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WORK STRATEGIES OF A SENSORY ROOM SPECIALIST

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Table of contents

Introduction	4
Sensory integration. Basic sensor systems. Principles of sensory integration.....	5
Sensory dysfunction diagnostics system and checklists for assessing the work of sensory systems for children of different ages and adults	10
Types of intervention and creation of a therapeutic program	22
Special exercises. Games that can be offered by specialists, working in the sensory room.....	31

Introduction

No one can drastically change, but everyone can get better.

- *Ernst Maria Johann Karl von Feuchtersleben – Austrian scientist, surgeon, psychiatrist, writer, poet, philosopher.*

Sensory room is a specially organized environment where people can safely and positively get different sensations, explore their body, get a new experience that will help them to cope with the challenges of everyday life.

Sensory room equipment and simulators will interest people of any age and will most likely make people want to hit the ground running and start the game.

Specialist, working with the client in the sensory room according to his request, studies the patterns of an individual's behaviour and encourages him to try new action algorithms.

An effective technique that experts use with different clients, is the technique called sensory integration.

Sensory integration therapy is based on the assumption that the environment is over- or under-stimulate. Thus, the goal of sensory integration therapy is to improve the brain's ability to process sensory information to enable individuals to be more successful in their daily activities.

The concept of sensory integration is based on research in neurology, developmental psychology, occupational therapy and education.

Successful sensory integration therapy makes it possible to eliminate sensory dysfunctions and improve the information comprehension received through the senses. As a result, children and adults can learn, communicate with people, play or work better.

Sensory integration. Basic sensor systems. Principles of sensory integration

Studies show that sensory information derived from the environment is crucial. The interaction between the human being and the environment shapes the brain and affects learning. In addition, studies show that the brain can change in response to environmental influences, and wide sensory experience can stimulate changes in the brain at any age.

There is a huge number of definitions of the term "sensory integration" coming from professionals working in the system of caregiving and from professional associations.

Sensory integration (sensus - sensation, feeling; integratio - connection, integrity) – a process when human nervous system receives information from receptors and sensory systems (visual, auditory, tactile, proprioceptive (deep sensitivity), vestibular, gustatory and olfactory), which simultaneously comes through several sensory channels, and combines this information into a whole, organizes and interprets it so that people can use it in purposeful activities.

In other words, sensory integration is a combination of adaptive reactions and processes that allow an individual to self-actualize as much as possible in the conditions that surround him. The development of all activities happens due to the integration of motor, communicative and cognitive capabilities.

We live at a high pace, constantly receiving a huge amount of sensations and information.

We learn, observe, try to understand, interpret, initiate, make decisions or refuse, act. And more often, we do not realize what processes are happening to us. How often do we actually analyse what is happening, in what way, where and at what moment it is happening?

It is impossible to walk without standing up. It is impossible to say the first word without hearing it. The principle is simple: each skill is a step towards the next, more complex one; in other words, the brain develops on a hierarchical principle: basic abilities provide the foundation for more complex self-realization of the child.

Each of us is born owning hundreds of billions of neurons. This is a huge, unconscious potential for development. Without the development of the most important neural connections in the first years of a child's life and throughout life, further development is not possible. While achieving personal experience, in the most comfortable conditions, neurons are perfectly connected, and high-speed signals

between them, create a "miracle" of the brain. The nervous system retains more functionally strong connections, which are used regularly, and weaker and less functionally involved neural connections are "cut off". "Use or lose!" – this is how the phrase of Dr Jack Shonkoff, the director of the Centre for Child Development at Harvard University, entered the scientific world.

How can we influence a child's development? What should we do for the harmonious development of an individual? How to open up all of the possibilities and not to overload the child? When we talk about child's abilities, we often do not realize many things and miss very simple and at the same time irreplaceable moments in life.

A child learns to interact emotionally with mom and dad, to make requests, to imitate, learn, plan, try and succeed. The development of all activities happens due to the integration of motor, communicative and cognitive capabilities.

Only because of the personal experience of the individual and sensory-integration processes that occur in the central nervous system (CNS), baby can get the most valuable opportunity – it learns how to learn.

That is why the ability to perceive is not innate, and the processes of perception go through successive stages of development during the child's first years of life. Therefore, learning is a complex aspect of perception and it goes on not only in childhood but also throughout life.

Main sensory systems

Tactile system

The tactile system is one of the main human sensory systems. It starts with receptors that are on the surface of our body and which provide information to the central nervous system. An individual constantly feels the impact of a huge number of stimuli that are perceived by the receptors of the skin (by touch), especially during routine processes: feeding, washing, dressing up, brushing the teeth, combing. An important sensory experience of the child occurs when acquainting with materials of different textures, which give an idea of the properties of objects (cold-ice, warm-hot, fluffy-prickly), functional quality (water, sand, cream, stone), localization on the body surface, about the scheme of the body (arm-leg, chest-back, palm-foot), about the shape of objects. So, even the formation of the leading hand also depends on a certain integration of processes. Therefore, it is very important to support the child, not to retrain. It is important to use simple tests, such as how a child cuts paper with scissors, twists the bottle cap, applauds.

Vestibular system

The vestibular system is responsible for an individual's feeling of balance and equilibrium, orientation in space, visual-motor coordination, feeling of changing the position of the body in space. Orientation in space is carried out in interaction with other sensory systems: visual and proprioceptive. There are some laws of child development, one of which reflects the development of motor control on a "top-down" basis. Each child's development takes place according to a unique scenario. Many children "miss" some stages of development. That is why it is so important to monitor the conditions in which the child develops, monitor the most correct sequence of development of motor abilities of the child (especially the possibility of transitional positions: sit, crawl, get on their knees). Due to the vestibular system, it is possible to perceive the movement of objects around us, the feeling of height and depth of the space. At a more difficult stage of child's development, there are opportunities to ride a skateboard, scooter, bicycle; an opportunity to skate on rollers, skates, skis, as well as participate in active team games.

