or counselor who specializes in working with children with special needs.

Empower Independence: Foster independence by teaching self-help skills and problem-solving. Empowering the child to manage some aspects of their life can reduce stress.

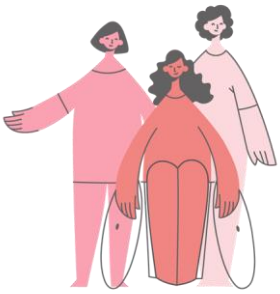
Celebrate Achievements: Celebrate even small achievements and milestones. Positive reinforcement can boost a child's self-esteem and reduce stress.

Create a Sensory-Friendly Environment: Design living and learning spaces that accommodate the child's sensory needs. Minimize sensory triggers and provide a safe, comfortable environment.

Promote Inclusion: Encourage inclusion in school and community activities. Feeling part of a group can reduce feelings of isolation and stress.

Be Patient: Understand that progress may be gradual. Be patient with the child's journey and provide ongoing support.

By implementing these strategies and maintaining a supportive and understanding environment, you can help children with special needs cope with stress more effectively, improve their overall well-being, and build essential life skills for the future.



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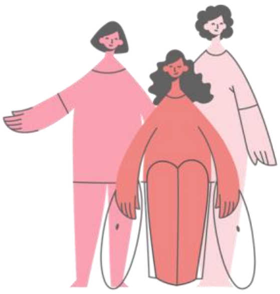

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