Music in the Lives of Individuals who have Down Syndrome:

Musical Involvement and Training as Learning Facilitators

To verify whether music can facilitate learning, I have conducted an on-line survey investigating possible correlations between the musical environment and the mastery motivation and self-regulation levels of individuals who have Down's syndrome.

The survey incorporated questions exploring the musical involvement and the musical training of the individuals, the beliefs of the parents on the impact of musical involvement and training, and two psychometric inventories investigating mastery motivation and self-regulation. The exploration of the musical environment was processed as an integration of home, school, care centre, and music school.

Musical involvement was identified as listening to music, dancing, singing, being sung to, going to concerts, participating in concerts, and interacting musically with parents or siblings.

Musical training was identified as participating in music lessons at school, participating in music lessons at a care centre, and taking private or group instrumental/singing lessons.

The participants of the study were 40 parents of individuals who have Down's syndrome, members of the Down Syndrome Associations of Cyprus, Greece, and the UK.

Summary of Results

Musical Involvement

Results revealed that musical involvement is positively correlated to social persistence with children, an instrumental aspect of mastery motivation referring to making other children feel better, keeping them interested, understanding them, forming friendships with them, seeking inclusion in their groups, and

extending interaction time with them. This finding is aligned with parents' beliefs, who viewed musical involvement as fostering social interactions.

Next to social persistence with children, musical involvement was found to be positively correlated to another instrumental aspect of mastery motivation, namely gross motor persistence. This outcome suggests that motor abilities can potentially develop along with the performance skills acquired through musical involvement. Musical activities such as singing and dancing can promote body awareness, control, and coordination of movements through the utilisation of the mouth, throat, chest, and other parts of the body. This finding is also aligned with parents' belief that musical involvement improves motor skills. Considering that low muscle tone is a common effect of Down's syndrome, musical involvement could be pursued for optimising gross motor persistence and facilitating learning through increments in mastery motivation.

Individuals who had more frequent musical interactions with their parents demonstrated higher levels of negative reactions such as frustration and anger during or after the process of mastering a new skill. Individuals who had more frequent musical interactions with their siblings also showed higher levels of negative reactions such as sadness, shame, frustration, and anger. A possible explanation for these findings could be the fact that family interactions depend on the family's perception of the disability. If the family believes that the child lacks the skills to solve a task autonomously, it might sometimes adopt a directive behaviour. Overuse of directives has been shown to undermine goal-directed behaviour, persistence, and self-regulation for individuals who have Down's syndrome.

In parallel to the negative expressive aspects of mastery motivation, musical interactions with the parent were positively correlated to mastery pleasure and to social persistence with children. Mastery pleasure is another expressive aspect of mastery motivation referring to feeling pleased or excited when succeeding something. The finding suggests that musical interactions can potentially increase this aspect of mastery motivation. This would impact learning ability as the pleasure experienced from mastering new tasks empowers individuals to continue the effort and to approach new learning challenges.

Lastly, musical interactions with siblings were positively correlated with cognitive/object persistence, an instrumental aspect of mastery motivation referring to maintaining focus even when faced with obstacles.

Musical Training

Looking at musical training led to the positive correlation of private instrumental/singing lessons with self-regulation and with cognitive/object persistence. Group instrumental/singing lessons were correlated with social persistence with children.

These findings suggest that musical training can potentially increase mastery motivation and self-regulation levels. In other words, musical training can potentially operate in a non-domain-specific manner that facilitates learning through improvements in cognitive and social persistence, and in self-regulation.

The fact that group instrumental/singing lessons did not present any correlation with self-regulation whilst private lessons did, could be explained by differentiated self-beliefs in the two settings.

Parent's beliefs

Regarding parent's beliefs, the results of the qualitative data show that they unanimously see music as having a positive impact on their childrens' learning ability in 6 aspects: psychological, emotional, social, cognitive, physical, and artistic.

Concerning musical involvement, the cognitive dimension displayed the highest level of consensus as parents believe that musical activities promote language, concentration, information processing, and memory. Concerning musical training, parents emphasised the social impact on learning stating the importance of social interactions, inclusiveness, and social connection.

Conclusions

This study addressed the motivational and self-regulation difficulties faced by individuals who have Down's syndrome, emphasising the utilisation of music as a medium for facilitating improvements. Considering the indispensable role of these constructs in the learning processes, and the scarcity of research in the field, I see the outcome of this study as very interesting. It aligns with the argument that an

individual’s development is not predetermined from genetics, but is instead affected by environmental influences such as one’s musical environment.

In my opinion, it is essential to create a rich musical environment for individuals who have Down’s syndrome and this could be achieved through informed practice on behalf of educators, music teachers, and family members. Musical involvement and musical training with a focus on mastery motivation and self-regulation skills, can potentially improve the quality of life for individuals who have Down’s syndrome through the facilitation of new learning processes.

Considering the limitations of the study, further research is required in order to better understand the role of music in the lives of individuals who have Down’s syndrome and its relation to learning ability. Getting an insight could allow possible improvements of the special music education curriculum and also inform the practice of music teachers.

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