Proprioceptive system

The most important system in the life of every person, which forms the feeling of their body parts and themselves in space, gives us a real idea of ourselves and the world around us. From receptors located in muscles, articular bags, on the surfaces of joints, kinaesthetic information enters the central nervous system. These feelings are the first ones that the child receives from the womb. The proprioceptive system affects the formation of all other human sensory systems.

Visual system

A child is born with a unique ability to clearly see the image of the object with both eyes, thus creating a three-dimensional visual perception. This is an ability to see near and far, to see all the colours of the spectrum, to see what is ahead, from the sides (peripheral vision), to look at a bright light, to be able to see at dusk, to withstand the flicker of the light. Children often have disorders of sensory information processing in the visual system.

Auditory system

The auditory system encodes sound and acoustic stimuli and provides an opportunity to navigate in space, find a sound source and adapt to the environment. Binaural hearing is the sensation of a common "sound map" (when the signals from the

receptors of the right and left inner ear, which perceive vibrations of air with different frequency and strength, reach the auditory cortex of the central nervous system), so a person can determine the location of the sound source both left and right ear, as well as the ability to estimate the distance at which it is located. Many children find it difficult to adapt to a huge variety of sound frequencies. They may show hypersensitivity to some frequencies and be hyposensitive to the other frequencies, so they may react unpredictably to different sounds and voices, get distracted during the lesson by different sounds both around and outside the window. An adult and a child need to do a lot in life: discover the sounds of various musical instruments, birds singing, the sound of the surf and much more.

Olfactory system

From an evolutionary point of view, it is one of the main defence systems of the body. The olfactory and gustatory systems are interconnected. We can often observe a situation where a child refuses food without trying it. In case of a sharp smell a child can show various reactions, even a vomiting reflex can arise; it can also work vice versa, you may really like the smell of moisture, newly printed books or other strong odours. Some children may combine imagination of scents with certain colours.

Gustatory system

Taste receptors, like olfactory ones, are chemoreceptors. One of the earliest stages of a child's cognitive activity is the stage when a child brings everything to the mouth. Very early a child has the opportunity to get unique combinations of taste sensations (sweet, salty, sour, bitter). As a rule, the taste preferences of a child are formed on the basis of his general reactivity, a combination of different sensations, from different sensory systems, which can accordingly be manifested in very individual taste preferences.

A few words about the internal environment of the organism, more precisely about its stability (homeostasis). All processes of dynamic regulation in response to any changes in the body are possible due to introreceptors (glucose, hormones, enzymes, carbon dioxide, oxygen, pressure, temperature, etc.), which provide a variety of signals for regulatory reactions in the body, in response for change. At different ages, when the situation changes, there may be various violations of the regulation of the stability of internal processes in the body. Especially in adolescence, during the restructuring of the body and hormonal surge, it is difficult for teenagers to cope and adapt. Therefore, support programs should always take into account the somatic condition, both in adults and children.

Sensory-integration therapy is based on the assumption that the environment stimulates a child excessively or insufficiently. Thus, the goal of sensory integration therapy is to improve the brain's ability to process sensory information so that a child can be more successful in its daily activities.

Principles of sensory integration

- A child must be able to cope successfully with the problems that arise as a result of play activities (Just Right Challenge);
- A child learns new and useful strategies in response to the tasks (Adaptive Response);
- A child wants to participate because lessons are fun (Active Engagement);
- Child's preferences are used to start therapeutic experience during the session (Child-Directed).

Sensory dysfunction diagnostics system and checklists for assessing the work of sensory systems for children of different ages and adults

Children and adults for various reasons may have difficulty in processing sensory information:

1. Problems of sensory modulation are underestimated or overestimated reactions (hypersensitivity) to tactile, visual, auditory and other sensations. Problems of sensory modulation appear through an individual's behaviour. For example, a child screams when he feels the touch of his own hands or does not feel pain at all.
2. Problems of sensory discrimination are difficulties in understanding information obtained through the senses. For example, when a person tries to catch a ball, he/she needs to interpret visual information (direction and speed of the ball) and information from the muscles, joints and middle ear (balance mechanism), and then plan the movement to catch the ball in time. Difficulties in understanding information lead to difficulties in learning motor skills (e.g. use of scissors, graphic skills, cycling).

Methods of identifying problems of sensory integration:

1. Survey of parents, guardians, teachers, clients (children of senior preschool and school-age, adults).
2. Observation of the client's behaviour in natural conditions (for example, the child's behaviour at school).
3. Testing – individual tries to solve offered tasks in a sensory room and supervision of behaviour and level of skills.

Specialists use checklists to assess customer behaviour. Checklists are filled out by a specialist together with clients.

If there are signs of certain behaviour in the column "Assessment" the specialist puts signs: "S" - information obtained during the survey, "O" - information obtained during the observation, "T" - information obtained during the proposed tasks in the sensory room.

After filling out the checklist, the specialist draws conclusions. For example, in behaviour, there are signs of hyposensitivity of the vestibular, proprioceptive systems, hypersensitivity of the auditory system.

Checklist for sensory system assessment

SENSORY PROFILE OF A CHILD OF EARLY AND PRESCHOOL AGE

First name and Last name _____

Date of Birth _____

Diagnosis _____

Information received from parents, guardians, teachers (underline the resource)

First name and Last Name _____

Behaviour description	Grade	Comment
Does not like to lie on the stomach (for a baby).		
Avoids playgrounds: swings, ladders, slides, carousels.		
Likes sedentary classes, moves slowly and carefully.		
Avoids elevators and escalators.		
Falling can be very frightening, even if there is no real risk.		
Is afraid to go up and down the stairs, walk on uneven surfaces.		
Freezes or screams if someone starts moving him or turns him upside down, sideways, backwards.		
Avoids baby swings or jumpers (for babies).		
Sometimes is afraid to ride a bike or learns to ride with great difficulty.		
Does not like to jump, balance, stand on one leg, especially with closed eyes.		
Avoids games that require balance.		
Avoids sudden movements.		
Often spins, jumps or runs.		
Prefers rocking, throwing in the arms of an adult.		
Often moves his head to obtain vestibular sensations.		
Can spin for a long time.		
Likes to visit amusement parks.		
Constantly jumps on the furniture, on a trampoline.		
When sitting, swings his whole body, shakes his leg or head.		
Stereotypically rotates or swings.		
Likes a rocking chair; hammocks; swivel chairs.		
Likes to ride in the elevator, on the escalator.		
Other.		

