



AutisMUSIC cutting-edge report and mapping of needs

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1. Introduction

The notion of a connection between autism and music is as old as the first reported cases of autism, and music has been used as a therapeutic tool for many decades. Music therapy holds promise as an intervention for individuals with autism, harnessing their strengths in music processing to enhance communication and expression.

While previous randomised controlled trials have demonstrated positive global improvement and quality of life outcomes, their reliance on psychological outcomes restricts our understanding of underlying mechanisms.



Musical ability is one of the unique talents of some children with autism

- they like to listen to music
- feel the structure of the music
- recognise melodies
- can memorise and sing long passages accurately
- have the ability to remember and play melodies that they have only heard once
- can have perfect relative or absolute hearing

A review of the English literature shows several evidence-based researches on autism spectrum disorders, beginning in the 70-tees.

The scope of selected research articles showed that music therapy affects social communication, vocalisation, joint attention, eye contact, concentration, cooperation, interactive behaviour, participation in games and playing together, speech intelligence, exchange-sharing and expression of feelings, language skills, and verbal and nonverbal communication reduce undesirable forms of behaviour, negative emotions, and obsessive behaviour (Goldstein, 1964; Edgerton, 1994; Wimpory, Chadwick i Nash, 1995; Hanser 1999; Pasioli, 2004; Mamić, Fulgosi-Masnjak i Pintarić Mlinar, 2010; Bujanović i Martinec, 2019; Zorba, Akçamete i Özcan, 2020)

2. Literature Review

The literature review examines studies centred on music intervention for autistic children, spanning various contexts and methodologies. Research in this field explores the therapeutic benefits of music in enhancing communication skills, emotional expression, and social interaction among autistic individuals.

Each partner country conducted comprehensive literature reviews involving various scientific scholars, examining the current state of affairs within their respective regions.

In terms of terminology, Autism Spectrum Condition is widely acceptable in academic and medical circles. However, studies have shown an increased consideration for the use of different terms. Research by Bury S. M et.al (2020) on the Australian autistic

population revealed a significant preference for the term "autistic person" by autistic societies.

Studies highlight innovative approaches across different countries, such as North Macedonia, Poland, Cyprus, and Portugal, showcasing varying cultural perspectives and practices in music therapy.

These investigations collectively contribute to a deeper understanding of how music can profoundly impact the lives and development of autistic children, promoting inclusive and effective intervention strategies worldwide.

Similar results have been found in studies in the UK (Kenny et al. 2016), emphasizing the importance of language use in minimising biases in ethical, cultural, and educational settings. In respect to those findings, in this booklet, the terms 'autistic people,' 'autistic students,' or 'autistic children' will be used when referring to these populations.





2.1 REPUBLIC OF NORTH MACEDONIA

In the Republic of North Macedonia, music therapy for autism may not be as widespread or formally established as in some other countries. Still, there is growing recognition of its potential benefits. Non-profit organisations, educational institutions, and healthcare providers may offer music therapy services to individuals with autism and their families.

Since 2001, the Center for Children's Artistic Expression, Music Therapy, and Psychophysical Relaxation "Dzunjule" has existed in Macedonia, part of the World Federation for Music Therapy. This centre affirms children's artistic expression and music therapy for children with learning difficulties.

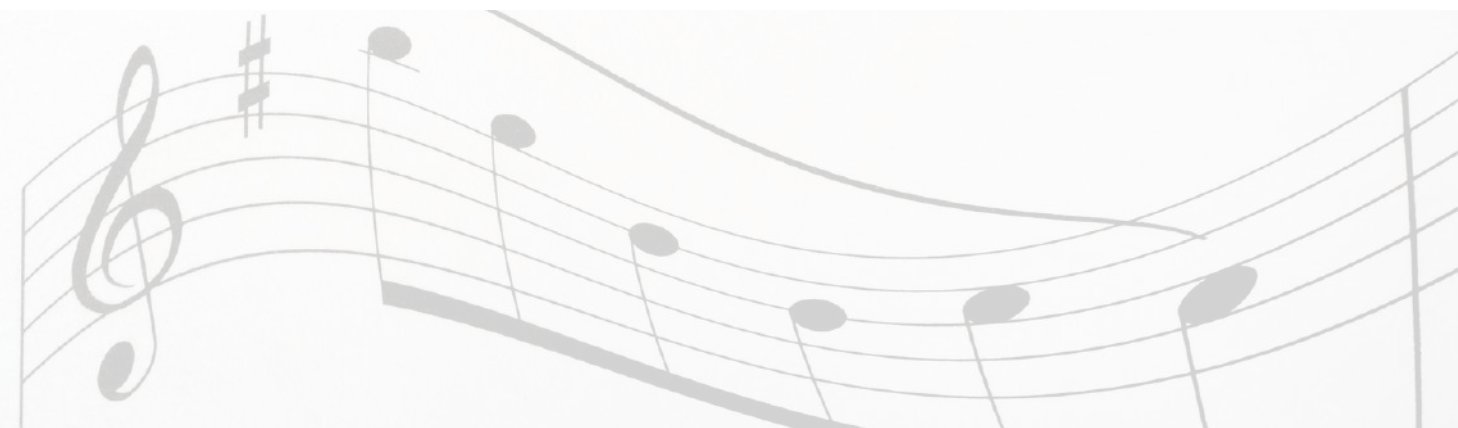
Tomislav Tanevski, who is employed at the Faculty of Educational Sciences at Gotse Delchev University in Shtip, is the only person who has worked on music therapy and children with learning difficulties.

He is the founder of the Center for Children's Artistic Expression, Music Therapy, and Psycho-Physical Relaxation "Dzundzule" in Skopje. Today, there are no data on the activity of this center.

When searching the literature online, apart from the mentioned paper, no other papers are related to music therapy and autism. Many captions are articles about organized musical events to which children with autism are invited.

During the search, in the Analysis of the situation with early intervention in childhood in North Macedonia issued by the UNICEF office in Skopje, music therapy was mentioned by respondents who believe that professionals who deal with early intervention should attend music therapy training.

The table of studies in North Macedonia can be found in Annex 1.





2.2 Poland

A review of articles from Poland confirms the effectiveness of music therapy in children with ASD. Musical intervention positively impacts their sphere of communication, social or educational (Kanpik – Szweda, 2014). In the article “Music therapy and its properties in the rehabilitation of a child with autism”, where a group of autistic children (n = 18) aged 3 to 7 years from centres and foundations were included, selected aspects of the changes were presented.

The changes occurring in all study participants are not detailed, and individual cases are included. Research can add to the current knowledge, especially in music therapy and its impact on autistic children. In the article “The Importance of Music Therapy Techniques in Support of the Development of a Child with Autism” (Maria Minczakiewicz, 2014) one of several conclusions presented that children with autism can be interested in movement, vocal music, and musical instruments.

You can encourage them to play with singing to the accompaniment of music and to actively listen to your favourite music tracks with a lively rhythm and catchy melodies.

In the case study “Musical Abilities of Autistic Children as a Manifestation of Expression Occurring during the Process of Musical Therapy,” based on observations and in-depth reports, both musical and non-musical, as well as recordings of the sessions, it was concluded that in the three presented cases, it is possible to demonstrate musical abilities that were and are a manifestation of expression and non-verbal communication.

In three therapy participants, an improvement in the functioning of the cognitive sphere could be observed.

The table of studies in Poland can be found in Annex 2.





2.3 Cyprus

The domain of music therapy in Cyprus has shown gradual development over the years, yet considerable efforts remain necessary for its further advancement. Notably, establishing the Cyprus Music Therapy Association (CYMTA) in December 2010 marks a pivotal milestone in this trajectory. As a member of the European Music Therapy Confederation (EMTC) since 2011, CYMTA operates with official recognition and adherence to established regulatory frameworks.

The association has instituted formalized charter and regulatory provisions, mandating adherence for all members. This structured approach ensures that practitioners within the field are duly aligned with professional standards, thereby facilitating music therapy's legitimization and effective practice in Cyprus. In Cyprus, specialized schools are integrated into the government curriculum, where certified music therapists are employed.





2.3 Cyprus

In addition, grassroots efforts in Cyprus, spearheaded by non-governmental organisations (NGOs) and specialised associations, actively employ music as a therapeutic modality, particularly in contexts such as autism treatment. Despite the need for further development and improvement in this sector, the presence of government schools, NGOs, and associations underscores a growing interest in and advocacy for the therapeutic application of music. These grassroots initiatives suggest the potential for further development and advocacy efforts to establish music therapy as a recognised and legitimate therapeutic practice within Cyprus.

Music therapy functions as a platform for emotional expression and processing through music, and it is an integral component of a customised, individualised curriculum tailored to these students' needs.

Furthermore, it facilitates the expansion of their experiential horizons and self-awareness, fosters the development of social skills, and cultivates their creative abilities.

The table of studies in Cyprus can be found in Annex 3.



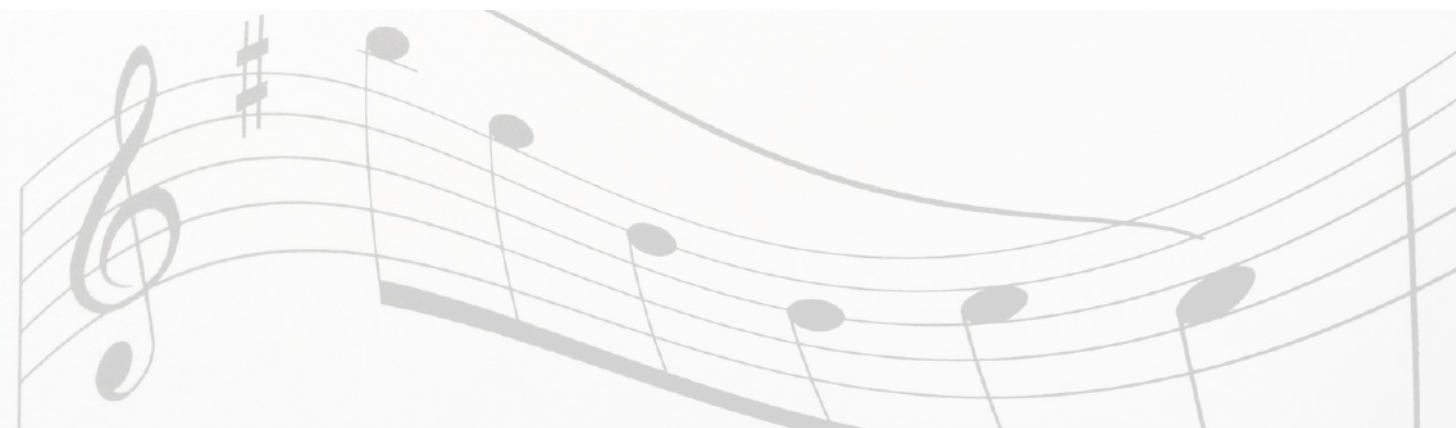


2.4 Portugal

Music therapy has proven to be a practical approach to supporting children with Autism Spectrum Disorder (ASD). The practice has been increasingly recognised and integrated into educational and therapeutic contexts in Portugal.

The table of studies in Portugal can be found in Annex 4.

The establishment of the Portuguese Music Therapy Association (APMT) in 2010 and its membership of the European Music Therapy Confederation (EMTC) since 2011 reinforce the importance of this discipline in the country. This study compiles four relevant studies carried out in Portugal on the benefits of music and music therapy for children with autism.



3. Collection of best practices



The compilation of best practices presented here represents a crucial resource in the ongoing effort to educate and empower educators in using music as a potent intervention tool for autism spectrum disorder (ASD). As we navigate the complexities of supporting autistic children in educational settings, the effectiveness of music therapy emerges as a promising approach. This collection of best practices not only synthesises insights

From diverse scholarly perspectives, it also draws upon practical experiences and successes from various regions and educational contexts. By fostering a deeper understanding and application of music therapy techniques, this collection aims to equip teachers with the knowledge and tools to create inclusive and supportive learning environments where every child can thrive.

3.1 Republic of North Macedonia

In the Republic of North Macedonia, music schools have opened their doors to children with autism. One such school is Inclusive Music, where Damjan Danevski works. He is a master's degree jazz drummer who has been actively involved in music for more than ten years. In "Inclusive Music," you will find keyboards, drums, guitar, and bass guitar. He explains that, for example, for the drums, there are children who are sensitive to sound, so he also took electric drums.

"One guitar is mine, and I had the chance to take the other one for people with a dominant left hand because there are children with autism who are left-handed or use both left and right. "Why should a parent buy a left-handed guitar when the child can come here and play," says Damjan.

For him, it is undoubtedly essential that if one is engaged in education, one should first and foremost have patience. And to learn how to transfer knowledge, remember that some children meet instruments for the first time. The whole point of school is to offer something that needs to be added.



"I think this model is the first in Macedonia to offer a comfortable space for all children. There is also a philosophy of mine. We always say, 'Nothing costs, nothing is done.' But when we come to change something, people either retreat or become worse than the previous versions. Above all, we should have a will and be human. That's why this is done. I love music, playing music, and creating music. That's my love! I also love education. I enjoy it when I can help someone. All I ask is when it's someone's turn - to do the same," emphasizes Damjan

He works together with special educators and a rehabilitator.

3.1.1 Best practice in the Republic of North Macedonia

Title of the practice	Inclusive Music
Country	Republic of North Macedonia
Organisation(s) responsible	Inclusive Music
Type of Organisation	Company
Main topic addressed	Music classes
Type of practice	Individual
Target group(s)	Children without and children with disabilities
Timing (when did this best practice take place)	From 2023, May

Context and objectives

"Inclusive Music" is the result of an idea built over more than four years, born in informal conversations with experienced people who actively work on the development of children with atypical growth. In its beginning, the vision behind the idea to combine music with specialized education in order to offer a different approach to the development of children with atypical development was very clear. However, what they lacked was the "business" model. During the pandemic, the idea came back again

and again in discussions and the possibilities for its implementation were explored. The first attempt included the idea of establishing a civil organization with a slightly different vision, but the model proved to be unsustainable, so it was again left aside, overwhelmed by the dizzying changes every day. And, probably, in the wake of those changes, standing on the side of the idea of "status", and at the moment when it was returned to the masses at the beginning of 2022, somehow we already had a clear vision for the modality and format that it should take.

3.1.1 Best practice in the Republic of North Macedonia

Together with my partner, we started to think about the possibilities, weaknesses and advantages of such a model on our market, but, most importantly, about the size and importance of the potential impact. This phase was quite intensive and included much research on the market, finding ways of initial financing, re-evaluating the ideas and sustainability and, most importantly, asking for an evaluation of the ideas from close special education teachers and parents of children with learning difficulties. Their feedback was a crucial link in the decisions for the final formation of the company.

The greatest motivation was close people who have children with atypical growth, who constantly encouraged and supported them, and now children are among our first-enrolled students. They also gave us incredible insight into their needs and everyday life, which really helped us create a picture of what exactly they need.

The idea of "Inclusive Music" is not only to offer an innovative approach to development for people with learning difficulties, but to provide a real inclusive experience - access for all, equipment that meets the different needs of different students.



For example, a guitar for a dominant left hand, electric drums for people with audio-sensitivity, etc., and also to push the boundaries for the quality of services and aesthetics in the field of private music education. That's why we put a lot of effort, time and funds into a space that combines inclusiveness, functionality and aesthetics - to offer high-quality education at the most affordable price possible.

3.1.1 Best practice in the Republic of North Macedonia



Short description

Inclusivity stems from the opportunity for everyone to get equal access to space, equipment and appropriate education. Students or their parents can choose between four instruments – drums, guitar, bass and keyboards, and three models of work – regular group lessons, regular individual lessons and specialized individual lessons, i.e. lessons accompanied by a special education teacher. The specific program depends on which instrument and work model it is about, while in the case of specialized teaching, the approach is adjusted according to the student's particular needs.

In regular teaching, the programs are designed to teach students how to learn, i.e. to give them a strong foundation in the instrument they have chosen, to teach them to be consistent and disciplined in their studies through exercises and their practical application, but also to be theoretically grounded in to be able to independently learn, explore and experiment on their instrument, create their own style and communicate their visions through music. In the specialized classes, the goals are defined according to the student's needs, his capacities for maintaining attention and learning skills, sometimes it is about improving fine motor skills, sometimes about maintaining attention.

