

Afterschool Music Education Program Linked to Social-Emotional Advantages for Children Facing Economic Hardship

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Background on music education

- Decreased access
- Disproportionate impact
- Arts equity problems

Potential importance of music education

- Inclusivity
- Success experiences
- Diverse cultural traditions
- Individual expression and associated positive emotions



Music education and social-emotional growth

- Experience of interest, happiness, and pride
- Team building
- Persistence

Study design

- After school music education program
- Persistence and social-emotional functioning
- Children at risk via poverty and racism
- Quasi-experimental
- Hypothesis

Description of MEP

- Music program types
- Frequency and duration
- Comparison group



Participants

- 503 students
 - MEP Group ($n = 345$)
 - Comparison group ($n = 158$)
- Demographics
 - 60.8% female
 - 70.1 % Black/African American, 9.0% Latinx American, 5.2% Asian American, 15.6% White/European American.
 - Mean age 9.58 years ($SD = 1.21$ years)
 - 97.4% of children fell below the federal threshold for poverty status.
 - 1.6% of children fell below the threshold for low-income status.

Method and measures

- Demographic Information
- Musical persistence
 - Rhythm synchronization task
- Social-emotional problems
 - The Brief™ Problem Monitor for students (Achenbach et al., 2011)

Table 1

Descriptive Statistics and Comparison of Demographic Characteristics of MEP versus Comparison Students (N = 607)

Variable	MEP (n = 345) Mean (SD)	Comparison (n = 158) Mean (SD)	Mean Difference	SE Difference	t-value	p-value
Age	9.73 (1.26)	9.60 (1.13)	.12	.09	1.38	.169
Sex	.35 (.48)	.47 (.50)	-.11	.04	-2.94	.003**
Race/ethnicity	.85 (.36)	.83 (.38)	.02	.04	.61	.551
Family income	20.79 (16.98)	22.68 (16.87)	-1.88	1.77	-1.07	.288
Poverty status	.98 (.15)	.97 (.18)	.01	.02	.87	.384

Note: Child age is in years. Child sex and race/ethnicity are scored dichotomously (*male* and *racial/ethnic minority group status* = 1). Caregiver income is in USD. Poverty status is assessed by the school based on ratios of family income to family size, compared with federal poverty thresholds and is coded dichotomously (*impoverished* = 1).

* $p < .05$, ** $p < .01$, *** $p < .001$.

Table 2

Descriptive Statistics and Comparison of Potential Educational Covariates of MEP versus Comparison Students (N = 607)

Variable	MEP (<i>n</i> = 345) Mean (<i>SD</i>)	Comparison (<i>n</i> = 158) Mean (<i>SD</i>)	Mean Difference	<i>SE</i> Difference	<i>t</i> -value	<i>p</i> -value
IEP for disability	.10 (.32)	.12 (.32)	-.02	.03	-.76	.450
Homeroom grade	1.37 (.65)	1.53 (.81)	-.16	.07	-2.33	.020**
English grade	1.78 (.80)	1.97 (.89)	-.18	.07	-2.55	.011**
Math grade	1.81 (.86)	1.97 (1.01)	-.16	.08	-2.01	.046*
Music grade	1.34 (.67)	1.31 (.68)	.03	.07	.42	.675
Years in other music program	1.07 (1.17)	1.03 (1.29)	.04	.12	.34	.733

Note: IEP (Individualized Education Plan) for disability is coded dichotomously (*IEP* = 1).

p* < .05, *p* < .01, ****p* < .001.