Proprioceptive system

Behaviour description	Grade	Comment
Doesn't like it when an adult presses on the shoulders or other parts of the body.		
It is difficult to teach new movements.		
Doesn't like the movements associated with pressure.		
Doesn't like to climb a mountain, up the stairs.		
Pulls, twists or chews things (e.g. T-shirt, pencil).		
Bites or pinches the own skin or others.		
Often inadvertently breaks toys, things.		
Often hits, stumbles or crashes into objects.		
Presses hard with a pen, pencil when writing or drawing.		
Deliberately falls or crashes into things.		
Likes to punch the wall.		
Presses hard on the object when he holds it in his hands.		
Likes when an adult presses on the shoulders or other parts of the body.		
Falls asleep under a heavy blanket.		
Likes to crawl in narrow places.		
Likes rhythmic flexion and extension of arms and legs.		
Performs original movements of hands and body.		
Likes to shake hands, the whole body.		
Constantly carries objects in his hand.		
Other.		

Tactile system

Behaviour description	Grade	Comment
Turns away, cries in response to tactile stimulation.		
Avoids touching sticky materials.		
Avoids contact with bulk materials.		
Does not allow to touch him.		
Avoids touching certain structures (e.g. fabrics, carpets).		
Does not like dirty hands or feet (for example, hands in sand or paint).		
Avoids touching the face, hair or head (eg, washing, haircut).		
Requires taking off clothes or shoes due to strong		

tactile sensations.		
Crying, screaming when you touch a towel, toothbrush, certain clothes (underline the appropriate).		
Cries, screams when his nails are cut.		
Cries, screams if he feels pieces of food on his lips, cheeks, chin.		
Avoids using a spoon or fork because of unpleasant sensations in the mouth.		
Eats only food of a certain texture.		
Does not use hands for play or self-care.		
Collars, cuffs, labels on clothes, rough seams cause discomfort.		
Requires constant tactile stimulation.		
Likes being in the arms of an adult.		
Likes to touch certain materials or structures (for example, silk fabrics).		
He touches everything with his hands.		
Does not respond to pain such as cuts, injections, blows or bone fractures.		
Bites himself.		
Other.		

Visual system

Behaviour description	Grade	Comment
Requires wearing sunglasses indoors.		
Easily remembers how the items are located in the room, requires that all items are in place.		
Likes to be in dark rooms.		
Tries not to look a person in the eye.		
Reacts negatively when the light is turned on, to increased lighting.		
Often closes his eyes.		
Likes playing with small objects.		
Likes the items of a certain colour.		
Likes to play with Lego, puzzles.		
Exhibits items in rows.		
Prefers watching cartoons to other activities.		
Prefers to contemplate bright objects and those that glow.		
Constantly examines himself in the mirror, moves, looking at the reflection in the mirror.		
Carefully examines the details but loses the overall picture.		

Looks at objects through his fingers.		
Examines the fingers, shakes them in front of his face.		
Prefers to contemplate rolling, spinning objects.		
Prefers to contemplate the shadows.		
Likes unusual visual sensory stimuli (provided vision is preserved): squints, looks at objects from a certain angle and so on.		
Incorrectly evaluates spatial relationships, so comes into contact with people or things.		
Other.		

Auditory system

Behaviour description	Grade	Comment
Shouts, covers ears with hands if hears certain sounds.		
Prefers to be spoken to in a low voice or in whispers.		
Not used to certain sounds.		
Cannot be in a loud room.		
Taps objects or surfaces, throws objects to listen to sounds.		
Prefers listening to music, songs and other activities.		
Makes certain sounds and listens to them.		
Prefers loud sounds, shouts loudly for the purpose of self-stimulation or to cause echoes.		
Does not respond to verbal requests if it is busy with something.		
Plays with objects so that they make a certain sound (for example, rustling a ball)		
Does not notice loud sounds (while capable to hear).		
Other		

Taste, sense of smell

Behaviour description	Grade	Comment
Explores objects by smelling them.		
Constantly sniffs objects, clothes.		
Negatively reacts to certain smells.		
Picky in food, prefers certain smells.		
Picky in food, prefers a certain taste.		
Prefers drinks, food of a certain temperature.		
Refuses to wear clothes, feeling a different smell.		
Trying to eat inedible items.		
Prefers pungent smells that others do not like (such as dirty clothes, rotten food, etc.).		

Constantly licks objects.		
Does not distinguish smells between edible and inedible objects.		
Does not react to unpleasant smells.		
Other.		

Conclusion _____

Checklist for evaluation of sensor systems

SENSORY PROFILE OF A SCHOOL-AGE CHILD

First name and Last name _____

Date of Birth _____

Diagnosis _____

Information received from parents, guardians, teachers (underline the resource)

First name and Last Name _____

Vestibular system

Behaviour description	Grade	Comment
Likes sedentary classes, moves slowly and carefully.		
Is afraid of heights.		
Doesn't like it when someone else starts moving him or turns him upside down, sideways, backwards.		
Avoids rides in the park.		
Easily loses balance and may seem awkward.		
Avoids sudden movements.		
Avoids games and sports that require balance.		
Experiencing symptoms of seasickness when driving a car, boat, train, plane, escalator or elevator.		
Easily loses balance when cycling or climbing stairs.		
Prefers swinging on a swing.		
Strives for everything that gives a feeling of fast, intense movement.		
In amusement parks likes everything fast and intense.		
Looks for sources of excitement, adventure, often dangerous.		
Constantly runs, jumps, etc., instead of a simple walk.		
When sitting, swings its whole body, shakes leg or		

head.		
Likes fast sudden movements. For example, when a car or bicycle jumps on a hilly road.		
Likes a rocking chair; hammocks; swivel chairs.		
Other.		