Of course, again the idea is for students to build a solid musical foundation in order to become as independent as possible in musical expression. In our specialized classes, we see many students with an exceptional gift for music who follow the lessons with great understanding despite certain other difficulties they face, which we overcome through direct work and/or consultation with a special education teacher.

3.1.1 Best practice in the Republic of North Macedonia

Achievements and outcomes

Each student's experience is unique, first of all, because everyone experiences music in their own way, but also, as I mentioned because everyone chooses to follow a different type of teaching. For those who do it in groups, there is a different dynamic, and it is quite interactive. They communicate individually with the professor and also with each other.

On the other hand, those who follow specialized teaching communicate between the student, the teacher, and the special education teacher, where they work on more developmental aspects than just musical skills. The individual lessons follow the dynamics of the students and are always open to topics proposed by the students depending on their interests.

Music has many benefits for people with disabilities. Many children with atypical development are very musically gifted and quickly manage to catch a rhythm, remember a melody, and play something. For them, it is a great success that builds self-confidence and teaches them skills that could potentially be their professional choice in the future.

For some students with disabilities, music therapy, through work with a special education teacher, helps them develop greater attention, improve gross and fine motor skills, and coordinate limbs.

But what I see as the biggest benefit for both students and parents is the feeling of acceptance—everyone is welcome to learn music here. I think the biggest benefit for people with disabilities is knowing that there is a place where they can participate in extracurricular activities, and that is not in environments with activities specialized only for people with disabilities.

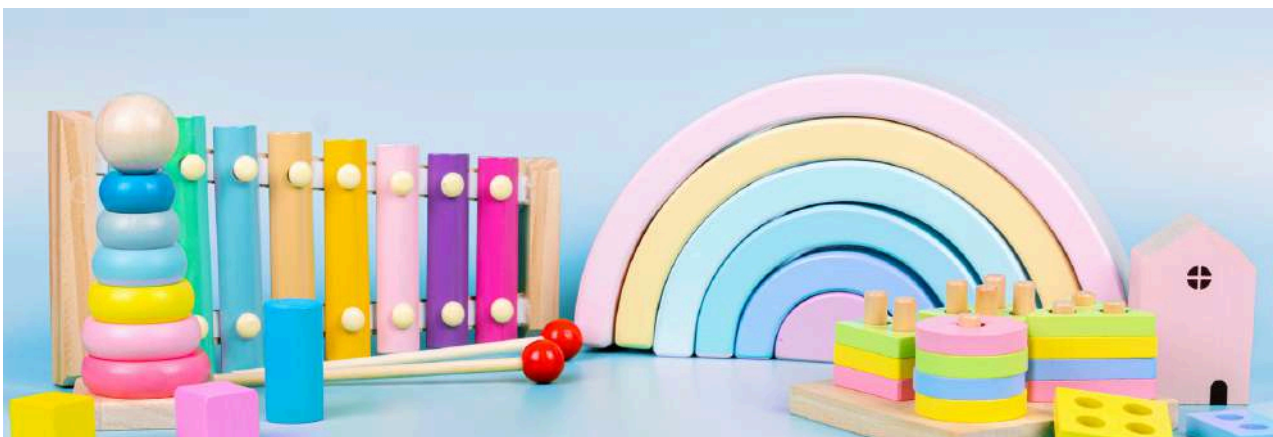


3.1.1 Best practice in the Republic of North Macedonia

Challenges and limitations

Our environment offers many opportunities, but we are waiting for us to take the first step. Because we create and shape our environment, how we behave will be the same for us. The road to the formation of "Inclusive Music" was both difficult and scary. Even after so many years of developing an idea and a working model, we always have a fear of failure because, in theory, opening and running a private school is one thing, and the implementation is quite another.

Namely, to promote the school and allow those interested to see the space and meet the teachers before enrolling in classes, we decided to open the school for free four-day visits in given periods. The first open day was on January 17 of this year, at 4:00 p.m., and at 4:20 p.m., we had four newly enrolled students, some of whom were for specialized programs, which shows that the need existed.



On that road, we overcame many obstacles daily, and of course, giving up was the easier way. But there were people we believed when they told us that they had a real need for this kind of service, and that was enough motivation to move forward. As for whether the importance is recognized, I can tell you a small anecdote about the opening of the school.

In the first two months, we have already achieved the projected number of enrolled and significantly improved the space with the grant support we received from NMSM within the framework of the social entrepreneurship project. We still have many planned activities and ideas that we will implement in the coming period.

3.1.1 Best practice in the Republic of North Macedonia



Unfortunately, our education system is light years behind Western trends, and I don't know if and what changes have been made since I was a student. Still, I can remember that in no school, there was intuitive access to the classrooms, to begin with, and I believe that that is still the case. After that, the programs changed frequently and significantly, so I could not say whether they are adapted to the needs of children with atypical development, age, and social trends in general. We also often saw cases involving the isolation of students with disabilities due to intolerance on the part of their classmates' parents. So, I assess that we still have a lot to change to reach full and fair inclusion as a whole,

And for an inclusive music environment, we need to provide real music education. Here, we have teachers who try to impart musical knowledge, but how much can they do without instruments or only with recorders that the students buy themselves? There is also a tuned piano to give intonation during choir rehearsals. Changes require a fundamental change with a holistic approach at all levels - raising awareness, improving the educational system at the national level, improving the academic infrastructure at the local level, refining the curricula, involving parents and special education teachers, as well as experts from different areas in the formation and implementation of programs, etc.

3.2 Poland

3.2.1 Best practice in Poland

Title of the practice	“Music therapy work with an autistic child” (experience of therapist)
Country	Poland
Organisation(s) responsible	Therapist (during the best practice, she was a student of music therapy) – the experience of Sara Knapik described in the article
Type of Organisation	Therapist
Main topic addressed	Music therapy work with an autistic child – Sara Knapik
Type of practice	Music therapy classes, group sessions.
Target group(s)	Description of an individual case - one child, a 14-year-old boy
Timing (when did this best practice take place)	October 2010 - May 2011
Source link	https://arteterapia.pl/praca-muzykoterapeutyczna-z-dzieckiem-autystycznym/

Context and objectives

These were group sessions with other students with autism, but observations and research were conducted with a selected boy. The sessions were constructed on the basis of contrasting exercises that were aimed at achieving the therapeutic goals set by the author.

Objectives: improving concentration of attention, increasing awareness of one's own body, establishing contact with the patient, improving motor and coordination activity and improving integration with peers.

3.2.1 Best practice in Poland

Short description

The author developed her class structure using Paul Nordoff's and Clive Robbins's Creative Music Therapy approach, elements of Maciej Kierył's Mobile Musical Recreation, chronotherapy, active listening, relaxation, and art therapy.

The structure of classes was unchanged and gave the boy a sense of security. It consisted of five stages:

1. Welcome song
2. Vocal-instrumental improvisation, instrumental
3. Movement improvisation and active listening
4. Relaxation
5. Farewell song

Challenges and limitations

The eight-month period of music therapy did not show any radical changes and therefore the author believes that this form of therapy should be conducted long-term and much more often than once a week.

Other Observations

More detailed description of practice and results can be found in the article.

Achievements/ outcomes

The therapy influenced the boy's psychophysical development. As the author showed in her research, music therapy improved the boy's concentration. It became a bridge for communication between the therapist and the child, as well as the child and peers, which is the essence of music therapy.

Musical and movement games became a form of children's play in which elements of integration, satisfaction and joy were revealed. Despite the short research period, the child improved in non-verbal communication and cognitive sphere, indicating high effectiveness in music therapy.



3.3 Cyprus



In Cyprus, music therapy is seamlessly integrated into special education, particularly benefiting children with autism spectrum disorder (ASD). Certified music therapists collaborate with educators to craft personalized programs utilizing music as a therapeutic tool, enhancing communication, social skills, and emotional expression through structured activities such as singing and instrument playing.

Family involvement reinforces therapeutic objectives, prioritizing the holistic development of children with ASD and facilitating their integration into communities. Additionally, CYMTA conducts regular seminars and training sessions to inform and raise awareness. They also organize events on World Music Therapy Day to celebrate and advocate for the significance of music therapy on both local and global scales.

3.3.1 Best practice in Cyprus

Title of the practice	Tomatis method
Country	Cyprus
Organisation(s) responsible	Tomatis centre
Type of Organisation	Rehabilitation and VET training centre
Main topic addressed	Music intervention and neuro-stimulation
Type of practice	Tomatis method
Target group(s)	Autistic children

Context and objectives

The “Tomatis Method” stands as a natural and innovative approach to neurosensory stimulation, designed to enhance various facets of human development. Through its specialized listening programs, this method dynamically modifies both music and voice in real time, aiming to captivate the brain's attention and foster the growth of motor, emotional, and cognitive skills.

Short description

The Tomatis method, operated through the Talks Up device, uses modern technology to provide a special listening program. This device directly handles voice and music, accurately recreating the well-known "Tomatis effect." Developed by Alfred Tomatis, the electronic Gating system keeps improving with new technology, ensuring it works well. Talks Up includes everything needed for the “Tomatis” method, making it the best tool for “Tomatis” professionals to use.

3.3.1 Best practice in Cyprus



Challenges and limitations

Using sound therapy may change the emotional (sensory) data processing. This method is valuable because it can affect social interaction, and stereotypical behaviours, and provide a method to improve autistic symptoms (Jeadry, 2010). This, however, requires “Tomatis” professionals who can measure its effectiveness and identify the specific needs of each child.

Achievements and outcomes

By engaging individuals in carefully curated auditory experiences, the “Tomatis” method endeavours to optimize neural pathways, promote sensory integration, and facilitate overall personal development. In a more detailed manner, the Tomatis method, as a sound therapy and auditory stimulus, can be applicable and useful for most autistic children. Also, this method is easy to use in clinical conditions. All autistic children with different levels of severity can use this method. According to the research music tends to be not only provide an enjoyable experience, but also one that is relatively easy to communicate and interact with (Jeadry, 2010).

Other observations

Although in Cyprus there aren't official intervention techniques or specific treatment principles due to unclear terminology, assessment procedures, and rights of autistic individuals, both associations and the government advocate for the use of individualized education programs that consider the specific needs of each individual, raising ethical considerations regarding the different techniques utilised. Given the worldwide acceptance of the “Tomatis” method and the presence of a specialized training centre in Cyprus, we inquire about its current facilitation in the Cyprus domain as a best practice.

3.4 Portugal

3.4.1 Best practice in Portugal

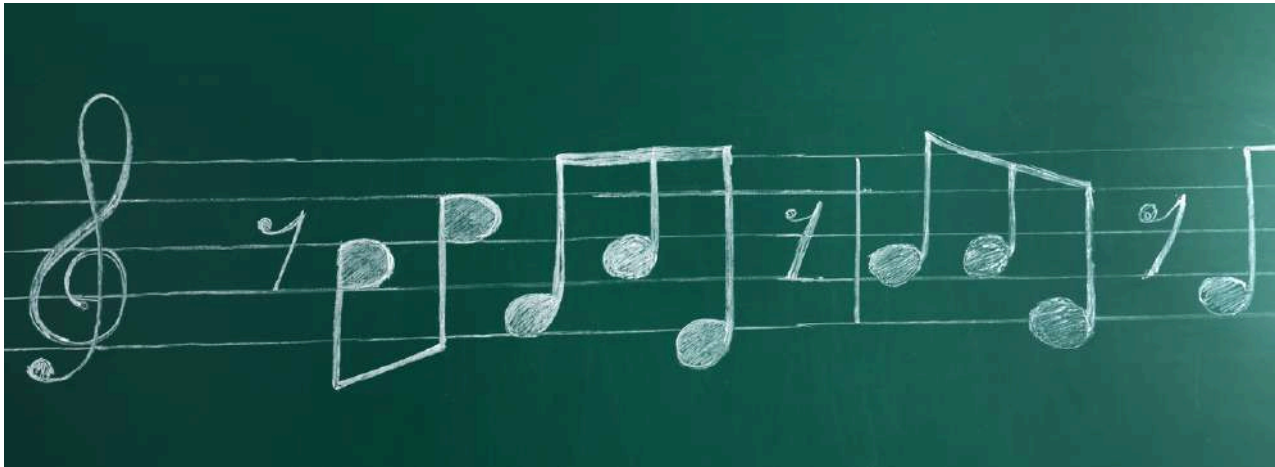
Title of the practice	Inclusive Music for treatment
Country	Portugal
Organisation(s) responsible	SESARAM- Hospital Nélío Mendonça
Type of Organisation	Hospital
Main topic addressed	Music classes for health
Type of practice	Individual and group
Target group(s)	All children (with and without learning difficulties education)
Timing (when did this best practice take place)	From 2022, May

Context and objectives

The Inclusive Music School in hospital was born out of the need to create a space where children with and without disabilities could learn music in an inclusive way outside school. The idea was developed over years of informal conversations with educators and parents of children with learning difficulties. During the pandemic, the idea was reformulated, and in 2021, the non formal school opened its doors.

The aim is to provide an inclusive musical experience, offering adapted instruments and personalised programmes that meet the specific needs therapy with music. The school aims not only to use music to relax and health, but also to promote social inclusion and personal development through music.

3.4.1 Best practice in Portugal



Short description

The Inclusive Music non formal School offers music lessons adapted to the needs of each student when they are sick. Students can choose from four instruments: drums, guitar, bass and keyboards. There are three lesson models: regular group lessons, regular individual lessons and specialised individual lessons accompanied by a special education teacher. The programmes are designed to provide a solid foundation in the chosen instrument, encouraging students' independence and musical creativity. In specialised lessons, the objectives are tailored to the students' specific needs, such as improving fine motor skills or maintaining attention.

Achievements and outcomes

Each student has a unique experience at the Inclusive Music School non formal education. Group lessons promote social interaction and communication between students and mental health, while individual and specialised lessons focus on individual needs, providing a personalised learning environment. Music helps children with learning difficulties develop motor skills, coordination and attention, as well as boosting confidence and providing an avenue for creative expression. The greatest benefit is the feeling of acceptance and inclusion, providing a space where all children are welcome to learn music.

3.4.1 Best practice in Portugal

Challenges and limitations

The creation of the Inclusive Music School faced challenges, such as the lack of initial funding and the need to adapt teaching methods to the specific needs of the students. Acceptance and awareness of the importance of musical inclusion in Portuguese society is still developing. In addition, the school needs more support to improve its facilities and teaching resources.

Other Observations

The practice exemplifies how music can be a powerful tool for social inclusion and personal development for children with and without disabilities. The Inclusive Music non formal School continues to evolve, facing challenges and celebrating achievements in its mission to create a welcoming and inclusive environment for all students that they are out school.



4. FIELD RESEARCH

Results from the survey by country



There has been a growing recognition of the profound impact that music interventions can have on children with autism, particularly in mainstream classroom settings (Geretsegger et al., 2014).

These interventions have shown promise in enhancing emotional, motivational, interpersonal, and social responsiveness, offering a unique pathway to support the developmental needs of these children. However, the successful implementation of music interventions largely depends on the preparedness, understanding, and support available to the teachers who are at the forefront of this educational approach.

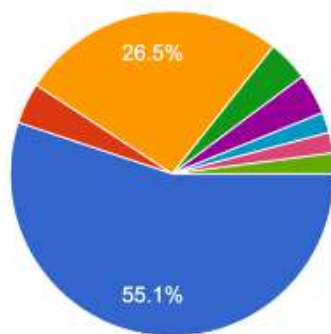
This project is the first cross-European partnership (Central, South-East, Balkan, South-West) specifically focusing on improving the knowledge, skills, and key competencies of teachers in using innovative music interventions based on music therapy practices. The aim is to improve the emotional, motivational, interpersonal, and social responsiveness of children with autism, ensuring their inclusion in the mainstream classroom.

By conducting a comprehensive exploration through questionnaires, interviews, and focus groups across partner countries, we gained a deeper insight into the practical realities teachers encounter.

