The role of psychosocial factors in the development of musical listening abilities within adolescents with intensive music training in Latvia

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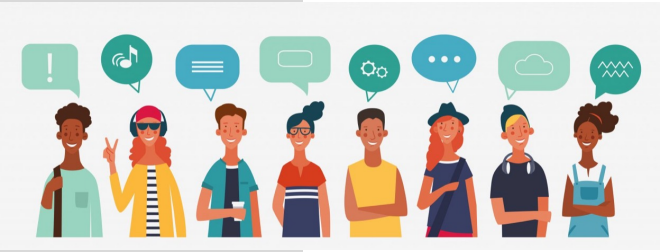
LONGGOLD JVLMA

BACKGROUND

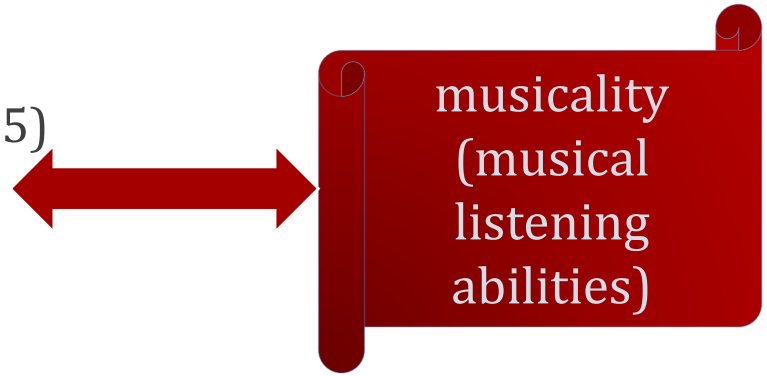
- Music has a significant impact on the biological, psychological, and social factors that define human nature (Miranda, 2013)
- Active engagement with music is considered to have a significant impact on the personal, social, intellectual, and physical development of children and young people (Asztalos & Csapó, 2017; Hallam, 2010, Rauscher & Hinton, 2011)
- Music training has a positive effect on many important domains, including general intelligence (Rickard et al., 2012), cognitive abilities (Roden et al., 2012; Sala & Gobet, 2017; Habibi et al., 2018), socioemotional skills (Harland et al., 2000), well-being (Saarikalio et al., 2020), academic achievement (Sala & Gobet, 2017)
- Is there a connection between music engagement and psychosocial skills ?



PSYCHOSOCIAL FACTORS & MUSICALITY

Psychosocial skills are closely linked to **musicality** as well as academic performance in adolescence (Müllensiefen et al., 2015)

- Children's Grit Scale (Duckworth & Quinn, 2009)
- Children's Hope Scale (Snyder et al., 1997)
- Musical Home Environment (Müllensiefen et al., 2015)
- Strengths and Difficulties (Goodman et al., 1998)
- School Engagement Measure (Wang et al., 2011)
- Theory of Intelligence (Dweck, 2000)
- Theory of Musicality (Eisinger, 2021)



RESEARCH AIM & QUESTIONS

- **determine the role of psychosocial factors and musical listening abilities within adolescents with intensive music training in Latvia**
- whether psychosocial factors are important for the development of musicality
- how and to what extent psychosocial factors interact with aspects of musicality

RESEARCH DESIGN

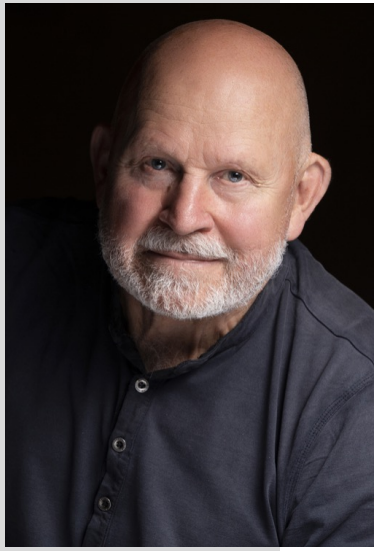
- **Focus group –** children from special music schools having a specific curriculum and being in a special environment of intensive music training on a daily basis
- **Control group –** all other children attending general schools