Proprioceptive system

Behaviour description	Grade	Comment
Doesn't like it when an adult presses on the shoulders or other parts of the body.		
It is difficult to teach new movements.		
Does not like the movements associated with pressure.		
Does not like to climb a mountain, up the stairs.		
Pulls, twists or chews things (for example, a pencil).		
Bites or pinches own skin or others.		
Often inadvertently breaks things.		
Often hits, stumbles or crashes into objects.		
Presses hard with a pen, pencil when writing or drawing.		
Deliberately falls or crashes into things.		
Likes to punch the wall.		
Presses hard on the object when holding it in hands.		
Likes when another person presses on the shoulders or other parts of the body.		
Falls asleep under a heavy blanket.		
Likes to crawl in narrow places.		
Likes rhythmic flexion and extension of arms and legs.		
Performs original movements of hands and body.		
Likes to shake hands, the whole body.		
Constantly carries objects in hand.		
Other		

Tactile system

Behaviour description	Grade	Comment
Turns away, in response to tactile stimulation.		
Does not allow to touch itself.		
Avoids touching certain structures (e.g. fabrics, carpets).		
Does not like dirty hands or feet (for example, hands in sand or paint).		
Avoids touching the face, hair or head (e.g. washing, haircut).		

Requires taking off clothes or shoes due to strong tactile sensations.		
Feels discomfort when touching a towel, toothbrush, certain clothes (emphasis added).		
Feels discomfort when cutting nails.		
Feels discomfort if he feels pieces of food on the lips, cheeks, chin.		
Eats only food of a certain texture.		
Collars, cuffs, labels on clothes, rough seams cause discomfort.		
Requires constant tactile stimulation.		
Likes to touch certain materials or structures (for example, silk fabrics).		
Touches everything with hands.		
Does not respond to pain such as cuts, injections, blows or bone fractures.		
Bites itself.		
Other.		

Visual system

Behaviour description	Grade	Comment
Requires wearing sunglasses indoors.		
Easily remembers how the items are located in the room, requires that all items are in place.		
Likes to be in dark rooms.		
Tries not to look a person in the eyes.		
Reacts negatively when the light is turned on, to increased lighting.		
Often closes eyes.		
Likes playing with small objects.		
Likes the items of a certain colour.		
Exhibits items in rows.		
Prefers to contemplate bright objects and those that glow.		
Constantly examines itself in the mirror, moves, looking at the reflection in the mirror.		
Carefully examines details but loses the overall picture.		
Looks at objects through fingers.		
Examines the fingers, shakes them in front of own face.		
Prefers to contemplate rolling, spinning objects.		
Prefers to contemplate the shadows.		
Likes unusual visual sensory stimuli (provided		

vision is preserved): squints, looks at objects from a certain angle, and so on.		
Loses lines when reading.		
Incorrectly evaluates spatial relations, so comes into contact with people or things.		
Other.		

Auditory system

Behaviour description	Grade	Comment
Feels uncomfortable when hears certain sounds.		
Prefers to be spoken to in a low voice or in whispers.		
There is no habituation to certain sounds, such as the school bell.		
Likes music.		
Cannot be in a loud room.		
Makes certain noises and listens to them.		
Prefers loud or certain sounds.		
Does not respond to verbal requests if it is busy with something.		
Does not notice loud sounds (while capable to hear).		
Other		

Taste, sense of smell

Behaviour description	Grade	Comment
Explores objects by smelling them.		
Constantly sniffs objects, clothes.		
Negatively reacts to certain smells.		
Picky in food, prefers certain smells.		
Picky in food, prefers a certain taste.		
Prefers drinks, food of a certain temperature.		
Refuses to wear clothes, feeling a different smell.		
Prefers pungent smells that others do not like (such as dirty clothes, rotten food, etc.).		
Does not distinguish between smells of edible and inedible objects.		
Does not react to unpleasant smells.		
Other.		

Conclusion _____

Checklist for evaluation of sensor systems

SENSORY PROFILE OF A PERSON 18 YEARS OLD AND OLDER

First name and Last name _____

Date of Birth _____

Diagnosis _____

Information received from parents, guardians, teachers (underline the resource)

First name and Last Name _____

Vestibular area

Behaviour description	Grade	Comment
Likes sedentary classes, moves slowly and carefully.		
Is afraid of heights		
Avoids rides in the park.		
Easily loses balance and may seem awkward.		
Avoids sudden movements.		
Avoids activities that require balance.		
Experiencing symptoms of seasickness when driving a car, boat, train, plane, escalator or elevator.		
Easily loses balance when cycling or climbing stairs.		
Strives for everything that gives a feeling of fast, intense movement.		
In amusement parks likes everything fast and intense.		
Looks for sources of excitement, adventure, often dangerous.		
When sitting, he swings his whole body, shakes his leg or head.		
Likes fast sudden movements. For example, when a car or bicycle jumps on a hilly road.		
Likes a rocking chair; hammocks; swivel chairs.		
Other.		

Proprioceptive system

Behaviour description	Grade	Comment
Does not like the feeling of pressure on the muscles.		
It is difficult to learn new movements.		
Does not like the movements associated with pressure.		
Does not like to climb a mountain, up the stairs.		
Pulls, twists or chews things (for example, a pencil).		
Often inadvertently breaks things.		

Often hits, stumbles or crashes into objects.		
Presses hard with a pen, pencil, when writing or drawing.		
Likes to punch the wall.		
Presses hard on the object when holding it in hands.		
Likes the pressure on shoulders or muscles.		
Likes to fall asleep under a heavy blanket.		
Likes rhythmic flexion and extension of arms and legs.		
Likes to shake hands, the whole body.		
Constantly carries objects in his hand.		
Other.		

Tactile system

Behaviour description	Grade	Comment
Does not allow to touch himself.		
Avoids touching certain structures (e.g. fabrics, carpets).		
Avoids touching face, hair or head (e.g. washing, haircut).		
Likes free clothes.		
Feels discomfort when touching a towel, toothbrush, certain clothes.		
Feels discomfort when cutting nails.		
Feels discomfort if he feels pieces of food on the lips, cheeks, chin.		
Eats only food of a certain texture.		
Collars, cuffs, labels on clothes, rough seams cause discomfort.		
Requires constant tactile stimulation.		
Likes to touch certain materials or structures (for example, silk fabrics).		
Does not respond to pain such as cuts, injections, blows or bone fractures.		
Other.		