4.1 Republic of North Macedonia

1. Participant Information

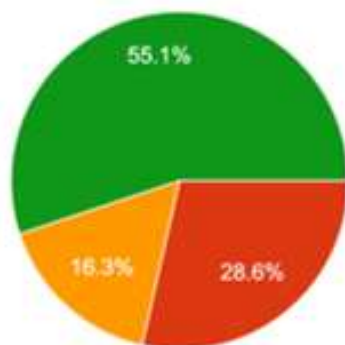
49 Participants took place in the research; most of them were primary school teachers (55%), then special education teachers (26,6%), and the rest of them were other professionals employed in the school (music teacher, pedagogue, psychologist, assistants, and associates.)



- Teacher
- Music Teacher
- Spec.ed.teacher
- Pedagogue
- Psychologist
- Assistant
- Teaching Assistant
- Professional associate in kindergarten

2. Years of experience in your current role

55% of the respondents have more than ten years of working experience.

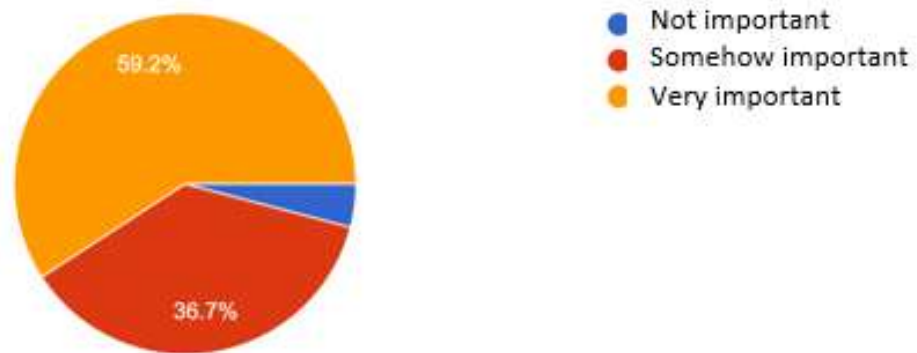


- Less than one year
- 1-5 years
- 6-10 years
- More than ten years

4.1 Republic of North Macedonia

3.The importance of music in improving the well-being of children with autism

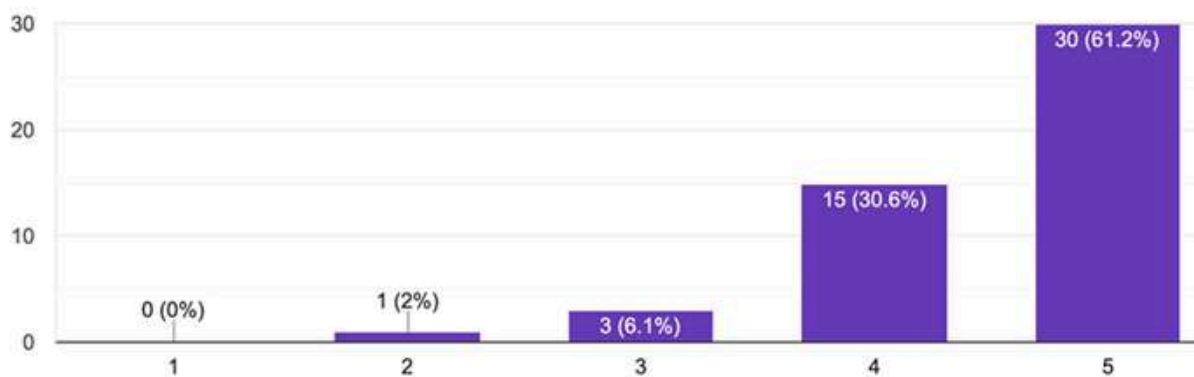
More than half of the respondents think music is essential in improving the well-being of children with autism.



4.The impact of music on a child's emotional and social development

61,2 % of the participants said that music significantly impacts the child's emotional and social development.

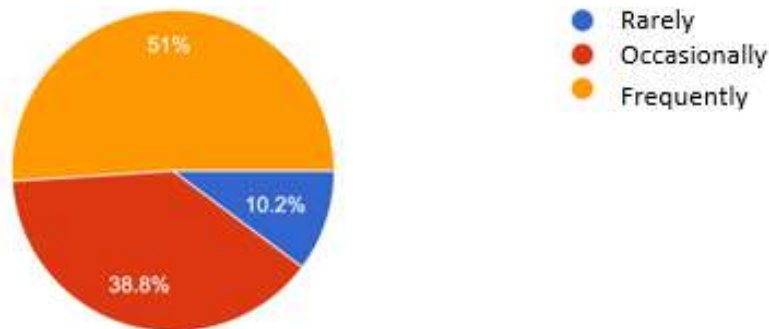
49 responses



4.1 Republic of North Macedonia

5. Incorporation of music into classes/sessions

51 % of the participants incorporate music in their classes frequently, 38,8 %occasionally and only 10,2% rarely.



6. Use of music as a teaching tool for children with autism

63% of respondents incorporate music as a teaching tool for children with autism. They said that they use music on different occasions:

Introduction

In educational practices, the integration of music has shown to be beneficial for students, facilitating engagement, focus, and emotional regulation. This report explores the incorporation of music in English classes and other educational activities, mainly focusing on its impact on students, including those with autism.

Music in English Class

Music is frequently utilized in English classes to create a dynamic learning environment. It serves as a tool for enhancing attention, mood, and participation. Rhythmic games and famous English songs are often played during lessons to engage students and facilitate language acquisition.

Obligatory Children's Songs in Macedonian

In the background of English classes, obligatory children's songs in the Macedonian language are played. This adds cultural richness to the learning environment and provides students with a familiar and comforting backdrop.

Inclusion of Students with Autism

Students with autism are actively included in all free activities, workshops, and group or individual counseling sessions. While music is generally beneficial, some students with autism may experience disturbances from certain types of music or may require repeated exposure to specific sounds.

4.1 Republic of North Macedonia

Music Therapy for Students with Autism

Music therapy supports students with autism, particularly in calming and relaxation exercises. Music serves as a tool for directing attention, reducing anxiety, and promoting emotional awareness. However, it's essential to tailor music choices to individual preferences and sensitivities.



Integration Across Subjects and Activities

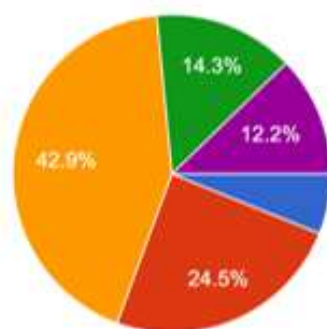
Music is integrated across various subjects and activities, a versatile tool for enhancing learning experiences. Music plays a significant role in creating a conducive learning environment, whether background music during work sessions, emotional learning activities, or drawing sessions.

Student Preferences and Sensitivities

Understanding individual preferences and sensitivities to music is crucial, especially for students with autism. Some students may have specific aversions or preferences, such as disliking choral music or preferring specific genres or compositions. Utilizing the synthesizer as a motivational tool can effectively engage these students.

7. Confidence in effectively using music as a tool for engaging children with autism

Most of the respondents are moderately confident in using music tools to engage children with autism.

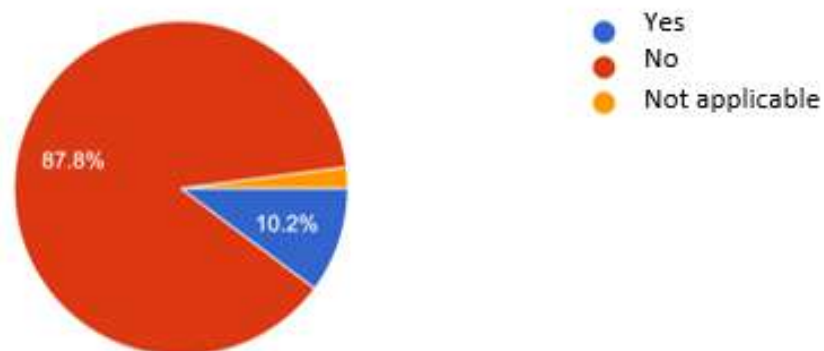


- Not confident at all
- Slightly confident
- Moderately confident
- Very confident
- Extremely confident

4.1 Republic of North Macedonia

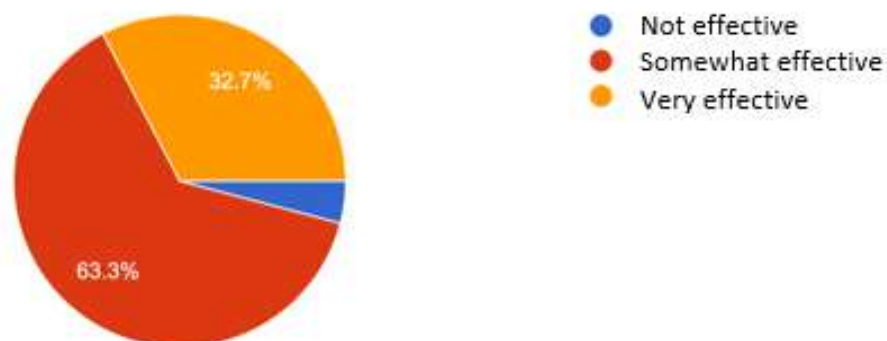
8. Collaboration with other professionals (e.g., music therapists and behavior analysts) in using music for autism treatment

87,8% of the participants never collaborate with other professionals.



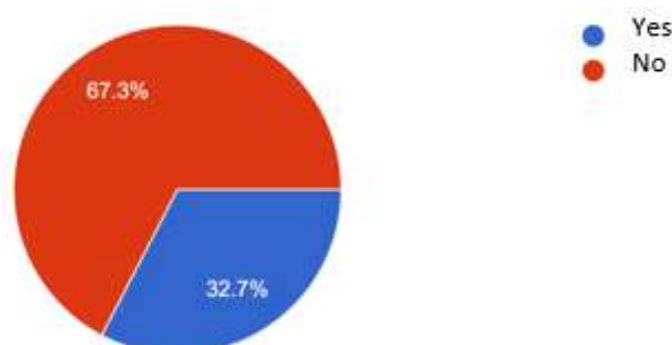
9. Effectiveness of the integration of music in autism treatment

63,3 % of the respondents consider integrating music in autism treatment somewhat effective.



10. Specific challenges or barriers when using music as a teaching tool for children with autism

32,7% of the participants agreed that using music as a teaching tool for children with autism presents specific challenges. They also added information.



4.1 Republic of North Macedonia

Conclusions



Effects of Music

While loud music tends to irritate students, music from cartoons or children's songs often has a positive impact, calming them in cases of challenging behavior.

Individual Differences

Every child exhibits unique responses to music. Some students with autism spectrum disorder (ASD) may find loud music particularly distressing due to hyperacusis and sensory sensitivities.

Considerations for Students with Autism

Children with autism are susceptible to sound and often experience sensory problems. They may find loud talking and shouting bothersome, highlighting the need for maintaining appropriate volume levels.

Preference for Quiet Music

Students dislike loud music and noise. Only some types of music are acceptable to them, indicating a need to select musical stimuli carefully.

Impact on Behavior

Inappropriate elements in music, such as melody, tonality, or volume, can exacerbate anxiety and lead to challenging behaviors, including repetitive questioning and covering of the ears.

Therapeutic Potential

Music is recognized as a therapeutic tool for calming students, but its effectiveness depends on appropriate selection based on the child's state and needs.

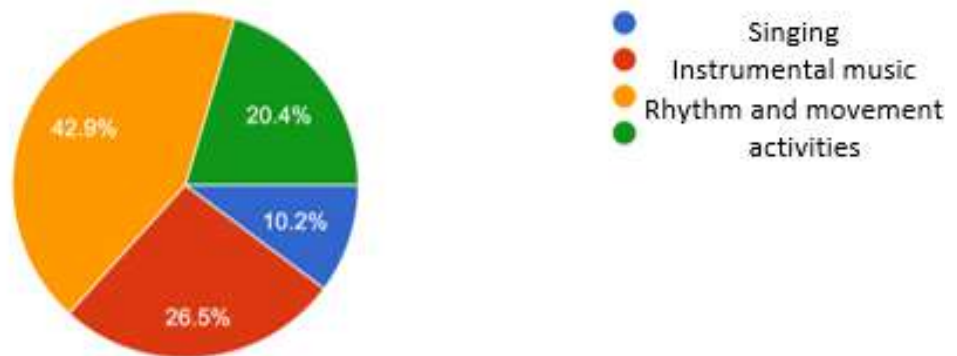
Communication and Attention

Quiet music encourages calmness and facilitates quiet student communication. Some students exhibit attention-seeking behavior, indicating a preference for individualized attention.

4.1 Republic of North Macedonia

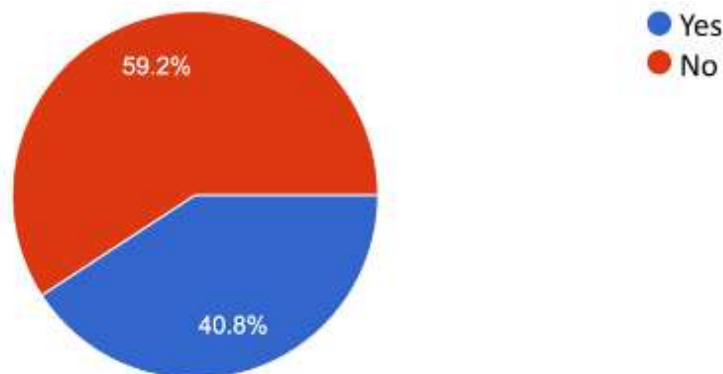
11.Types of music activities that they found most effective in engaging children with autism

Almost half of the participants think that rhythm and movement are most effective in engaging children with autism.



12.Differences in the response to music between children with autism and neurotypical children

40.8% of the participants recognize differences in the response to music between children with autism and neurotypical children.



Conclusions

Varied Reactions to Music

Autistic children exhibit diverse responses to music, sometimes covering their ears during group singing or reacting with shouts to children's music. However, music also can calm them and enhance their concentration and attention.

Individual Preferences and Sensitivities

Autistic children may not consistently outwardly demonstrate their engagement with music and may react violently to certain sounds. Some have a heightened sensitivity to sound, leading to behaviors such as covering their ears or leaving the classroom.

4.1 Republic of North Macedonia

Potential Benefits of Music

Despite challenges, music can positively affect autistic children, improving their attention, calmness, coordination, and rhythm. It can also calm them down and help them maintain their attention for longer periods.

Honest Reactions to Music

Autistic children express their music preferences more intensively, clearly, and honestly. They may readily accept changes in the song's tempo, rhythm, and other elements.

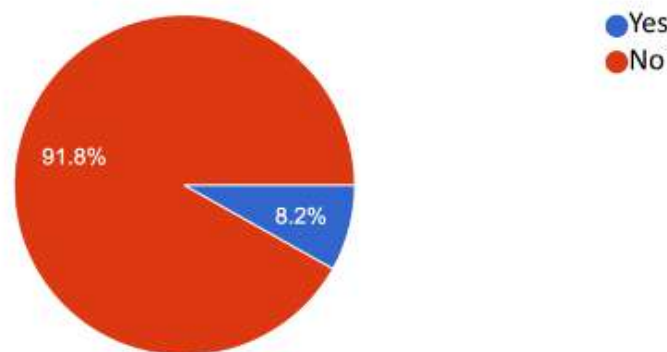
Musical Aptitude

Autistic children often display a natural affinity for music, showing talent in singing, playing instruments, and listening attentively. However, loud music may bother them, contrasting with the preferences of neurotypical children who may enjoy it.

Exploration of Music

Despite challenges, some autistic children actively seek out music or social gatherings involving music, indicating an intrinsic interest in musical experiences.