TWO SPECIAL SCHOOLS:
National School of Arts Emīls Dārziņš music school and Riga Cathedral choir school

Motto:

From talent to personality, from personality to excellence

- Grade 1 to 13
- additional prepclasses for children (aged 5-6)
- fundamental music education, intensive music curriculum (10-22 music classes per week)
- quite small classes (15-20 pupils)
- regular music events (concerts, open exams, competitions etc.)
- collaboration with leading institutions and artistic collectives in Latvia and abroad
- strong traditions and look into the future



Peteris Vasks

Andris Nelsons

Gidon Kremer

Baiba Skride

Misha Maisky

SCHOOL SCHEDULE in the special music schools

GRADE 8 in Riga Cathedral Choir school

Music lessons:

- **Choir – 5 lessons**
- **Solo singing – 1 lesson**
- Piano – 1 lesson
- Solfeggio (Ear training) – 2 lessons
- Music history – 2 lessons
- Music theory – 1 lesson

⇨ 12 music lessons weekly

Additionally by choice:
Composition, Improvisation, Conducting

GRADE 12 in Emīls Dārziņš music school

Music lessons (e.g. wind instruments)

- **Main instrument – 4 lessons**
- **Ansamble – 2 lessons**
- **Orchestra – 4 lessons**
- **History of wind instruments – 2 lessons**
- Piano – 1 lesson
- Solfeggio (Ear training) – 2 lessons
- Music history – 5 lessons
- Harmony – 2 lessons
- Form analysis – 3 lessons
- Polyphony – 1 lesson
- Rhythmics – 1 lesson

⇨ 27 music lessons weekly

MATERIALS AND METHODS

PROCEDURE

- N=191 (ages 11-18; M=13.9, SD=1.75)
- 84 female, 99 male, 8 other or undisclosed
- 2 general schools & 2 special music schools
- 17 tests and questionnaires from the LongGold test battery (www.longgold.org)
- 80 minutes online testing under supervision
- three measurements waves 6 months apart

1st measurement SPRING 2023 → 2nd measurement AUTUMN 2023 → 3rd measurement SPRING 2024

ONLINE TEST BATTERY

Tests on musical and non-musical performance

- Melody discrimination test (Harrison et al., 2017)
- Mistuning perception test (Larrouy-Maestri, Harrison & Müllensiefen, 2019)
- Beat alignment test (Harrison & Müllensiefen, 2018)
- Jack & Jill working memory test (Alloway, 2007)

Other tests and questionnaires

- Concurrent musical activities (Müllensiefen et al., 2015)
- Basic demographics
- Goldsmiths musical sophistication index (Müllensiefen et al., 2014)

Tests and questionnaires on psychosocial factors

- Children's Grit Scale (Duckworth & Quinn, 2009)
- Children's Hope Scale (Snyder et al., 1997)
- Musical Home Environment (Müllensiefen et al., 2015)
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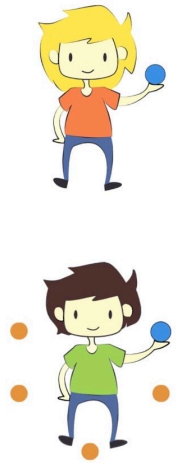
Please read the following list of musical activities and select the ones that you have done during the last **three months**. Please tick all that apply.

- ☐ play in an orchestra
- ☐ sometimes play music with friends
- ☐ sometimes make music at events or special occasions
- ☐ receive individual lessons on an instrument (or voice)
- ☐ receive group lessons on an instrument (or voice)
- ☐ have music classes in school
- ☐ attend music-related after school clubs
- ☐ sometimes compile playlists for myself or others
- ☐ none of the above

Continue

Jautājums nr 1 no 1

Vai Jānim bumbiņa ir tajā pašā rokā kā Līgai? Iegaumē, kur atrodas bumbiņa, kad Jānis pagriežas.