Visual system

Behaviour description	Grade	Comment
Easily remembers how the items are located in the room, requires that all items in place.		
Likes to be in dark rooms.		
Reacts negatively when the light is turned on, to increase lighting.		
Often closes his eyes.		

Likes activities with small objects.		
Prefers to contemplate bright objects and those that glow.		
Carefully examines the details but loses the overall picture.		
Easily remembers people's faces.		
Prefers contemplation of objects or species of nature.		
Likes bright light shows.		
Loses lines when reading.		
Incorrectly evaluates spatial relations, so bumps into people or things.		
Other.		

Auditory system

Behaviour description	Grade	Comment
Feels uncomfortable when hears certain sounds.		
Prefers to be spoken to in a low voice or in whispers.		
Not used to certain sounds.		
Likes the music.		
Cannot be in a loud room.		
Prefers loud or certain sounds.		
Does not respond to verbal requests if is busy with something.		
Does not notice loud sounds (while is capable to hear).		
Other		

Taste, sense of smell

Behaviour description	Grade	Comment
Explores objects by smelling them.		
Constantly sniffs objects, clothes.		
Negatively reacts to certain smells.		
Picky in food, prefers certain smells.		
Picky in food, prefers a certain taste.		
Prefers drinks, food of a certain temperature.		
Prefers pungent smells that others do not like (such as dirty clothes, rotten food, etc.).		
Other.		

Conclusion _____

Types of intervention and creation of a therapeutic program

The American Occupational Therapy Association recommends the following types of interventions that can help with sensory problems:

1. An Intervention involving the use of sensory and motor actions and equipment (classes in the sensory room).
2. Adaptations, such as using earplugs or earmuffs or using special washcloth when taking a shower.
3. Sensory diet programs to meet sensory needs of children, including daily routines (such as rocking chair, aromatherapy, weighted blankets), certain physical activities (e.g. yoga, swimming) and materials (e.g. sensory kits that contain music, items for comfort).
4. Modifications of the environment and devices, such as lighting, special furniture, inscriptions or pictures, to increase or decrease the level of sensory stimulation.
5. Knowledge of individuals, family members, caregivers, administrators and politicians on the impact of sensory functions on the child's activities, how to minimize their negative impact on functions; actively help to prevent unwanted behaviour.

When creating a therapeutic program, a specialist takes into account possible types of intervention and discusses goals with the client, steps to achieve the goals and terms of the course.

Therapeutic program development begins with clarifying request of the client or parents/guardians (if a client is a child of early and preschool age or a child with severe disabilities).

Such request is aimed at improving the functioning (life) of the client in everyday life and is based on:

- analysis of client's problems;
- data about the current level of client's functioning;
- assessment of sensor systems work;
- child's development level (for children).

The therapeutic program is created based on the request of the client or parents/guardians and diagnostic data.

The following methods can be used for diagnosis:

- Questionnaires;
- Tests;
- Observations;
- Video recording.

When creating a therapeutic program, the specialist takes into account possible types of interventions and discusses goals with the client and actions of the specialist in the sensory room; actions of the client/parents in the classroom and in real life situations to achieve the goals; deadlines; total number of classes.

The consent of the client or parents/guardians is required to conduct diagnostic methods and to implement the program according to client's request.

Therapeutic goals are aimed at improving functioning of the client in various life situations, goals are set at the level of activity and participation of the client.

An "activity" is a process when individual is performing a task or an action.

Participation is the involvement of an individual in a life situation.

Therapeutic goals are discussed with the client / parents and formed according to the SMART principle:

- Specific - individual, specifies the situation in detail;
- Measurable – can be measured;
- Achievable – can be achieved, does not contradict other goals and plans;
- Realistic – is realistic to perform;
- Timed - can be measured and calculated over time.

Parents are the initiators and active participants in the implementation of the program. They are with the child most of the time and can implement the program in the natural environment. Parents and a specialist coordinate their actions in the sensory room. Parents together with a specialist create an action plan in different life situations (for example, a walk, doing homework, etc.) If necessary, parents keep a diary of observations of the child's behaviour.

Examples of goals:

Problem	Incorrectly formed goal	Correct goal
A girl, 6 years old, motor awkward, avoids	After 3 months Oksana's level of general motility will	After 3 months Oksana will throw and catch the ball in a

playground and children playing moving games. Wants to learn to play with the ball.	improve.	joint game with an adult. After 5 months Oksana will throw and catch the ball in a joint game with the children on the playground.
Girl, 3 years old, oral hypersensitivity.	After 4 months Barbara's sensitivity in the mouth will decrease.	After 4 months Barbara will use a toothbrush and brush her teeth.
A 5-year-old boy cannot use toilet because he is frightened by the sound of a water drain in the toilet.	After 3 months Sasha will calmly respond to certain sounds.	After 3 months Sasha will learn to use toilet and will be able to flush the toilet on his own.

Cases of programs implemented by specialists in the sensory room

Program 1

Anton, 2 years 3 months

Diagnosis: Symptomatic epilepsy. Delayed psycholinguistic development.

Parents' request: teach their child to use his hands for playing and feeding.

General level of functioning of the child:

With his own initiative, the child picks up only smooth plastic, rubber or wooden toys. Examines them, knocks them, throws. At an earlier age he did not touch the toys with his hands but touched his nose. Repels rough, fabric, soft toys. Screams if sticky objects fall into his hands. Likes to whirl, sometimes sways his torso. Likes to ride on swings, carousels.

Understands simple instructions “let's go to eat”, “let's go swimming”. Pronounces different syllables but does not copy them from an adult. Expresses a request with a cry, sometimes with a look. The mother understands well what the child wants and quickly comes to help.

The child walks and runs independently.