13. Formal training or education on incorporating music into your work with children with autism

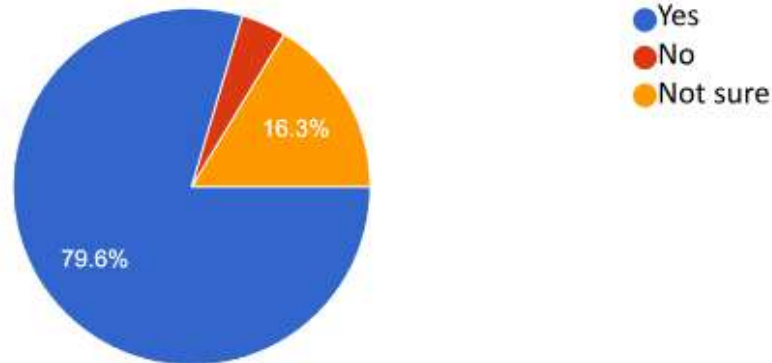


91,8 % of the respondents never received training about incorporating music into work with children with autism.

14. More inclusive music education programs for children with autism

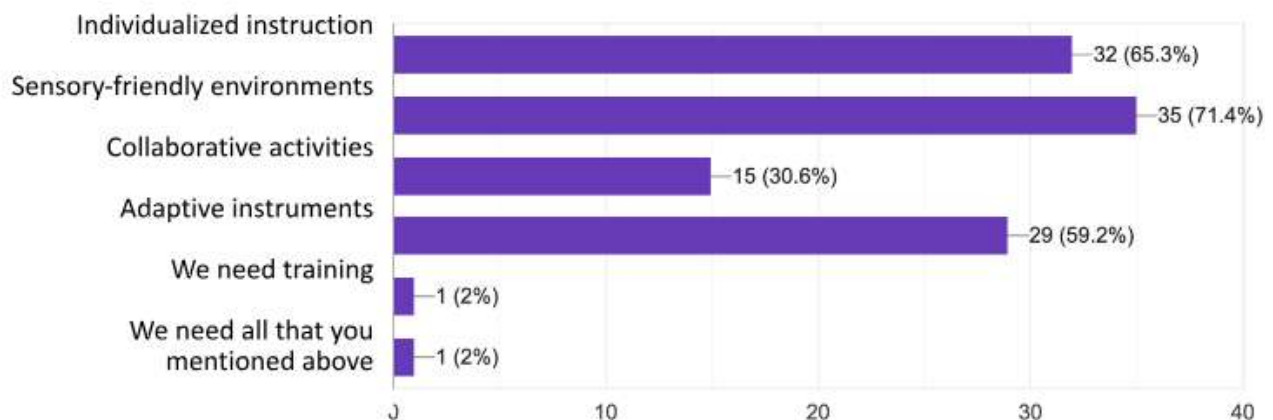
Most of the participants (79,6%) said that they need more inclusive educational programs for children with autism

4.1 Republic of North Macedonia



15. Important features in an inclusive music education program for children with autism

The most important features for teachers in an inclusive music education program is sensory-friendly environment (71,45%), individualised instructions (65,3%) and adaptive instruments (59,2%)



Main conclusions

In the Republic of North Macedonia, there is a small number of investigations on the impact of the hobby on children with autism spectrum disorders. There is also a need for more literature in the Macedonian language. Music therapy is usually considered any musical activity with children with autism, teaching them to play an instrument, sing, or socialize. There are examples of music schools

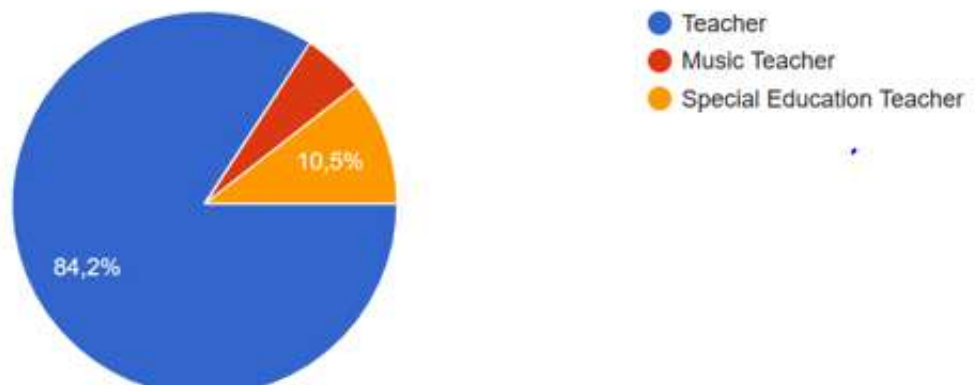
that have good practices for children with autism. In teaching, music is often used as songs or performing rhythmic activities. Experts believe that music has a positive effect on children with autism, although sometimes some types of music can upset them for sensory reasons. The research showed that 91.8% never received training about incorporating music into work with children with autism.

4.2 Poland

1.Participant Information

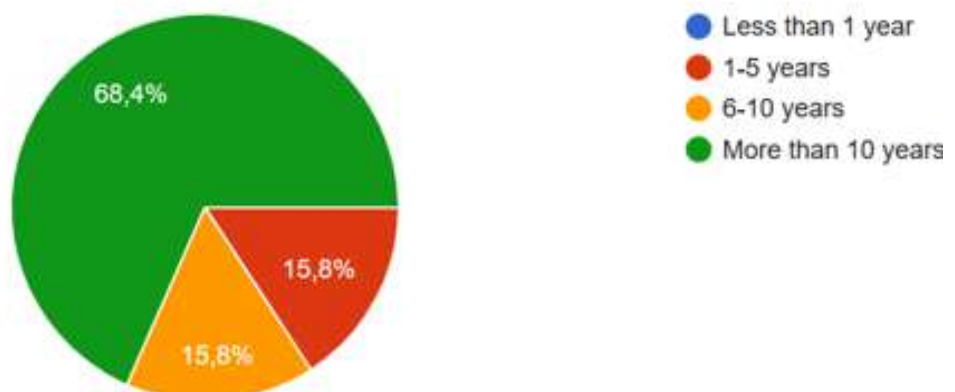
In Poland, 19 respondents participated in the field research. 84,2% of respondents were teachers, 10,5% were Special Education teachers, and 5,3% were Music Teachers.

19 odpowiedzi



2.Years of experience in your current role

19 odpowiedzi

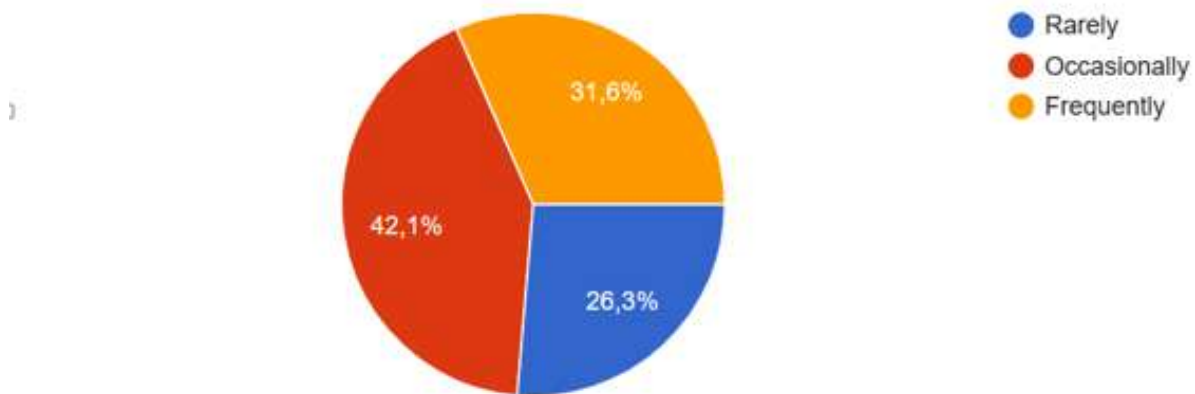


68,4% of teachers taking part in the questionnaire have more than 10 years of teaching experience. And 15,8% of teachers have experience in groups of 1-5 years and 6-10 years, respectively.

4.2 Poland

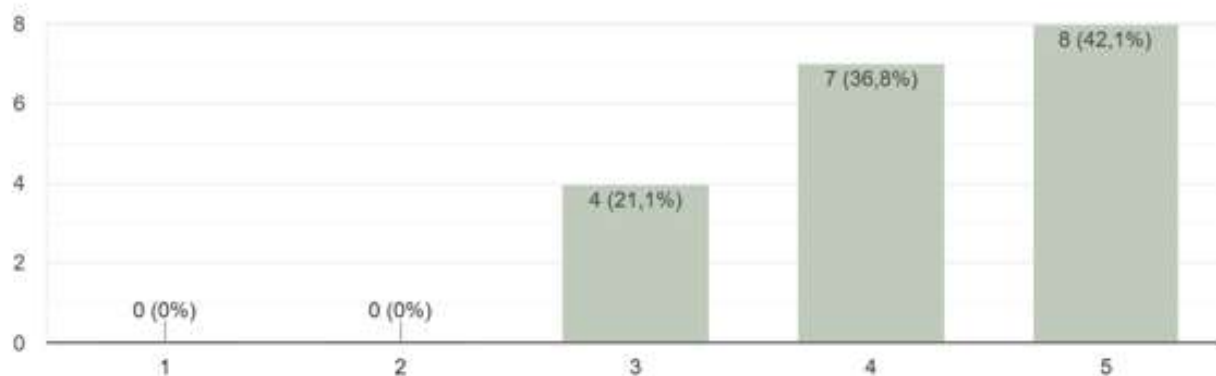
3. The importance of music in improving the well-being of children with autism

19 odpowiedzi



The above answers show that teachers include music in their classes occasionally (42,1%) and frequently (31,6%). But 26,3% of teachers rarely include music in their classes.

4. The impact of music on a child's emotional and social development

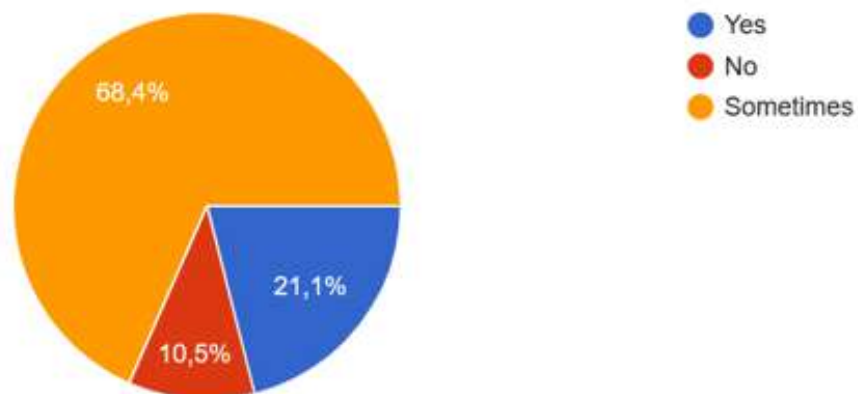


4.2 Poland

The graph above highlights that respondents definitely appreciate the importance of music in the process of children's development and socialization. 42,1% of respondents give this aspect the highest importance, 36,8% only slightly less. Only 21,1% of teachers rated this impact at an average level.

5. Incorporation of music into classes/sessions

19 odpowiedzi



The vast majority of teachers (68,4%) sometimes use music as a means of working with children with autism. 21,1% use music as a teaching tool for children with autism. And 10,5% do not use music in this way.

5.1 If you answered yes, to question number 5 that you use music as a teaching tool for children with autism, please briefly describe how you integrate music into teaching or treatment.

4 odpowiedzi

As na English teacher I teach English through songs, It is easler for children to learn new English vocabulary or, expressions. It also makes them happy, more relaxed and overall ,it improves the atmoshere in the classroom. I often organise visits to the local music school . Listening to classical music makes autistic students calm and peaceful.

I use meny musical instruments, , multimedia applications and music games.

Rithm, instrumens, singing, ..., helps to develop The language, concentration and many skills that improve learning curricular componentes.

Listen to songs

4.2 Poland

6. Use of music as a teaching tool for children with autism

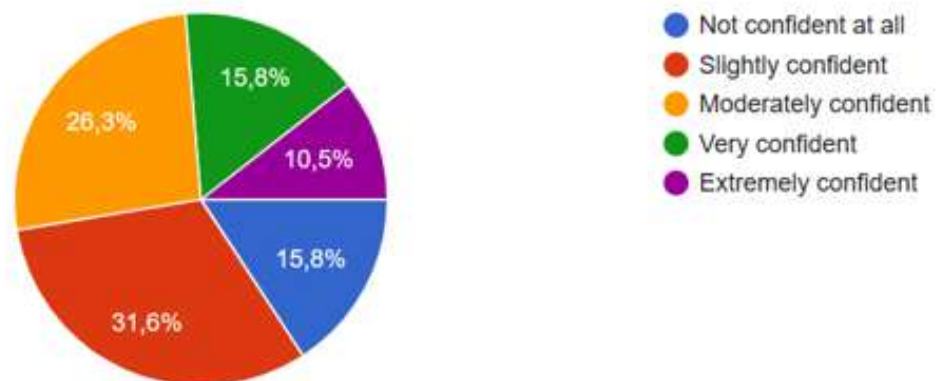
19 odpowiedzi



Teachers believe that music is important in improving the well-being of children with autism. 57,9% of teachers think it is very important, and 42,1% somewhat important.

7. Confidence in effectively using music as a tool for engaging children with autism

19 odpowiedzi

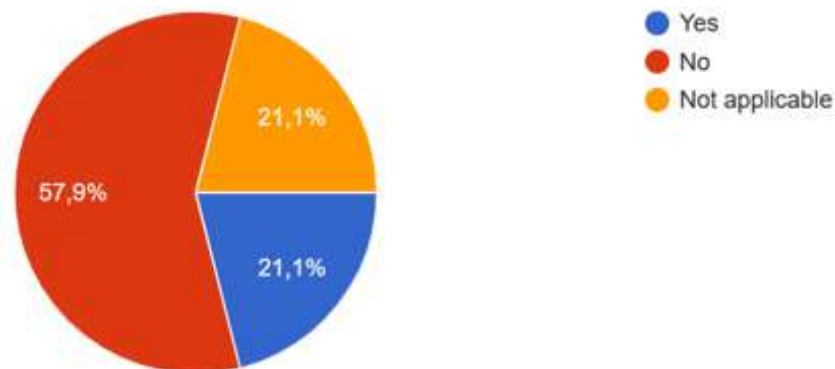


From the above answers we can see, that teachers rather don't feel confident in their ability to effectively use music as a tool for engaging children with autism. 15,8% of the don't feel confident at all, 31,6% feel only slightly confident and 26,3% feel moderately confident. Only 15,8% of teachers feel very confident and 10,5% of them feel extremely confident.

4.2 Poland

8. Collaboration with other professionals (e.g., music therapists and behavior analysts) in using music for autism treatment

19 odpowiedzi



As we can see majority of teachers haven't collaborated with other professionals in using music for autism treatments (57,9% answered "no" and 21,1% answered "not applicable"). Only 21,1% of teachers have collaborated with other professionals.

8.1 If you answered yes to the previous question and you have collaborated with other professionals, what benefits have you observed from the interdisciplinary collaboration?

3 odpowiedzi

Understanding how important music is in ASD students lives

The most important is cooperate with specjalists who deal with a given child, to talk about the problems and successes of a given child which allows them to understand it, reach out them and ultimately help them.

Happiness makes The children participate in school activities.

4.2 Poland

9. Effectiveness of the integration of music in autism treatment

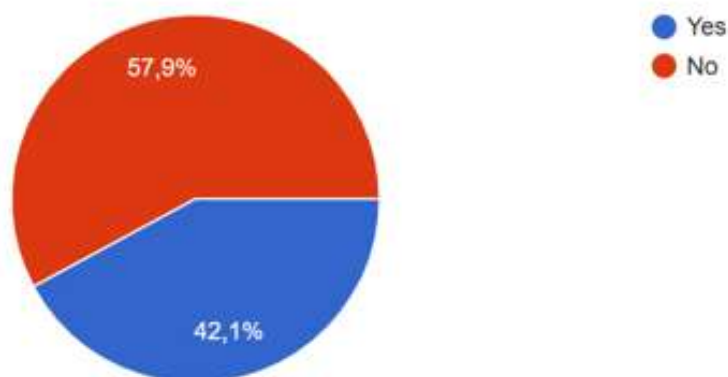
19 odpowiedzi



All respondents agree that music is effective in the treatment of autism. 57,9% of them said it is very effective and 42,1% somewhat effective.