Persistence Results

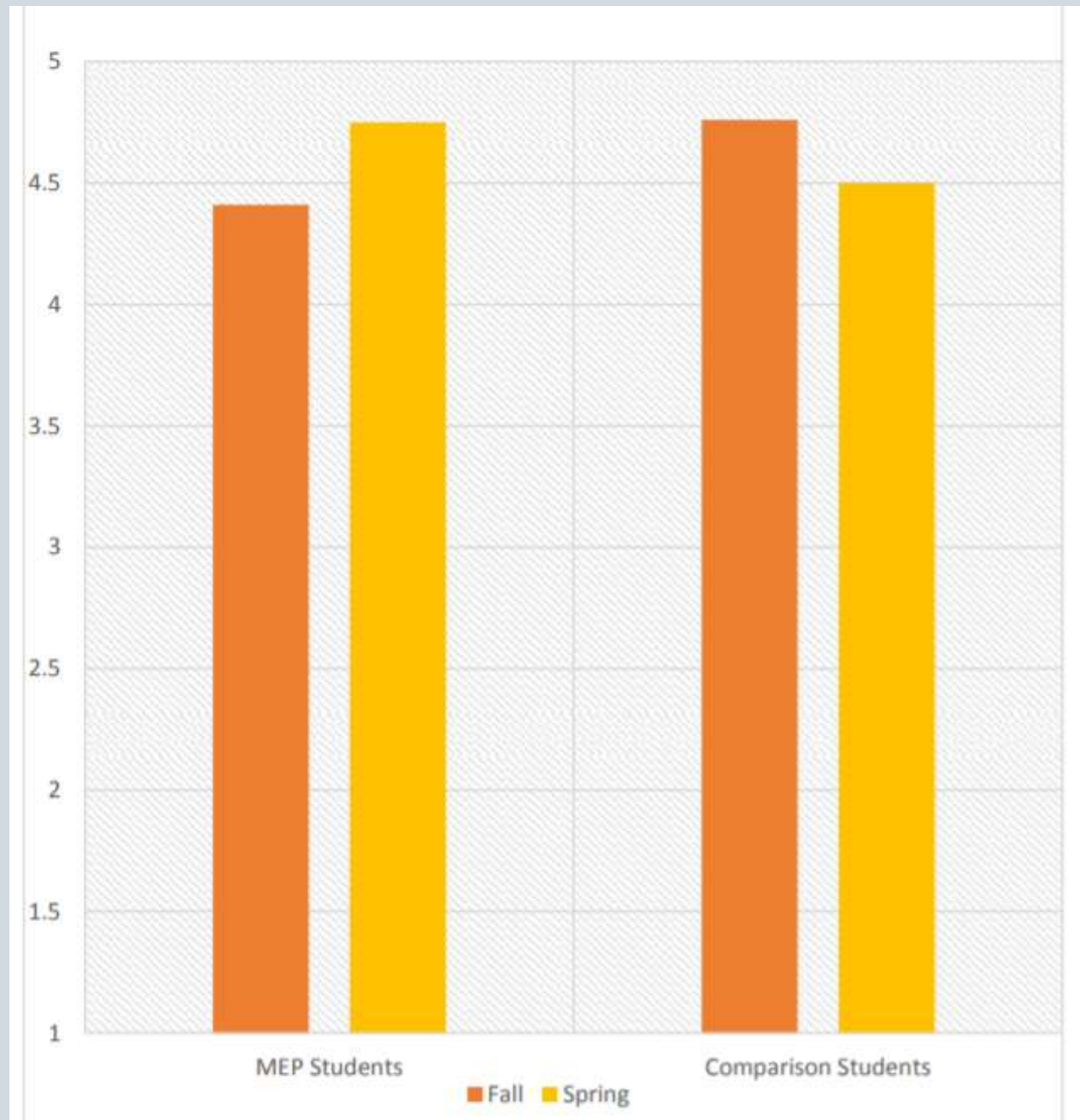


Figure 1. Change in persistence for MEP (n = 345) versus comparison students (n = 158)

Social-emotional results

- Repeated MANCOVAs
- Internalizing Behavior
- Externalizing Behavior
- Total Problem Score