The child eats with a spoon. Chews usual food. Does not pick up a spoon or food. The mother dresses and undresses the child.

On the playground he observes other children, runs after them. Comes closer to the sandbox, watches the children playing, but does not play in the sandbox.

Description of the child's activity in the sensory room: moves independently around the room. Likes listening to the songs "Hakuna matata" from the cartoon "The Lion King", riding on a therapeutic ball, riding on a swing, jumping on a trampoline (an adult holds his hands).

Filling out checklists: interviewing parents and observing the child's behaviour in the sensory room.

The child prefers vestibular, proprioceptive sensations. There is tactile hypersensitivity in the hand area: child allows an adult to hold hands, but does not pick up sticky objects, soft toys, loose materials.

Goals: After 3 months, the child will pick up toys of different textures (touch balls), examine them, throw them, take them out of the container (in the centre and at home).

After 3 months the child will play with the developmental (game) centre (press buttons, twist, etc.).

After 3 months the child will take sand in his hands, pour it into a bucket, will be able to stay in the children's sandbox for up to 5 minutes.

After 3 months the child will pick up his favourite cookies and bite them.

After 3 months the child during sensory-social games with an adult will ask to continue the game with a look or a gesture.

After 3 months the child will choose activities during classes in the sensory room and various life situations.

After 3 months, the child, sitting on a highchair, will take off and put on sandals on his own.

Goals for the parents:

1. In 2 weeks, parents will organize a sensory corner at home, will offer Anton to choose an activity (alone or with parents to play; listen to music) – 2-3 times a day (games and exercises are discussed every week).

2. In 1 month, parents will provide Anton with minimal assistance (partial physical hint or gesture) in situations of taking off / putting on shoes, feeding cookies; will praise the child for independence of his actions.

3. In 1 month, parents on a walk will play with the child together in a sandbox (the algorithm of actions is discussed for each week).

Program implementation:

1. Classes in the sensory room – 2 times a week, 50 minutes, for three months. 24 classes in total.

2. Creating a sensory corner at home (rocking chair, ball set, music selection, bean container).

3. Teaching parents.

The structure of the lesson in the sensory room:

Mother or father takes part in the lesson.

Start of class: 4 minutes. Greetings "Give five".

Adults teach a child to take off his shoes on his own.

Block 1: 7 minutes "A game of the child's own initiative".

The adult asks: What do you want to play?

Choice (based on diagnostic data):

1. Rolling on the therapeutic ball.

Sensory influence: vestibular influence, proprioceptive influence, tactile influence.

Exercises: The adult puts the child on the ball, holds on the pelvis, begins to swing, then holds the thighs or shoulders, presses on the muscles of the thighs or shoulders. Pauses, waiting for the child's signal "Continue the game" – the child looks into the eyes of an adult, gives a signal with hand or sound.

The adult puts the child on the ball on his stomach, the child's hands in front. Begins to swing so that the child's hands touch the surface. First, the surface is smooth, in subsequent classes, the child's hands touch the touch mat, then the child's hands are lowered into a container with beans, etc.

2. Swing.

Sensory influence: vestibular, sound, tactile influence. The specialist and the mother swing the child on the swing, calling his name from different angles. When the child

returns to the voice of an adult, he is offered to "Give five" or adult touches hands or legs of the child.

3. Trampoline.

Sensory influence: vestibular influence, proprioceptive influence, tactile influence.

The specialist and the child are on a trampoline. An adult holds a child's hands and swings a trampoline. Then the adult holds the child by the shoulders and swings the trampoline. Pauses, waiting for the child's signal "Continue the game" - the child looks into the eyes of an adult, gives a signal by hand or sound. After the child's signal, this game continues.

Or the child is offered a new game: the child's mother is nearby and offers the child a ball, initially smooth, in subsequent lessons touch balls. The child's task is to throw the ball.

Block 2: 7 minutes

The game is offered by an adult "Now it's my turn to make a game choice".

Game options: game "Now I'll catch you", relay (goes through the tunnel, then the trampoline), a game in a ball pool, a game with a developmental centre, musical toys (pressing buttons, knocking on the drum), a game with touch containers, a game in touch sandbox.

Block 3: 10 minutes. Snack: the child sits down at the table and he is offered to drink compote and eat cookies. First, the cookies are in mom's hands, then the cookies are on a plate. A mother helps the child to take cookies and bring them to his mouth. Gradually the hint is removed. If the child does not want to eat, the adult does not insist, and offers the child to choose a game (block 1).

Block 4: 10 minutes - independent play of the child. Listening to his favourite children's songs. Discuss the results of the lesson with parents, discuss games and exercises that can be done at home and on the playground.

Block 5: 7 minutes - relaxation part of the lesson: the child with his mother in a darkened room examines the columns with bubbles, glowing fiber. Avoid flashing lights due to epic seizures! The child listens to calm music. Game in the sensory sandbox.

The specialist warns the child: "Our lesson is over, there are 5 minutes left to play... 1 minute... I'm counting to 3 and we have to go". Turns on the light.

End of class: 5 minutes. The child puts on shoes. The child waves "Bye-bye".

Program 2

Client Olena, 38 years old.

Request: remove unpleasant, sometimes painful, "strange sensations" in the hands and feet. Increase physical and emotional endurance during the day.

During the last few months, when activity decreases, at rest, when falling asleep, arms and legs begin to become numb, then unpleasant sensations - heartburn and tingling may appear. Examination by a neurologist: diseases of the central and peripheral nervous system were excluded.

General level of functioning: Olena together with her husband and daughter-schoolgirl, 3 years ago moved from the combat zone. The period of adaptation in the new place was difficult. At the moment, according to Elena, the situation is improving. Her husband found a job, the daughter finished the eighth grade. A year ago, they bought an apartment.

Olena also works but gets tired quickly at work, exhausted when communicating with strangers. Olena often cries for no apparent reason (according to her), it is difficult for her to make decisions. Olena is afraid of losing her job. Relationships with daughter and husband are good, family members try to support each other. Olena receives individual therapy from a psychologist (sessions of cognitive-behavioural therapy) - once a week.