10. Specific challenges or barriers when using music as a teaching tool for children with autism

19 odpowiedzi



57,9% of respondents haven't observed any specific challenges or barriers when using music as a teaching tool for children with autism, but 42,1% of them did notice some challenges or barriers.

4.2 Poland

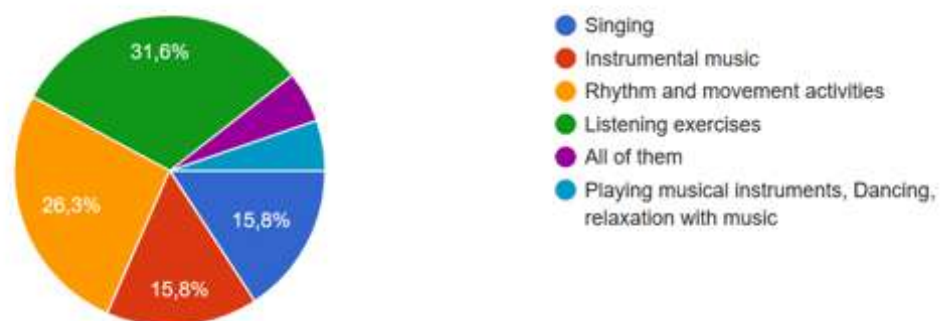
10.1 If you answered YES on the previous question, please specify what are the specific challenges or barriers when using music as a teaching tool for children with autism.

7 odpowiedzi

- They dont accept specific sounds depending on person, dont accept noise.
- Some of autistic children are sensitive and are not able to listen to loud or high-pitched sounds.
- For example auditory hypersensitivity.
- Many Children with autism have a problem with the level of the noise. Even silent rhythm can be annoying.
- The autism students they dont like the noise
- some of them are very sensitive
- Especific Instruments manusment

11.Types of music activities that they found most effective in engaging children with autism

19 odpowiedzi

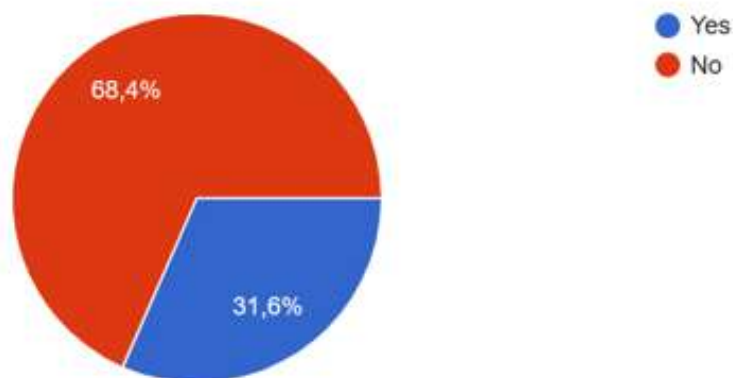


The biggest group of teachers (31,6%) finds listening exercises as the most effective music activity in engaging children with ASD. 26,3% of teachers finds also rhythm and movement activities as effective activities. 15,8% consider Instrumental music and Singing as most effective activities. And 5,3% of respondents finds both: playing musical instrument, Dancing, relaxation with music and all of them.

4.2 Poland

12. Differences in the response to music between children with autism and neurotypical children

19 odpowiedzi



Teachers rather haven't noticed any differences in the response to music between children with autism and neurotypical children (68,4% of the answered "no").

12.1 If you answered YES on the previous question, please specify what are the differences in the response to music between children with autism and neurotypical children

5 odpowiedzi

Some autistic children are hypersensitive to sound

Autistic-less creative, less brave, less self-confident

Children with autism are often more expressive or some sounds irritate them.

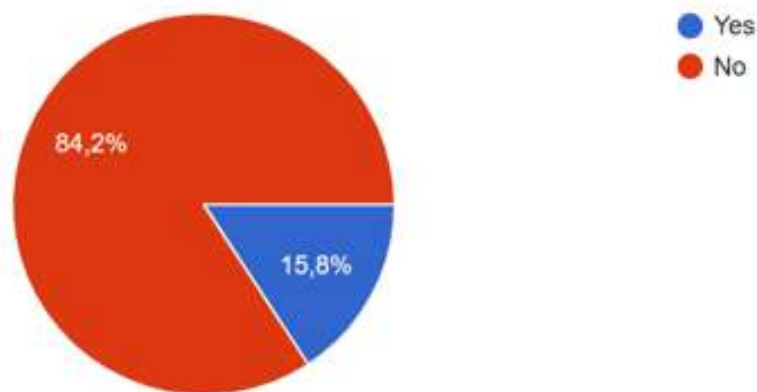
Children with asperger's syndrome are often extremelly musically gified, especially when it comes on their sense of rhythm.

I put this answer in 10 th question.

4.2 Poland

13. Formal training or education on incorporating music into your work with children with autism

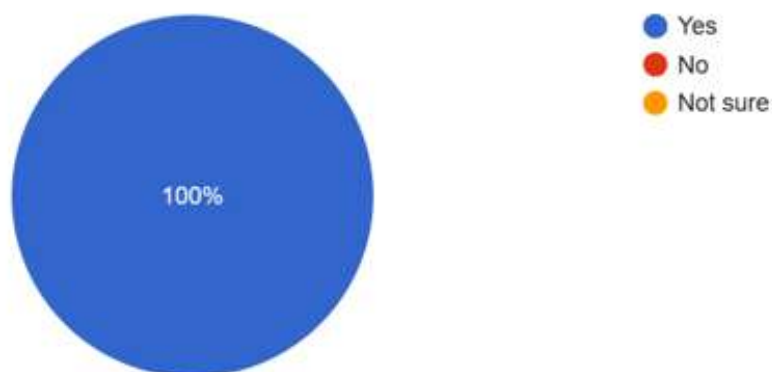
19 odpowiedzi



Majority of teachers (84,2%) haven't received any formal training or education on incorporating music into their work with children with ASD.

14. More inclusive music education programs for children with autism

19 odpowiedzi

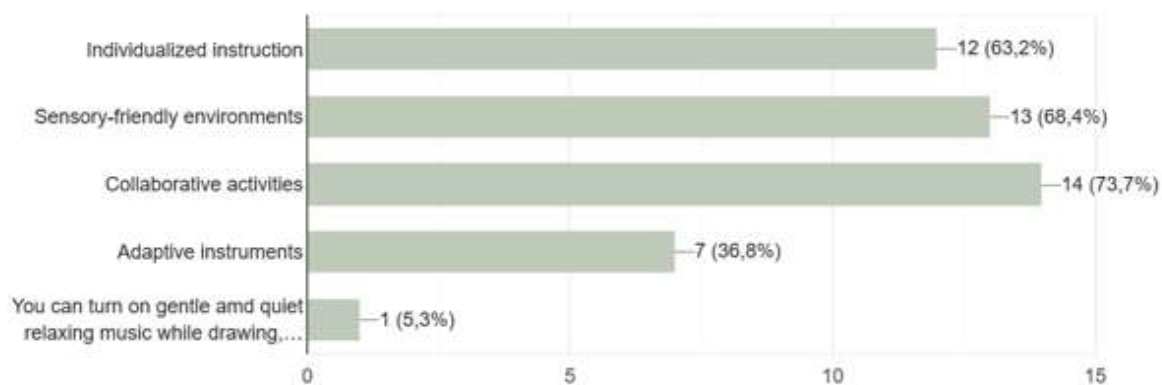


All respondents (100%) agree there should be more inclusive music education programs for children with autism.

4.2 Poland

15. Important features in an inclusive music education program for children with autism

19 odpowiedzi



As the most important in an inclusive music education program for children with autism teachers consider collaborative activities (73,7%), sensory-friendly environments (68,4%) and individualized instruction (63,2%).

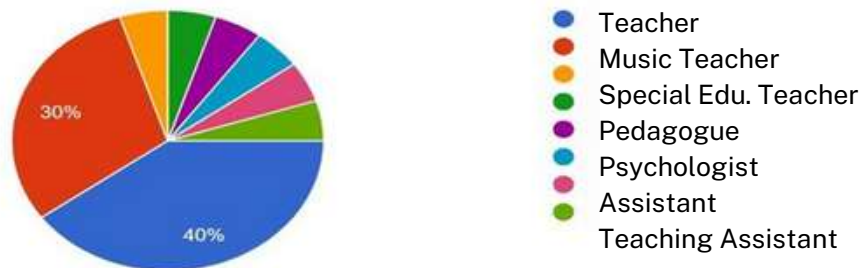
Conclusions

From the results of both desk research and field research presented in the report, it can be seen that the topic of music as a therapeutic tool for children with autism has already been discussed in Poland and is not completely foreign to teachers and educators. Teachers notice a great need to use music as a tool of working with children with autism, and they appreciate its importance in the child's emotional and social development.

On the other hand, some of them have lack of formal preparation to undertake such activities when working with children. This emphasizes the importance and need for work in this area and its dissemination among teachers.

4.3 Cyprus

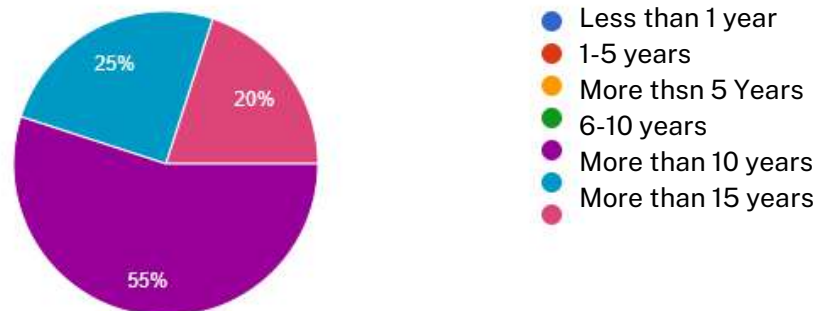
1. Participant Information:



Twenty participants took part in the research; the majority were primary school teachers (40%), followed by music teachers (30%), with the remaining participants being other professionals employed in primary schools or kindergartens. One participant was also a social worker, with roles including kindergarten owner, kindergarten teacher, special education teacher, and social worker.

2. Years of experience in your current role.

Of the respondents, 55% have more than ten years of working experience, 25% had 6-10 years of experience, and 20% had 1-5 years of experience. There were no participants with zero experiences.



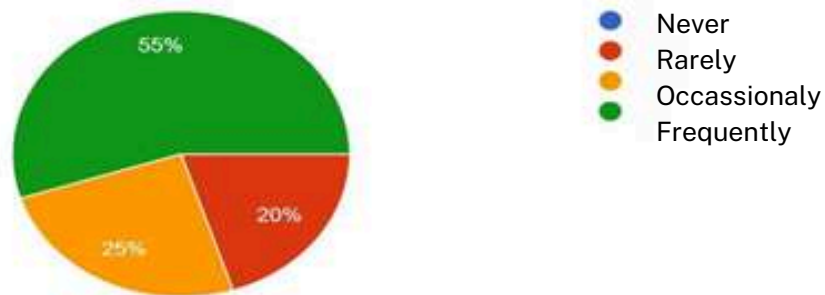
3. The importance of music is in improving the well-being of children with autism.



4.3 Cyprus

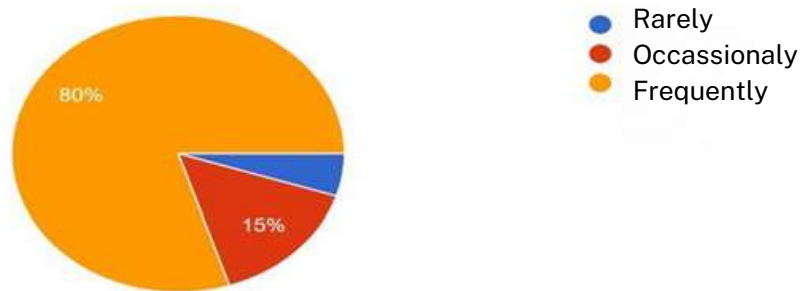
80% of the participants believe that music is vital in improving the well-being of children with autism. None of the participants responded negatively to the importance of music for children with autism.

4.The impact of music on a child's emotional and social development.



75 % of the participants said that music significantly impacts the child’s emotional and social development.

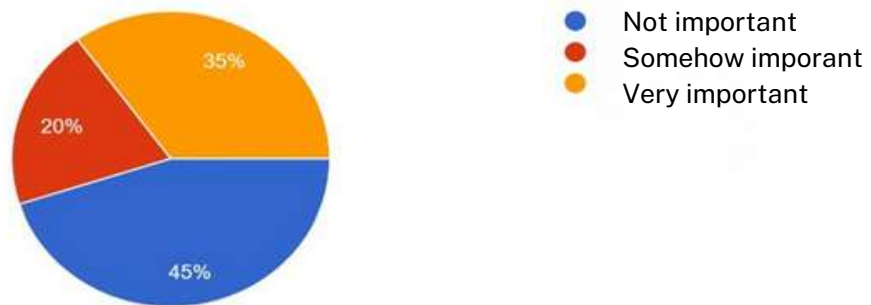
5.Incorporation of music into classes/sessions.



80% of participants answered that they frequently incorporate music into their classrooms, while 15% do so occasionally. Only 1 participant answered that they rarely use music in their classroom.

4.3 Cyprus

6. Use of music as a teaching tool for children with autism.



45% of participants answered that they use music as a teaching tool for children with autism, while 20% indicated that they do not use music. Participants provided various insights into how they utilize music as a teaching tool for children with autism in their classrooms. One approach, is that participants try to foster engagement and comprehension through rhythmic and melodic exercises tailored to each child's needs. Music-movement games, such as themed activities inspired by pieces like Vivaldi's "Four Seasons," encourage joyful participation and relaxation. This approach benefits all students, including those with autism or emotional disturbances, by making learning a playful experience. Another approach, for a participant that is a music teacher, was to emphasize the importance of creating a positive and peaceful learning environment for children during piano lessons.

For starters, students should begin with familiar melodies to cultivate interest and gradually introduce chromatic sheet music, demonstrating that imagined sounds can be played on the piano. To aid in understanding notes, they incorporate colours without initially pressuring technique. Consistent daily music lessons and rhythmic patterns in routines help reinforce learning. Participants also mentioned employing sound-based communication techniques for non-verbal individuals who have a passion for music. By assigning specific sounds to "yes" or "no" responses, they maintain interest and demonstrate patience while achieving educational goals. Additionally, they utilize musical clinical improvisation to further engage and connect with students, promoting a holistic approach to music education that nurtures creativity and emotional well-being.

4.3 Cyprus

7. Confidence in effectively using music as a tool for engaging children with autism

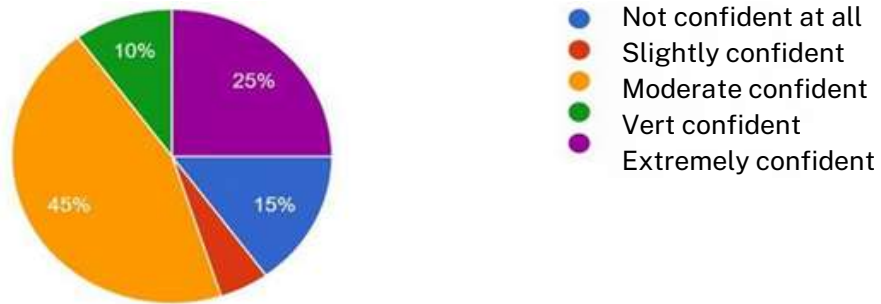


Figure 7. Confidence in effectively using music as a tool for engaging children with autism

Out of 20 participants, 9 express moderate confidence in utilizing music tools to engage children with autism, while only 5 report feeling extremely confident. Notably, among these 5 participants, 3 are musicians, comprising 25% of the total. This higher percentage is primarily due to the inclusion of musicians, despite the presence of only 1 primary teacher and 1 kindergarten owner in the group.