Social-emotional Results

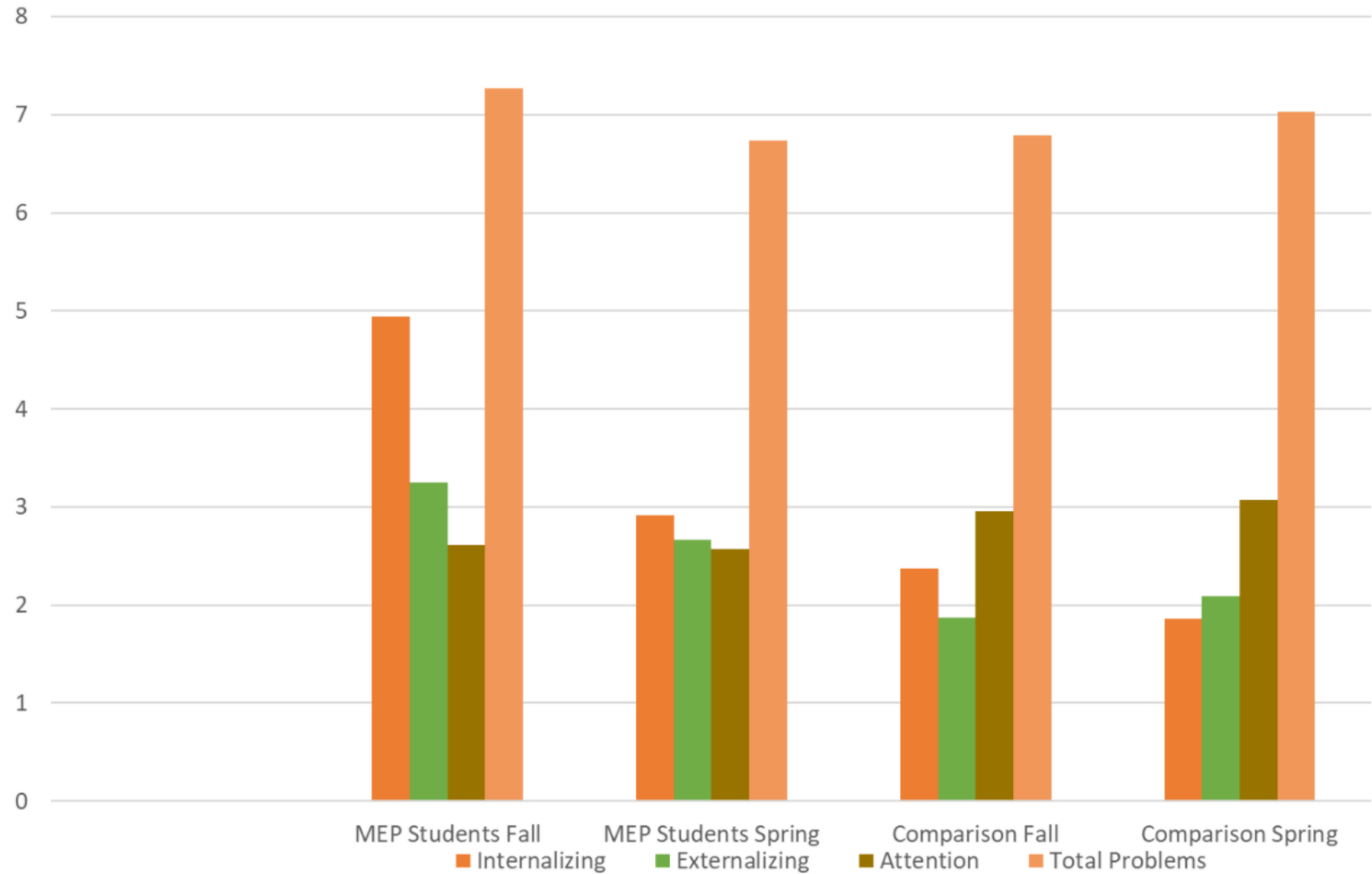


Figure 2. Change in social-emotional problems for MEP (n = 345) versus comparison students(n = 158)

Discussion of persistence results

- Greater growth across year for MEP students
- MEP participation associated with increased persistence





Discussion of social-emotional results

- Higher levels of social-emotional problems in fall for MEP group
- MEP participation associated with greater improvement in internalizing, externalizing, and overall problem behavior