Activity in the sensory room and the results of filling in the checklists of the sensory profile: has difficulty copying certain sequences of movement following an example, easily loses balance, avoids sudden movements, situations of rotation; makes many additional movements: straightens hair, touches the face with her hands, strongly squeezes the objects she holds in her hands; demonstrates priority to strong smells; describes taste preferences - food with strong extractive properties; her husband and daughter often express dissatisfaction with the food taste; notes difficulties in correspondence, prefers to write with a thin sharp rod, presses quite hard.

Goals for working in the sensory room

In 2 months, Olena will be able to repeat quickly the sequence of movements following an example.

In 2 months, Olena will be able to prepare dishes from simple ingredients.

In 2 months, Olena will be able to keep her diary, describing exciting events during the day (without writing discomfort).

Implementation of the program

Classes in the room for sensory integration once a week lasting 50 minutes, for two months, group form classes (group of 3 women). Eight classes in total.

Continue training with a cognitive-behavioural therapist.

Lesson structure

Greetings: Discussing the meeting plan. Start of the session.

Own choice (tune, feel and imagine what exactly she wants to do at the beginning of the session). Each participant chooses exercises for herself.

Block 1 (10 min)

Vestibular, proprioceptive, tactile component (according to diagnostic results).

1. Exercises on a trampoline

Olena swings on a trampoline in different positions (in a sitting position, standing on her knees and feet), holding a box of bags (of different weight and filling), throws the bags and tries to get exactly into the boxes placed on the floor.

2. Exercise "Move the walls" – a powerful proprioceptive effect, stress and relaxation techniques. Olena tries to imagine changing the position of the walls in her apartment.

3. Exercises on a suspended, movable platform. Olena, with her eyes closed, describes in which direction the movement is taking place. Olena gives an assumption of where the specialist will move her now.

Block 2 (5 min) – a joint exercise for all group members.

"The waves in the sea" fast copying of movements following an example (repeat after the specialist).

Block 3 (5 min) – a joint exercise for all group members.

"Magic bag" recognition of objects by touch.

Block 4 (5 min) – exercise for all group members.

Exercises with precise movement. Walk on the rope, which is located on the floor. Go on platforms of different heights.

Block 5 (5 min) – exercise for all group members.

Exercise "rubber bands". Olena will perform jumps, in turn with other members of the group, through a tight rope (which springs), at different heights, in different ways, repeats after the specialist.

Block 6 (7 min) – exercise for all group members.

Exercise "Relax". Olena will be able to imagine (in a supine position, with her eyes closed, in a darkened room with included sensory room equipment: optic fibers and columns with bubbles), with what colour all parts of the body glow in the thermal camera, to feel how the heat wave spreads throughout the body, and at the fingertips and feet.

End of class – (7 min).

Participants share their impressions, discuss what was done best during the session, what they liked the most. They decide what they will be able to apply during the day in their routine. Olena and each participant write down their goals for the next week in their diary.

Special exercises. Games that can be offered by specialists, working in the sensory room

Magic bag

The kid is offered a bag (or box, jewellery box), which contains different objects (objects of different sizes, shapes, textures, little toys from Kinder surprise, cars, figures of animals, cubes, balls, rings).

The specialist asks questions to a child or adult: "What's in the bag?". A participant receives a variety of items of relevant interests: lipstick, pen, pencil, rubber, cord, a small bottle of perfume – things are placed in a box or fabric pouch.

You must wait for a response before a child or an adult will get and see an item.

You can extend the task and additionally wear a blindfold.

A specialist focuses on the concepts of objects, the recognition of an object, a precise description of characteristics and own sensation during recognition process.

Find out what it smells like

A child or an adult is offered a bag containing jars that are tightly closed with a lid, each jar contains a soft substance soaked in essential oil (pine needles, coffee, vanilla, cocoa, perfume, laundry gel). The day before, it is necessary to clarify whether a person has allergic reactions. To complicate the task, you can wear a blindfold.

Specialists focus on the description of felt and associative memories.

Sensory bag (box)

A child or adult is offered a box filled with bulk materials (beans, flax, peas, semolina, sand), in which various soft toys are placed in addition, a client tries to find them.

The specialist is focused on the quality of the search process, the person's ability to demonstrate toys found to the specialist, the ability to enumerate of toys, the ability to group toys by characteristics, the ability to complete the search process.

If you have an opportunity, you can use a larger box that can fit in a child immersed in bulk material.

Creative drawing

A child or an adult is asked to draw on a mirror surface or on a dark hard table surface. To do this, a specialist offers toothpaste or shaving foam.

The specialist focuses on the person's efforts, on the area of filling with material, on the initiative, on the "subject" of drawing, on different sensations (tactile, visual, proprioceptive, olfactory).

Creative sculpture

A child or an adult on a specially organized surface (on a table or on the floor) is asked to determine the amount of kinetic sand or dough.

Depending on the age and interests of the client, a specialist offers different tasks.

From simple studies of the quality of materials (quality of texture, volume, parts and total weight and volume) to complex works of art and situations.

A specialist focuses on the emotional experiences of a child or an adult and on the general perception of the process (integrative abilities).

Crystal castle

A child or an adult is offered a frozen piece of ice, on a specially organized surface, in which are various frozen objects (chestnuts, cones, beans, leaves, small toys).

A child or an adult tries to get these objects in various ways, warms them with his/her breath, puts each finger or the whole palm to the ice, beats with an iron spoon. Be sure to warm your hands and dry your hands with a towel afterwards.

A specialist focuses on various temperature effects and tactile sensations of the hands, on the ability to get small items as a result of activities, on the ability to continue in difficult circumstances.

Fountain of emotions

For younger children from six months to 3-5 years.

On a specially prepared surface, a specialist offers a jar of a moisturizing cream, children can apply the cream on different parts of the body, on the whole body, slide the whole body on the surface, try to stand on your knees or hands.

A specialist focuses on the tactile sensations of the child, on the ability to decide where to apply the cream, on the ability to trust another person to apply the cream on different parts of the body.

Picnic

For children and adults.