8. Collaboration with other professionals (e.g., music therapist and behaviour analysts) in using music for autism treatment.

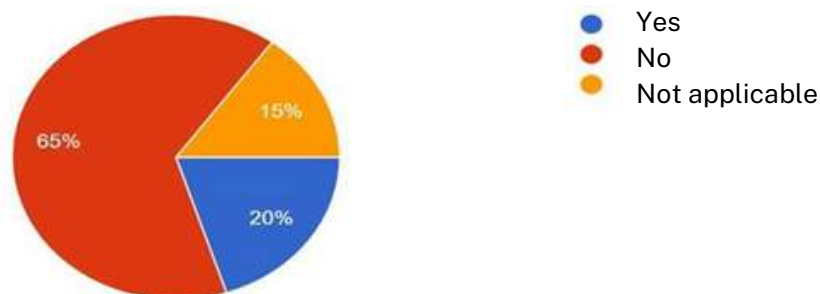
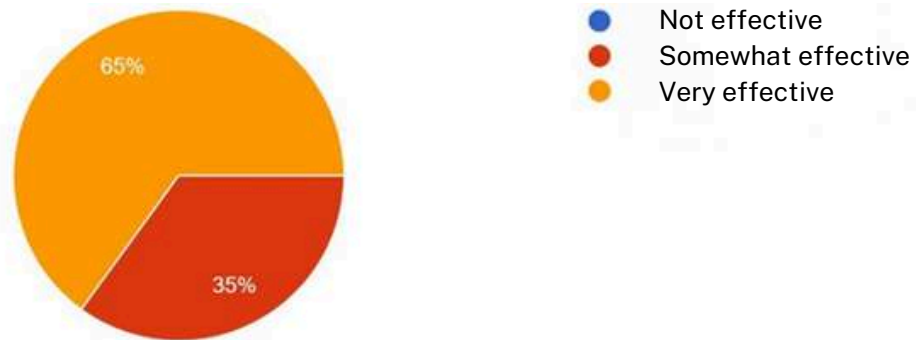


Figure 8. Collaboration with other professionals in using music for autism treatment.

65% of the participants answered that they never collaborate with other professionals.

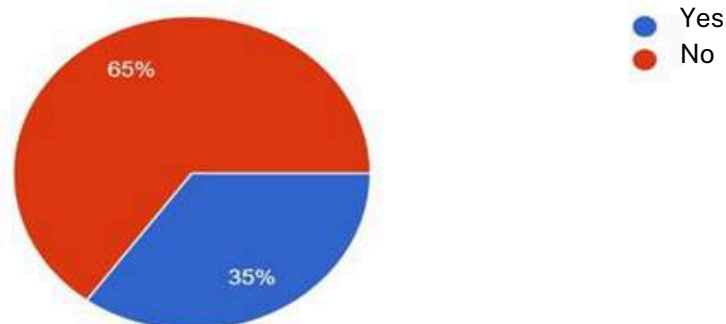
4.3 Cyprus

9. Effectiveness of the integration of music in autism treatment.



Around 65% of participants answered that the integration of music in autism treatment are very effective.

10. Specific challenges or barriers when using music as a teaching tool for children with autism.



The participants commented on the challenges they observed when using music as a teaching tool for children with autism.

4.3 Cyprus

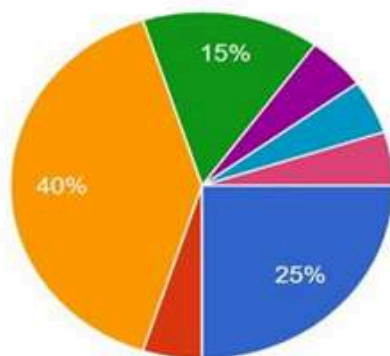
To begin with, they commented that their approach as educators involves constant assessment and monitoring of each child's behavior to determine the most effective teaching strategies. They noted that it is common for children to initially display reluctance or manipulative behaviors, akin to those observed in autism spectrum disorders, which they must skillfully manage.

Additionally, they highlighted encountering challenges such as children's disappointment when they struggle to accomplish tasks, leading to resistance to learning. They also mentioned that the team's support is only sometimes consistent, and accessing necessary materials can be problematic.

Some participants noted that confident children are sensitive to intense music or sounds, while others have specific preferences or aversions to particular songs or sounds.

Lastly, participants noted that negative associations with disliked songs can disrupt the learning environment of children with autism. Furthermore, they observed that hypersensitivity to sounds or tactile stimuli may hinder cooperation, or the use of specific tools provided by the music therapist. They emphasized that navigating these challenges requires flexibility, patience, and a deep understanding of each child's needs.

11.Types of music activities that participants found most effective in engaging children with autism.



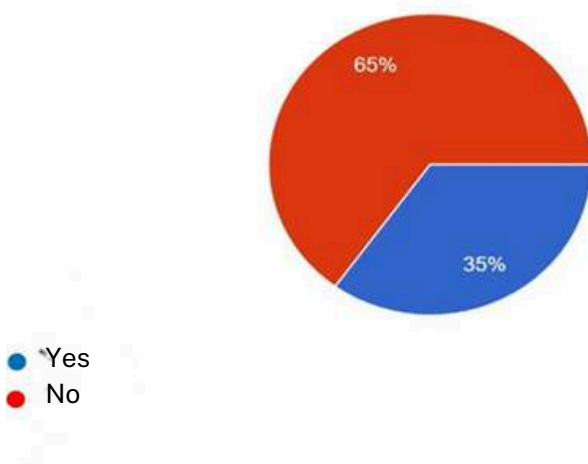
- Singing
- Instrumental Music
- Rhythm
- Listening Exercises

4.3 Cyprus

Participants provided many answers regarding the activities they found effective in engaging children with autism in the classroom. Approximately 40% of the participants mentioned that rhythm/movement activities are very engaging, while the second most popular answer, chosen by 25%, was singing as another engaging activity.

12. Differences in the response to music between children with autism and neurotypical children.

65% of participants answered that they haven't noticed a difference in how neurotypical children and children with autism respond to music.



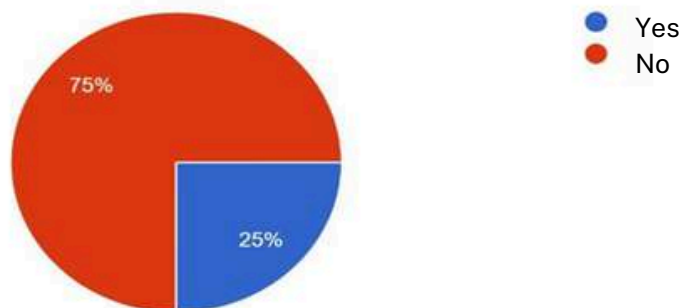
According to participants, many of these children (children with autism) have perfect pitch and developed musicality, which makes them more capable of learning music. Combined with their desire for perfection, this leads them to become very proficient musicians. However, it was also mentioned that some kids with autism do not tolerate music and cover their ears,

and there are many more differences among children with autism due to the perception and peculiarities of ASD. The belief that children react to music differently was also mentioned, as a child who cannot speak because they are low on the spectrum may move to the rhythm of the music very differently from a neurotypical child

4.3 Cyprus

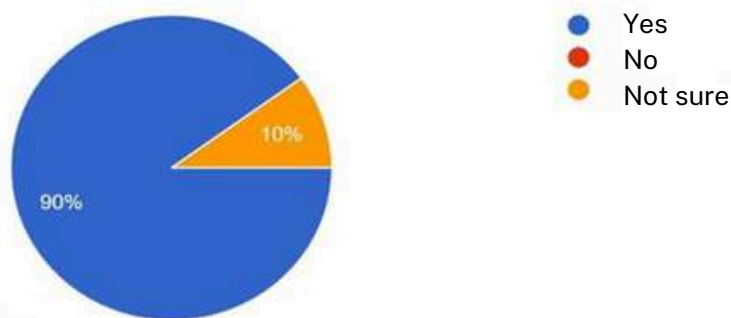
13. Formal training or education on incorporating music into your work with children with autism

75% of participants have never received training on incorporating music into their work with children with autism.



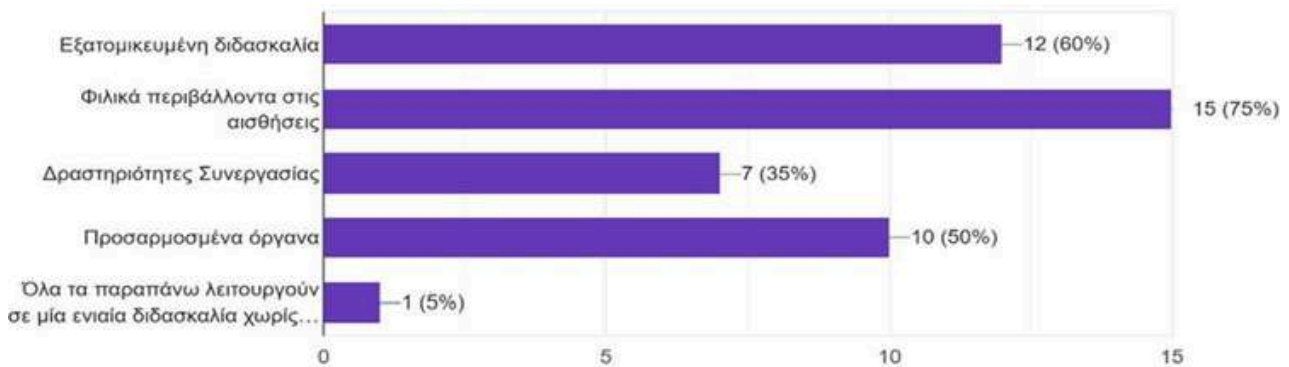
14. More inclusive music education programs for children with autism

90% of participants believe that there is a need for more inclusive music education programs for children with autism.



4.3 Cyprus

15. Important features in an inclusive music education program for children with autism.



- Individualized instruction: 12
- Sensory-friendly environments: 15
- Collaborative activities: 7
- Adaptive instruments: 10
- Other: 1

Main Conclusions

In Cyprus, there is a scarcity of resources and academic articles available in the Greek language concerning children with autism and the role of music in the school curriculum. Based on research, some teachers and educators incorporate music into their classrooms with children with autism, but the majority lack professional training in this area. Despite being aware of music's benefits to students, many teachers are hesitant to integrate it into their classes.

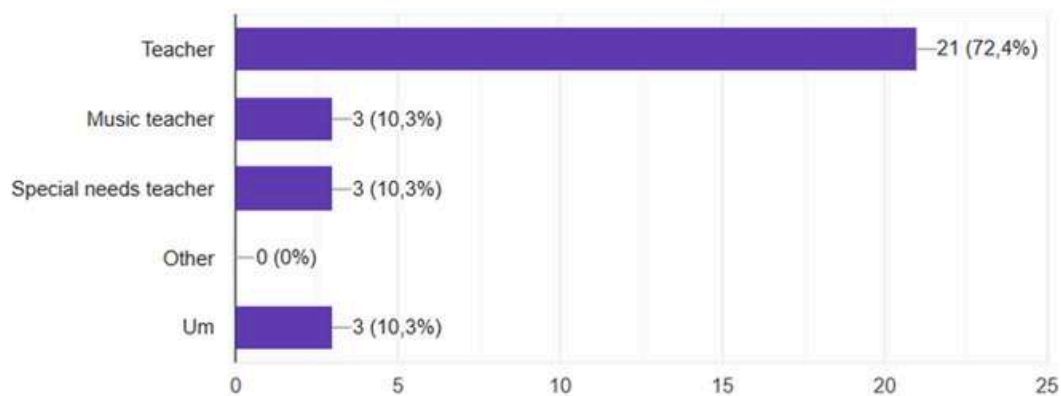
When teaching music, most prefer rhythmic exercises, while a smaller percentage prefer singing and other activities. However, when participants were asked about the characteristics, they consider essential in an inclusive music education program for children with autism, they identified 'individualized instruction,' 'sensory-friendly environment,' and 'adaptive instruments' as the most essential features.

4.4 PORTUGAL

1. Participant Information

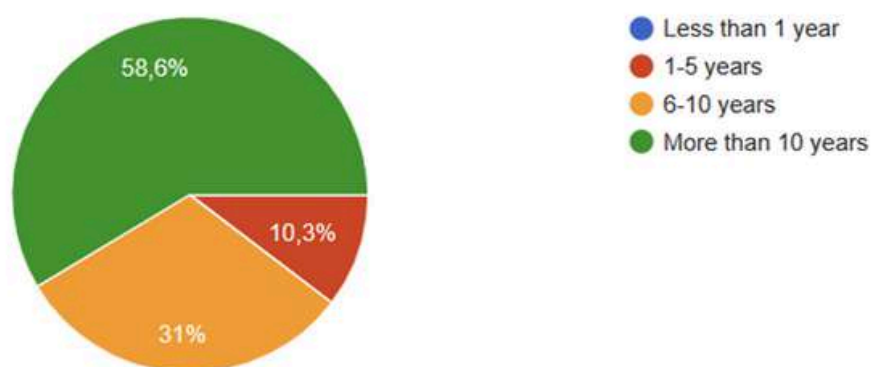
29 Participants took place in the research; most of them were primary school teachers (72,4%), then special education teachers (10,3%), and the rest of them were other professionals employed in the school 10,3% (um=music teacher, pedagogue, psychologist, assistants, and associates.)

29 respostas



2. Years of experience in your current role

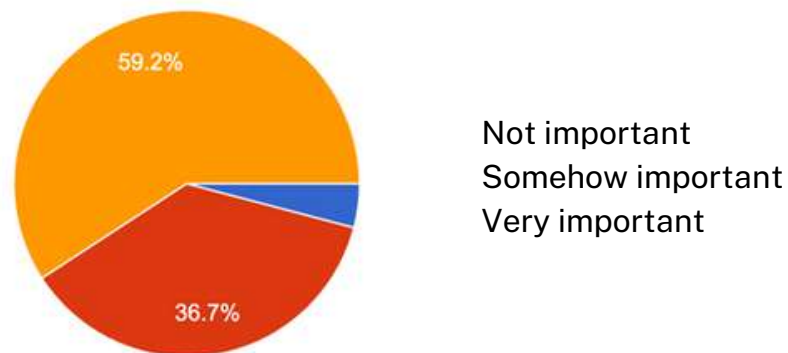
58% of the respondents have more than ten years of working experience.



4.4 PORTUGAL

3. The importance of music in improving the well-being of children with autism

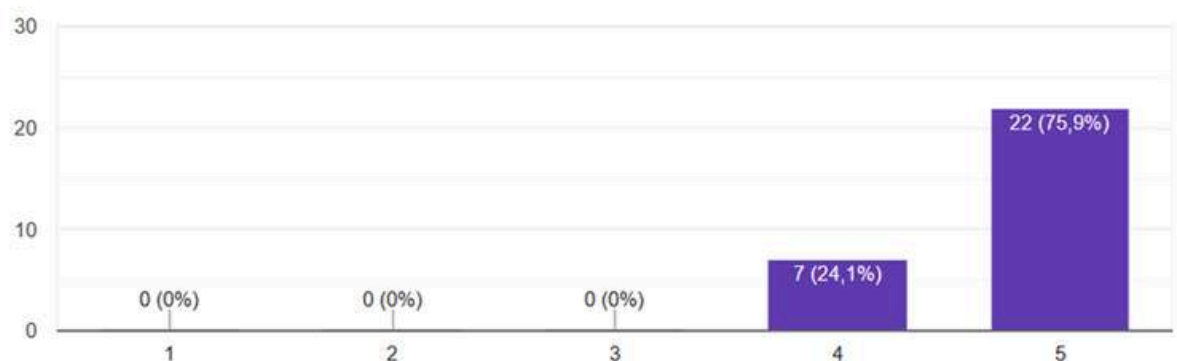
More than half of the respondents think music is essential in improving the well-being of children with autism.



4. The impact of music on a child's emotional and social development

61,2 % of the participants said that music significantly impacts the child's emotional and social development.