Tajā pašā rokā | Otrā rokā

LongGold Battery Demo LONGGOLD

Question 9 out of 23

In general, I feel like a real part in this school.

1 Strongly disagree	2	3	4

5 Strongly agree

CROSS-SECTIONAL RESULTS (1st TESTING WAVE)

Descriptive statistics

Measure	Mean	SD	Mean	SD
	Music school		**Standard school**	
DEG.age	14	1.7	14	1.8
MDT.ability	0.62	0.86	-1.1	1.1
BAT.ability	0.23	0.99	-1.1	1.3
MPT.ability	0.66	1	-0.43	1
Aggregate.Musical.Ability	0.5	0.68	-0.87	0.84
GMS.musical_training	5.2	0.82	2.6	1.3
CCM.general	4.7	2.1	-0.32	2.7
JAJ.ability	1	0.98	0.5	1

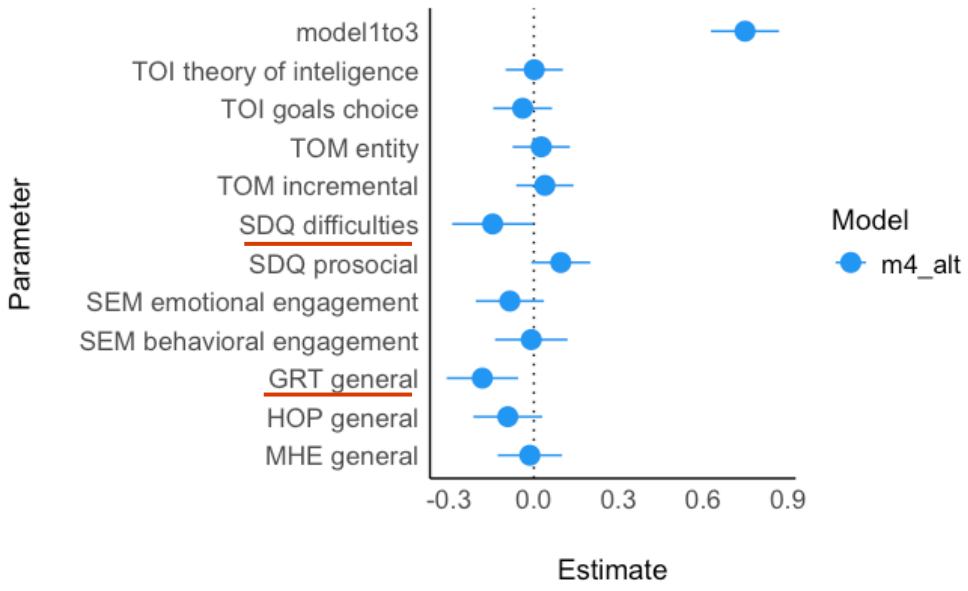
CROSS-SECTIONAL RESULTS (1st TESTING WAVE)