On a specially prepared surface on the floor, in separate plates, in the offered plates are different food items in small pieces.

A specialist focuses on taste assumptions, the combination of tastes, the ability to take the initiative of a moderating adult and the social ability to treat other people.

Opening the task of preparing for such a picnic (purchasing products, slicing products, opening packages, decomposing on plates).

Magic patterns

For children and adults.

There are specially prepared boards (it is possible to conduct with a cork surface) with small vertical pins (decorative office buttons) on which multi-coloured threads for knitting (dense threads) are tied.

A specialist offers to create own picture with different threads.

A specialist focuses on motor dexterity, perhaps chooses different threads, decides how to fasten the thread, to hold each thread on the pins (young children need help to fasten the threads).

For adults, a specialist focuses on abstract concepts, various events and feelings in life (for example, to create your own mandala).

It is possible to perform such an exercise with wide ribbons tied to a horizontal bar (similar to macramé).

The miracle of decoupage

For children and adults.

A specialist offers variety of napkins (paper) to paste objects of different, preferably non-standard, shapes.

A specialist focuses on the precise movements, the tactile sensations of paper, water and glue on napkins, the shape of objects, ways to assess the satisfaction with the results.

Dry pool

The first option.

Free access required. Ways to climb and dive, choosing to stop or continue moving in balls in the pool.

A specialist offers support: "Do you need help?", offers a choice: turn on the optic fibers or not, turn on the lights or not. A specialist focuses on the personal initiative of the child or adult.

The second option.

A specialist generates various tasks to search for items in the ball pool. A specialist helps a child or an adult to understand their movements, the position of own body, the feeling of pressure of the layers on the skin and body.

Suspended modules

Hammock suspension system.

A child or an adult is asked to get cozy in hammocks (in a position on the abdomen, back, sides, with raised and brought to the chest legs), the specialist spreads the hammock in different directions, with different amplitude and makes pauses.

A specialist constantly focuses on the position of the body inside, on the position of the body in space, on the pressure of the hammock on the body, on a calm comfortable or uncomfortable position. A specialist suggests looking for a comfortable position. It is possible to use a special simulator "egg-tomato".

In the abdominal position, a specialist suggests that a child or an adult move the touches of the hands and feet on a wide floor surface to perform various tasks (layout objects in a certain order, string rings, throw layers in a certain container, knockdown pins). A specialist focuses on accurately performed tasks in an unstable position and while moving, focuses on emerging sensations, on the ability to complete the task.

Suspended platform system

For a child or an adult.

A specialist suggests performing various precise tasks in a sitting position on a platform, in a position with bent legs or in a position with straightened legs, while the platforms are moving. For example, task can be to keep water in a spoon. A specialist focuses on the accuracy of performed tasks.

Jump from the cliff

A specialist suggests that a child or an adult first get on their knees and stay on the rocking platform in a kneeling position. The next phase is to stand on a suspended platform in a standing position.

A specialist focuses on the efforts that must be made to maintain a stable body position on a platform. And then a specialist offers to jump from a mobile platform, on a specially prepared surface (from soft modules, for example, in the simulator "Island of safety"). The specialist focuses on the opportunity to decide to jump with the whole body (powerful proprioceptive effect).

Suspended cylinder system

For a child or an adult.

A specialist suggests holding on while sitting on a round cylinder, moving feet on the floor, "riding" or holding on without touching the surface with feet, or not holding the cylinder with hands. A specialist focuses on the exact performance and the sensations during the performance of the task.

Suspended system "loops"

Loops are holding the shoulder and hip joints (4 fixation points).

In this position, a specialist offers to a child or an adult to move by touching with hands and feet a wide floor surface, performing various tasks (lay out objects in a certain order, string rings, throw balls in a certain capacity, knock down pins).

A specialist focuses on the accurate performance of tasks in an unstable position and while moving, focuses on the emerging sensations, on the ability to complete the task.

System of trampolines and balance weights

For small children, you can use a balance bowl, a specialist places a child inside this bowl. A specialist focuses on the pauses between the swings, making different intensity fluctuations.

For children of all ages and adults, a specialist uses a trampoline. A specialist can offer different tasks, in different positions (sitting and standing). For example, catch and throw balls, bags of different contents and different weights, in a certain place or in a container (stimulation of visual-motor coordination).

For children and adults, a specialist can offer balancers of various shapes that are installed on the floor (arc open up and arc open down), a specialist focuses on maintaining balance when performing various tasks.

Roller system (boards on wheels)

A specialist can put a child on the board and ask a child to push away with its hands and move forward or backward, or such a specialist can hold (pull forward) the board, grabbing the child forward. The child at this time can perform various tasks: just hold on while moving the board, collect small items and place them on the board in front of the chest (do an action while moving, at a certain distance, collect as many items as possible).

Happy relay races

A specialist suggests that a child or an adult sits on a blanket, on a slippery floor surface. A specialist can pull the blanket and ride a child or an adult on the slippery floor. Experts pay attention to how difficult it is to maintain balance and maintain body position, and not to fall on the floor (proprioceptive and vestibular effects).

Crimping machine (hugging machine)

You can ask a child or an adult to crawl through the soft rollers that compress the whole body.

Cheerful pizza

A specialist invites a child or an adult to lie on the floor and continues to place objects of different textures and sizes on the body of a child or an adult, maintaining a communicative dialogue about what details to lay (like the ingredients that lay on the pizza). To lay down objects of different textures in the form of an interesting game with different speed of touch and pressure, to add to the pressure of objects by

pressing with your hands (to strengthen the proprioceptive effect). Do not cover the face of a child or an adult.

Cheerful sandwich

Place a child between two soft modules, add more objects of different texture placed on the child's body, fold the soft modules and add pressure to the entire body surface (increase the proprioceptive effect, make pulsating movements of pressure).

Orofacial stimulation

You can teach a child to drink a delicious thick drink from a narrow tube. You can teach a child to blow out the candles. You can teach a child to blow into a tube, into the water ("Storm in a glass"). You can teach a child to blow into a thin tube and make a "clear field" on the surface in the sand or in semolina.

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