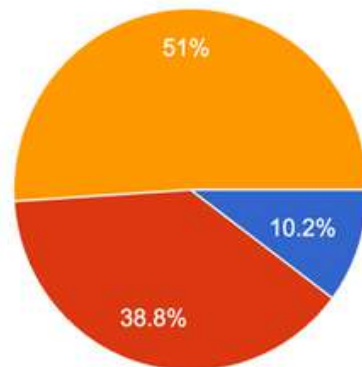
29 respostas



4.4 PORTUGAL

5. Incorporation of music into classes/sessions

51% of the teachers rarely incorporate music in their classes.

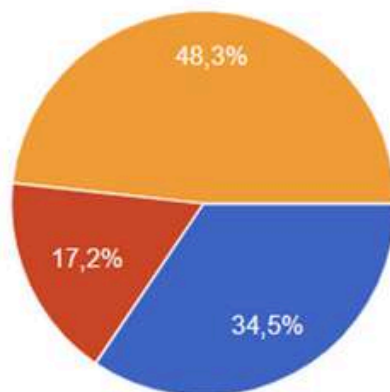


Rarely 51%
Occasionally 38,8%
Frequently 10,2%

6. Use of music as a teaching tool for children with autism

48,3% of the teachers sometimes use music as a teaching tool for children with autism

29 respostas



Yes
No
Sometimes

Additional notes/answers:

I use music to learn to read and write, as well as to relax and concentrate. To help in the routines.

4.4 PORTUGAL

As an English teacher, I teach English through songs. It is easier for children to learn new English vocabulary or expressions through songs. It also makes them happy and more relaxed, and overall, it improves the atmosphere in the classroom. I often organise visits to the local music school. Listening to classical music makes autistic students calm and peaceful. Quodlibets/canon/ traditional songs with movement. Yes, I use music as a teaching tool for children with autism in several ways. First, I use songs and rhythms to teach academic concepts.

For example, we might use a song to learn counting or a rhythm to understand mathematical patterns. Secondly, I use music to help develop fine and gross motor skills. Playing an instrument can help improve coordination and dexterity, while dancing to the beat of music can help develop gross motor skills. In addition, music can be used to help build social and emotional skills. Singing together can promote teamwork and cooperation while listening to music can help children explore and express their emotions. Finally, music can be used as a form of therapy. Many children with autism find music soothing and comforting, and it can be used as a form of self-regulation. In summary, music is a versatile and effective tool that I integrate into many aspects of my teaching and treatment for children with autism.

Yes, I use music as a teaching tool for children with autism. Music is a universal language we all understand, so it's an incredibly effective tool. First, I use music to establish routine and structure. Specific songs signal the start and end of classes, helping children understand and anticipate the structure of the day. Second, I integrate music into learning activities.

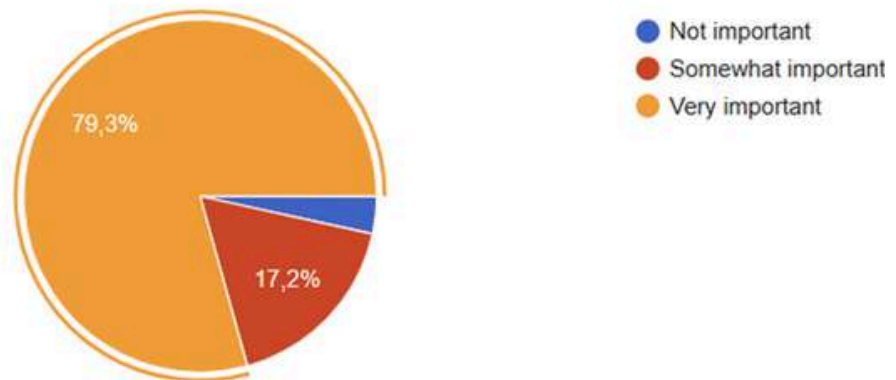
For example, we might learn about patterns and rhythms through drum beats or explore mathematical concepts through rhythm and timing. In addition, music is a great way to enhance social skills. Group musical activities, like singing songs or playing instruments together, encourage interaction and cooperation. Finally, music can be a powerful therapeutic tool. It can help calm and focus children who are agitated or overwhelmed and can be used to help express emotions that might be difficult to verbalise. In summary, music is an integral part of my teaching and treatment for children with autism, and I have seen first-hand the positive impact it can have.

4.4 PORTUGAL

6. How important do you believe music is in improving the well-being of children with autism?

Most teachers think music is very important (79,3%) in improving the well-being of children with autism.

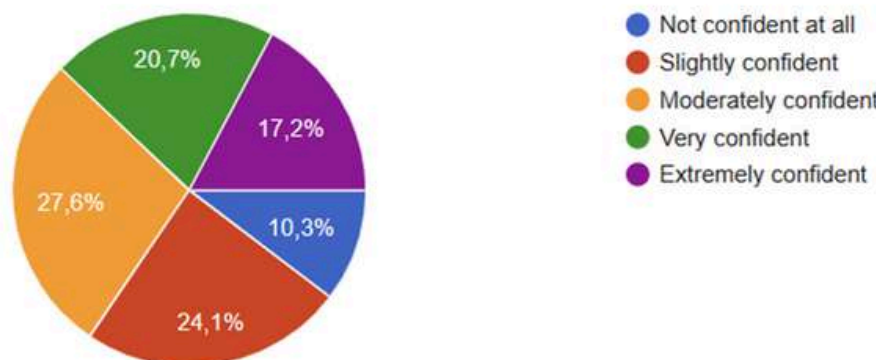
29 respostas



7. Confidence in effectively using music as a tool for engaging children with autism

Most are moderately confident in using music tools to engage children with autism.

29 respostas

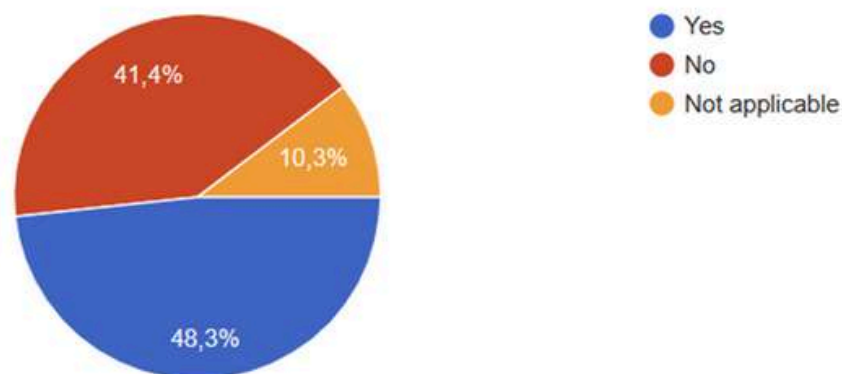


4.4 PORTUGAL

8. Collaboration with other professionals (e.g., music therapists and behavior analysts) in using music for autism treatment

41,4% of the participants never collaborate with other professionals.

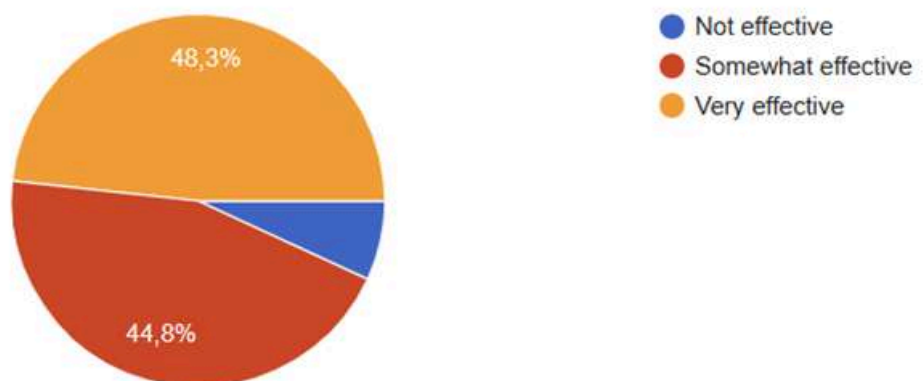
29 respostas



9. Effectiveness of the integration of music in autism treatment

Almost one half think that integrating music in autism treatment is very effective and the other half consider that it is somewhat effective.

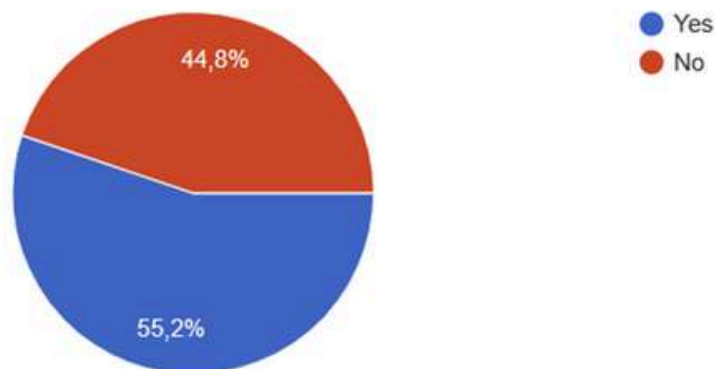
29 respostas



4.4 PORTUGAL

10. Specific challenges or barriers when using music as a teaching tool for children with autism

29 respostas



55,2% of the participants agreed that using music as a teaching tool for children with autism presents specific challenges.

They also added information:

- They become more motivated and socialized, interacting with others.
- Sensitive to the noise missing material in the class
- Speech difficulties

Yes, while music can be a powerful teaching tool for children with autism, there are certain challenges and barriers that can arise. Firstly, the variability in musical preferences and sensitivities among children with autism can pose a challenge. Some children may respond positively to certain types of music, while others may find the same music overstimulating or distressing. Secondly, integrating music effectively into the curriculum can take time and effort. It requires careful planning and adaptation to ensure that the musical activities suit each child’s abilities and learning goals.

Thirdly, measuring the impact of music on learning outcomes can be challenging. While we can observe immediate responses to music, understanding its long-term effects on cognitive and social development requires ongoing observation and assessment. Lastly, there can be practical challenges, such as a lack of resources, including musical instruments and appropriately trained staff. Not all educational settings have the resources to integrate music into their teaching methods fully.

4.4 PORTUGAL

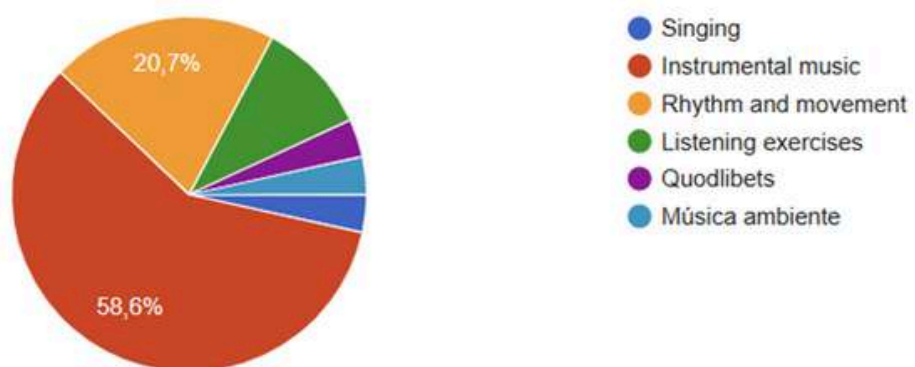
Despite these challenges, I believe that with creativity, flexibility, and the right support, music can be an invaluable tool in teaching children with autism. While music is an effective teaching tool for children with autism, there are some specific challenges. First, each child with autism is unique and may respond to music differently. Some children may be hypersensitive to certain sounds, making music overwhelming or uncomfortable. Secondly, it can be not easy to find songs or musical activities that are appropriate for each child’s skill level and interest.

Some children may struggle to participate in group musical activities due to social or behavioral challenges. In addition, while music can be a powerful tool for teaching new skills, it can be a challenge to integrate music into other areas of the curriculum effectively. Finally, there may be practical barriers, such as a lack of resources or training in music. Not all teaching environments have access to musical instruments or teachers trained in music therapy. Despite these challenges, I firmly believe in the power of music as a teaching tool and am committed to overcoming these barriers to better meet the needs of my students. helps in searching for reactions and stimulation.

11. What types of music activities have you found most effective in engaging children with autism?

58,6 % of the participants found that instrumental music is most effective in engaging children with autism.

29 respostas

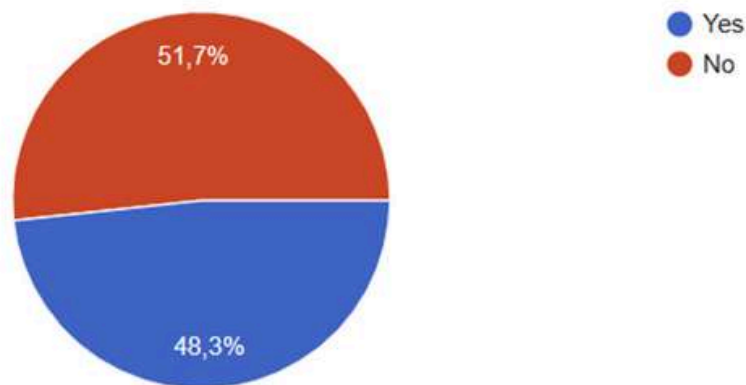


4.4 PORTUGAL

12. Have you noticed any differences in the response to music between children with autism and neurotypical children?

48,3% noticed a difference in reaction to music with children with autism.

29 respostas



They concentrate in the body expression/ mime. Yes, there are notable differences in how children with autism and neurotypical children respond to music. Firstly, children with autism often exhibit a heightened interest in music. They may show a deep fascination with certain songs or types of music, and can listen to them repetitively. This is less common in neurotypical children. Secondly, children with autism may use music as a form of self-soothing.

They often find comfort and calm in the predictability and structure of music, and may use it as a coping mechanism during stress or sensory overload. Thirdly, children with autism may have a different sensory experience of music. They may be more sensitive to certain pitches or volumes or focus on different aspects of the music, such as the rhythm or timbre. Lastly, while neurotypical children often use music as a social activity, children with autism may engage with music in a more solitary way.

4.4 PORTUGAL

They may prefer to listen or play music alone, using it as a form of self-expression and exploration. It's important to note that these are general observations and can vary significantly from individual to individual.

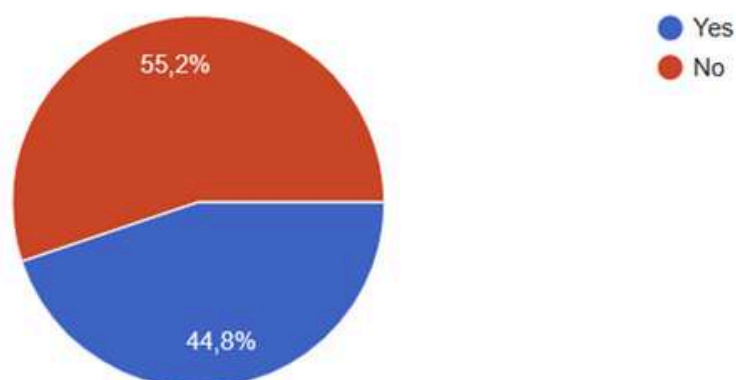
While all children may enjoy and benefit from music, I have observed some differences in how children with autism respond to music compared to neurotypical children. First, children with autism may have unique auditory sensitivities. Some may be hypersensitive to certain sounds, while others may be hypo-responsive. This can affect how they interact with and respond to music. Secondly, children with autism often show an intense focus on certain interests.

If music is one of these interests, they may engage with it more intensely or detailedly than neurotypical children. In addition, music can be a form of non-verbal communication for children with autism. They may respond to music or use music to express themselves in ways they can't with words.

Finally, music can have a calming effect on children with autism. Many children with autism find music comforting and may use music as a self-regulation tool. However, it's important to remember that each child is unique, and their responses to music can vary widely, regardless of whether they are autistic or neurotypical.