Correlations among psychosocial variables assessed in the study

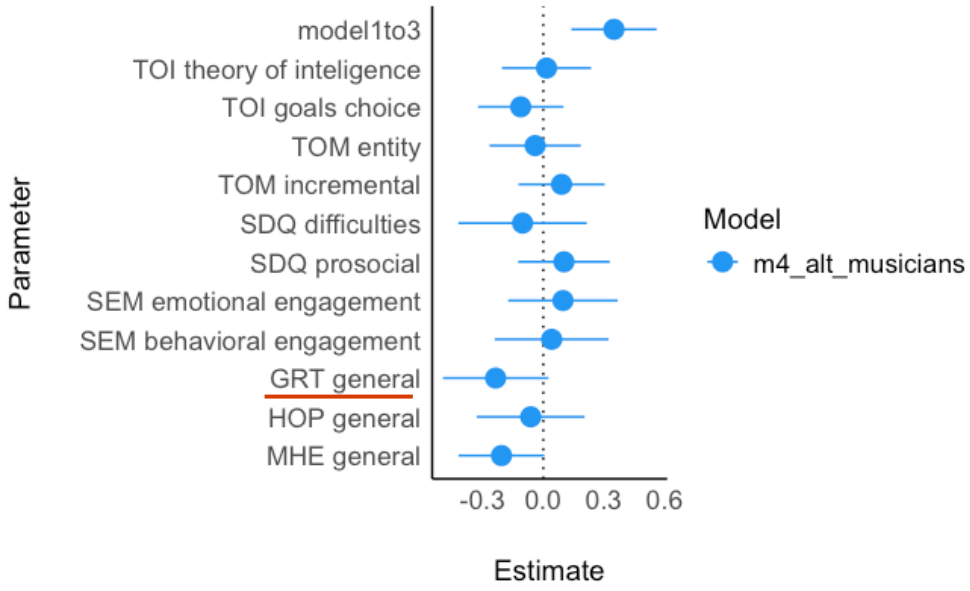
Variable	1	2	3	4	5	6	7	8	9	10
1. MHE.general										
2. TOI.theory_of_inteligence	-.17* [-.31, -.03]									
3. TOI.goals_choice	-.15* [-.28, -.00]	.21** [.07, .35]								
4. TOM.entity	-.19* [-.32, -.04]	.20** [.05, .33]	.03 [-.12, .17]							
5. TOM.incremental	.13 [-.01, .27]	-.12 [-.26, .03]	-.08 [-.23, .06]	-.29** [-.42, -.15]						
6. SDQ.difficulties	-.10 [-.24, .05]	.27** [.13, .40]	.25** [.11, .38]	.06 [-.08, .21]	-.07 [-.21, .08]					
7. SDQ.prosocial	.23** [.08, .36]	-.07 [-.21, .08]	-.14 [-.28, .00]	-.03 [-.17, .12]	.10 [-.05, .24]	-.14 [-.28, .01]				
8. SEM.emotional_engagement	.13 [-.02, .27]	-.21** [-.34, -.07]	-.15* [-.29, -.01]	-.07 [-.22, .07]	.22** [.08, .36]	-.49** [-.59, -.37]	.32** [.19, .45]			
9. SEM.behavioral_engagement	.06 [-.08, .20]	-.16* [-.30, -.02]	-.25** [-.38, -.11]	.01 [-.14, .15]	.20** [.05, .33]	-.57** [-.66, -.46]	.31** [.17, .43]	.53** [.42, .63]		
10. GRT.general	.17* [.03, .31]	-.31** [-.44, -.17]	-.34** [-.46, -.21]	-.13 [-.27, .01]	.08 [-.06, .22]	-.57** [-.66, -.47]	.22** [.08, .36]	.43** [.30, .54]	.49** [.37, .59]	
11. HOP.general	.10 [-.04, .24]	-.27** [-.40, -.13]	-.25** [-.38, -.11]	-.08 [-.22, .07]	.13 [-.01, .27]	-.61** [-.70, -.51]	.17* [.03, .31]	.41** [.28, .52]	.35** [.21, .47]	.44** [.31, .55]

CROSS-SECTIONAL RESULTS (1st TESTING WAVE)

Standardized regression coefficients of psychosocial variables – full sample



Standardized regression coefficients of psychosocial variables – focus group



Discussion

- Significant associations among several psychosocial factors
- Differences in musical listening abilities:

	Standard schools	Music schools
Musical training	15,8%	<1%
Psychosocial variables	8%	10%

- Psychosocial skills (as well as musical training and age) play a crucial role for the development of musical skills during adolescence
- Grit has a consistent negative relationship with musical listening abilities => need for further investigation

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