13. Have you received any formal training or education on incorporating music into your work with children with autism?

29 respostas



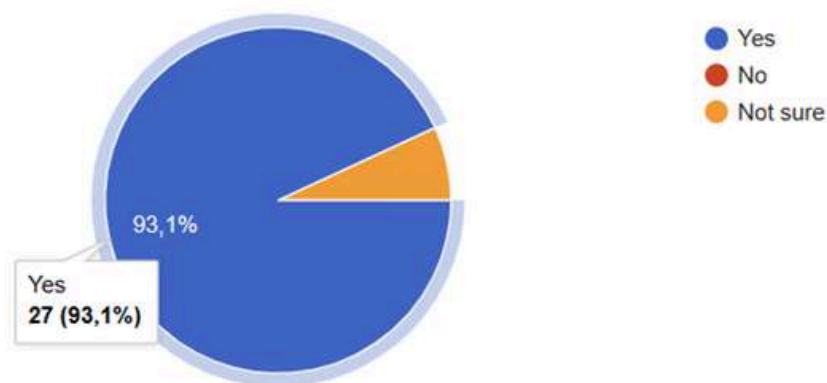
Half of the participants received no formal training on incorporating music into their work.

4.4 PORTUGAL

14. Do you think there should be more inclusive music education programs for children with autism?

On this question about inclusive music education programs, almost all (93,1 %) think that there should be education.

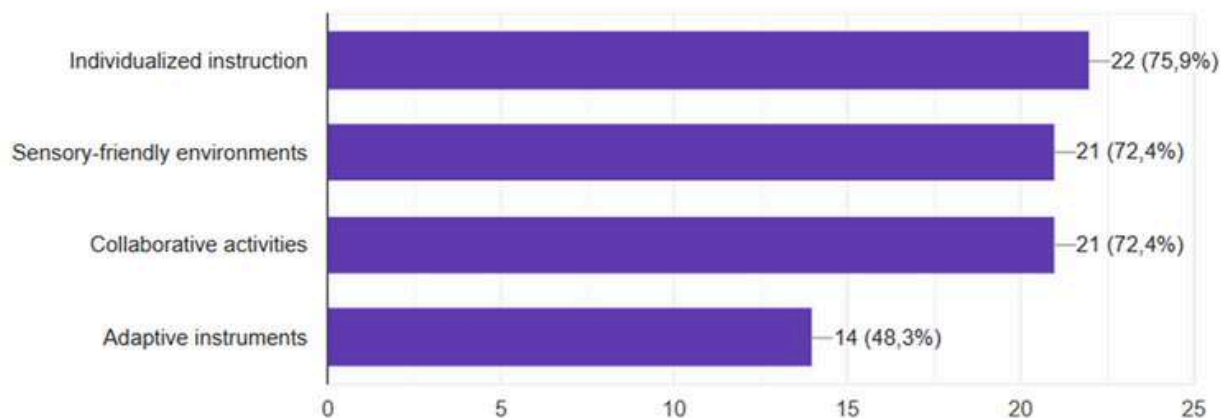
29 respostas



15. What features would you consider important in an inclusive music education program for children with autism?

The attendees could not decide on this question; they considered all the offered answers to be important.

29 respostas



4.4 PORTUGAL

Main conclusions

In the Portugal (Madeira Island), there is a small number of investigations on the impact of the hobby on children with autism spectrum disorders. There is also a deficit of literature in the Portuguese language. Music therapy is usually considered any musical activity with children with autism, teaching them to play an instrument, sing, or socialize. There are examples of music schools that have good practices for children with autism.

In teaching, music is often used as songs or performing rhythmic activities. Experts believe that music has a positive effect on children with autism, although sometimes some types of music can upset them for sensory reasons. The research showed that 55,2% never received training about incorporating music into work with child but they consider important in an inclusive music education program for children with autism.



5. Research outcomes

1. Participant Information

The research was conducted in the partner countries over two months, from March to April 2024.

According to the research design, each country needed to receive 20 answers to the survey prepared using Google Forms. The total number of participants was 110. Music teachers from the RN Macedonia were very interested in the research because it was original and included questions no one had ever asked. Because of this, a considerable interest 50 participants fulfilled the survey;

55% were music teachers, 26 % were special education teachers, and the others were teachers, assistants, or other school staff.

From Poland, 82% were teachers, 10% were Special education teachers, and others were music teachers. From Cyprus, 40% were assistants, 30 % were music teachers, and the rest were other school staff. Portugal took part with 72,4% teachers, 10% music teachers, 10 % learning difficulties teachers, and others were school staff.

Table 1. Number of participants by country

Country	Number
Poland	19
RN Macedonia	50
Cyprus	21
Portugal	20
Total	110

2. Years of experience

Our research participants were experienced. More than 50 % of the participants from all partner countries have more than ten years of experience in their current professional role.

5. Research outcomes

3. Incorporation of music in the classes

Half of the total number of participants (52,25%) in the research frequently use music in their classes/sessions:

-31 % from Poland.

-51 % from RN Macedonia,

-80 % of the participants from Cyprus frequently apply music in their classes/sessions and,

-47% from Portugal

4. The Impact of Music

Table 2. Impact of music on child's emotional and social development

	1 (minimal impact)	2	3	4	5 (significant impact)
Poland	0	0	21,1 %	36,8 %	42,1%
RN Macedonia	0	2 %	6,1 %	30,6%	61,2 %
Cyprus	0	0	0	25 %	75 %
Portugal	0	0	0	84,2 %	15,8 %

5. The use of music as a teaching tool

Our participants sometimes use music as a teaching tool in English classes, music classes, or all the time in class for relaxing, during free activities, or during teaching different subjects.

5. Research outcomes

Table 3. Use of music as a teaching tool for children with autism

	Yes	No	Sometimes
Poland	21, 1 %	10, 5 %	68,4 %
RN Macedonia	20,4 %	16,3 %	63,3 %
Cyprus	45 %	20 %	35 %
Portugal	26,3 %	10,5 %	63,2 %

6. The importance of music

Most of the participants believe that music is very important for improving the well-being of children with autism:

-57,9% Poland

-59,2 % RN Macedonia

-80 % Cyprus

-94,7 % Portugal

7. Confidence in the ability to effectively use music

Table 4. Confidence in the ability to effectively use music as a tool for engaging children with autism

	Not confident at all	Slightly confident	Moderately confident	Very confident	Extremely confident
Poland	15,8 %	31, 6 %	26,3 %	15,8 %	10,5 %
RN Macedonia	0	24,5 %	42,9 %	14,3 %	12, 2%
Cyprus	15 %	0	45 %	10 %	25 %
Portugal	10,5 %	21,1 %	36,8 %	31,6 %	0

5. Research outcomes

8. Collaboration with other professionals

A large number of the participants DO NOT COLLABORATE with other professionals:

- Poland 57,9 %
- RN Macedonia 87,8 %
- Cyprus 35 %
- Portugal 42,1 %

9. Effectiveness of integration of music in autism treatment

Most of the participants think that the integration of music into autism treatment is very effective.

- Poland 57,9 %
- Cyprus 65 %
- Portugal 47,4 %
- RN Macedonia 32,7 %

10. Challenges and barriers in using music as a teaching tool

Approximately half of the participants have barriers to using music:

- Poland 42,1 %
- RN Macedonia 32,7 %
- Cyprus 35 %
- Portugal 57,9 %

They mention the barriers that are sensory sensitivity, repetition of the same melody, and the difficulty of adapting to a different tone for different students.

5. Research outcomes

11. Music activities

The most usual activities with music that teachers practice with students with autism are rhythm and movement activities:

- Poland 26,3 %
- RN Macedonia 42,9 %
- Cyprus 40%
- Portugal 26,3 %

12. The difference in responding to music between children with and without autism

Most teachers said children with autism react differently from children without autism while listening to music. Here, they also mentioned the sensitivity and differences of children with autism.

13. Training

The high percentage of teachers didn't receive any formal training or education incorporating music:

- Poland 84, 2%
- RN Macedonia 91,8 %
- Cyprus 75 % and
- Portugal 63,2 %

5. Research outcomes

14. Inclusive music education programs

A very high percentage, 92,4% of the total number of participants, think there should be more inclusive education programs for children with autism, or by countries Portugal and Poland 100%, Cyprus 90 %, and RN Macedonia 79,6 %.

15. Features essential in an inclusive music education program

Most participants said they need sensory-friendly environments, adaptive instruments, and individualized instructions.

CONCLUSION

- In the research, 110 participants participated.
- More than 50 % of the participants from all partner countries have more than ten years of experience in their current professional roles.
- Half of the total number of participants (52,25%) in the research frequently use music in their classes/sessions.
- More than half of the participants said that music has a significant impact on children's emotional and social development.
- More than half sometimes use music as a teaching tool.
- More than 70% think that music is significant for children with autism
- They feel Moderately confident in the ability to effectively use music as a tool for engaging children with autism
- A large number of the participants DO NOT COLLABORATE with other professionals:
- Most of the participants think that the integration of music into autism treatment is very effective.
- -pproximately half of the participants have barriers to using music:
- They mention the barriers in sensory sensitivity, repetition of the same melody, and difficulty adapting to a different tone for different students.
- The most usual activities with music that teachers practice with students with autism are rhythm and movement activities

5. Research outcomes

- Most teachers said children with autism react differently from children without autism while listening to music.
- The high percentage of teachers didn't receive any formal training or education incorporating music.
- A very high percentage, 92,4% of the total number of participants, think there should be more inclusive education programs for children with autism
- Most participants said they needed sensory-friendly environments, adaptive instruments, and individualized instructions.

6. Annexes

Annex 1. Studies in North Macedonia

Study	Participants	Applied method	Results
Music and dance therapy for children with learning difficulties	14 children with learning difficulties	Assesment	“The results of the initial assessment of psychophysical abilities showed that they were at a very low level. Throughout the study, the group of children with easy intellectual d isabilities showed better performance of abilities in relation to the group of children with Down syndrome”

Annex 2. Studies in Poland

Study	Participants	Measure	Results
Musical Abilities of Autistic Children as a Manifestation of Expression Occurring during the Process of Musical Therapy – a Case Study	3 boys with ASD	The aim of the study is to learn about the impact of improvisation as an element of holistic music therapy on the development of musical and non-musical communication and on the development of social functioning	On the basis of observations and in-depth reports, both musical and non-musical, as well as recordings of the sessions, it was concluded that in the three presented cases it is possible to demonstrate musical abilities that were and are a manifestation of expression and non-verbal communication. In three participants of the therapy, an improvement in the functioning of the cognitive sphere could be observed.

6. Annexes

Annex 2. Studies in Poland

Study	Participants	Measure	Results
Music therapy and its properties in the rehabilitation of a child with autism	A group of autistic children (n = 18) aged 3 to 7 years from centers and foundations of Upper Silesia.	The subject of the research is music therapy, or rather music therapy techniques introduced in the intervention therapeutic care for children with autism	Selected aspects of the changes were presented. The changes occurring in all study participants are not detailed and individual cases are included. Research can add to the current state of knowledge, especially in the field of music therapy and its impact on children with autism.

Annex 2. Studies in Poland

Study	Participants	Measure	Results
Application of music in the therapy of autistic children and youth – an overview	A review of research in the field of music therapy and its impact on individual developmental spheres of children with autism	The aim of this article is the overview of the state of music therapy research and its influence on separate developmental spheres of children with autism.	This review confirms the effectiveness of music therapy in children with ASD. Musical intervention has a largely positive impact on their sphere communication, social or educational.

6. Annexes

Annex 2. Studies in Poland

Study	Participants	Measure	Results
The Importance of Music Therapy Techniques in support of the development of a child with autism	Eight children with autism between the ages of 3 and 11	The aim of the study was to understand the dynamics of children with autism spectrum of selected developmental spheres – communicative, social and emotional, cognitive and motor skills.	Due to the chosen research method and its individualizing nature, it is not possible to compare cases and generalize the results. The main objective of the study was to indicate the significance of changes occurring within a single case, rather than to compare them.

Annex 2. Studies in Poland

Study	Participants	Measure	Results
Music and music-making in overcoming communication and language difficulties in children diagnosed with autism	10 children diagnosed with autism, including 3 girls and 7 boys, aged between 6 and 10 years	The aim of the research was to determine, among other things: Can music trigger spontaneous communicative reactions in children, and to what extent? Can children's reactions be directed and reinforced, and to what extent	One of several of the conclusions presented: Children with autism can be interested in movement, vocal music and musical instruments. You can encourage them to play with singing to the accompaniment of music and to actively listen to your favourite music tracks, with a lively rhythm and catchy melodies.

6. Annexes

Annex 3. Studies in Cyprus

Study	Participants	Measure	Results
Music and social skills for young children with autism: A survey of early childhood educators.	94 preschool teachers at Greece and Cyprus	Experimental/ Field research with questionnaire	The study suggests that music could aid in the academic and social development of students with ASD. It highlights the need for further research in this area and underscores the importance of providing early childhood educators with training in using music effectively.

Annex 3. Studies in Cyprus

Study	Participants	Measure	Results
Promoting Communication for Young Children with Autism Spectrum Disorders: A Family-centered Music Therapy Intervention.	8 parents with their children with autism. Children were primarily male (7 out of 8)	A mixed-methods design was implemented to gather data on the children's preverbal and verbal communication abilities (pre-and-post intervention data collection)	The study provides evidence on the potential of using music therapy interventions within a family-centred approach to enhance young children's preverbal and verbal communication skills. catchy melodies.

6. Annexes

Annex 3. Studies in Cyprus

Study	Participants	Measure	Results
My colleagues wear blinkers... If they were trained, they would understand better'. Reflections on teacher education on inclusion in Cyprus.	8 in-service teachers of the Cyprus Pedagogical Institute.	A mixed-Methods approach was adopted, in which quantitative and qualitative methods were combined.	Results showed that initial teacher education doesn't always ensure a common understanding of inclusive education. Thus, in-service training programs for all teachers must be well-designed and implemented to effectively address both theoretical and practical aspects of inclusive education.

Annex 3. Studies in Cyprus

Study	Participants	Measure	Results
Looking at the ideal secondary school music teacher in Cyprus: Teachers' and students' perspective	518 Cypriot students and 71 music teachers participated in the study.	Mixed methods, which was the case in this article, allow researchers to use side by side comparisons of data that bring together both the qualitative and quantitative strands.	The study shows that secondary school students prioritise personality traits and the student-teacher relationship in an ideal music teacher. Conversely, music teachers highly value musical skills, pedagogical knowledge, and teaching approaches.

6. Annexes

Annex 3. Studies in Cyprus

Study	Participants	Measure	Results
Fostering musical creativity in pre-service teacher education: Challenges and possibilities.	64 primary school preservice teachers participating in a sound stories' project (11 male and 53 female)	Assesment	“The results of the initial assessment of psychophysical abilities showed that they were at a very low level. Throughout the study, the group of children with easy intellectual disabilities showed better performance of abilities in relation to the group of children with Down syndrome”

Annex 4. Studies in Portugal

Study	Participants	Measure	Results
Musicoterapia e Desenvolvimento Cognitivo em Crianças com Autismo	20 school-age children with autism	Experimental	Music therapy showed significant improvements in the children's cognitive development, especially in attention and memory

6. Annexes

Annex 4. Studies in Portugal

Study	Participants	Measure	Results
Ferreira, M., & Rodrigues, L. (2018). Impacto da Música na Comunicação de Crianças com TEA	15 children with autism, 10 therapists	Case study	The music facilitated verbal and non-verbal communication, increasing social interaction between the children and their peers

Annex 4. Studies in Portugal

Study	Participants	Measure	Results
Silva, R., & Costa, T. (2020). Intervenções Musicais em Escolas Inclusivas: Um Estudo de Campo	30 children with autism at school	Field research with questionnaires	The musical interventions promoted the children's inclusion and active participation in school activities, improving behaviour and cooperation

6. Annexes

Annex 4. Studies in Portugal

Study	Participants	Measure	Results
<p>Martins, A., & Lopes, F. (2022). Musicoterapia Familiar e o Bem-Estar de Crianças com Autismo</p>	<p>10 families with autistic children</p>	<p>Qualitative research with interviews</p>	<p>Music therapy in a family context contributed to the children's emotional well-being and strengthened family ties.</p>



AutisMUSIC cutting-edge report and mapping of needs

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