

# **SURVIVAL OF MUSICAL ENGAGEMENT. LONGITUDINAL INVESTIGATION OF ENGAGEMENT IN MUSICAL ACTIVITIES IN CHILDREN**

**Nicolas Ruth<sup>1,2</sup> & Daniel Müllensiefen<sup>1,3</sup>**

**<sup>1</sup>Department of Psychology, Goldsmiths, University of London**

**<sup>2</sup>Institute for Systematic Musicology, University of Hamburg**

**<sup>3</sup>Hanover Music Lab, Hanover University of Music, Drama and Media**

# RESEARCH QUESTIONS

---

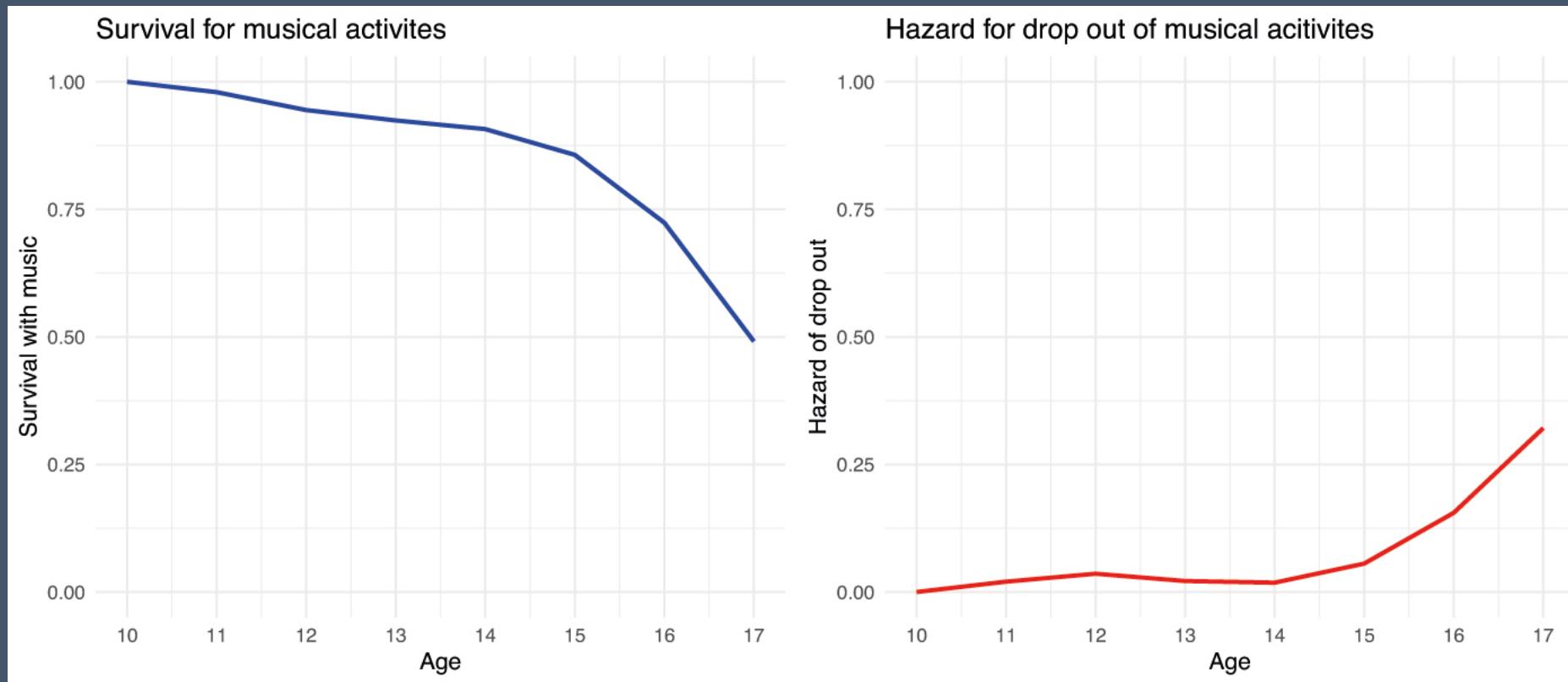
- 1. Who will stop making music and when?**
- 2. Which factors can explain who will survive puberty without giving up music making?**

# SURVIVAL ANALYSIS

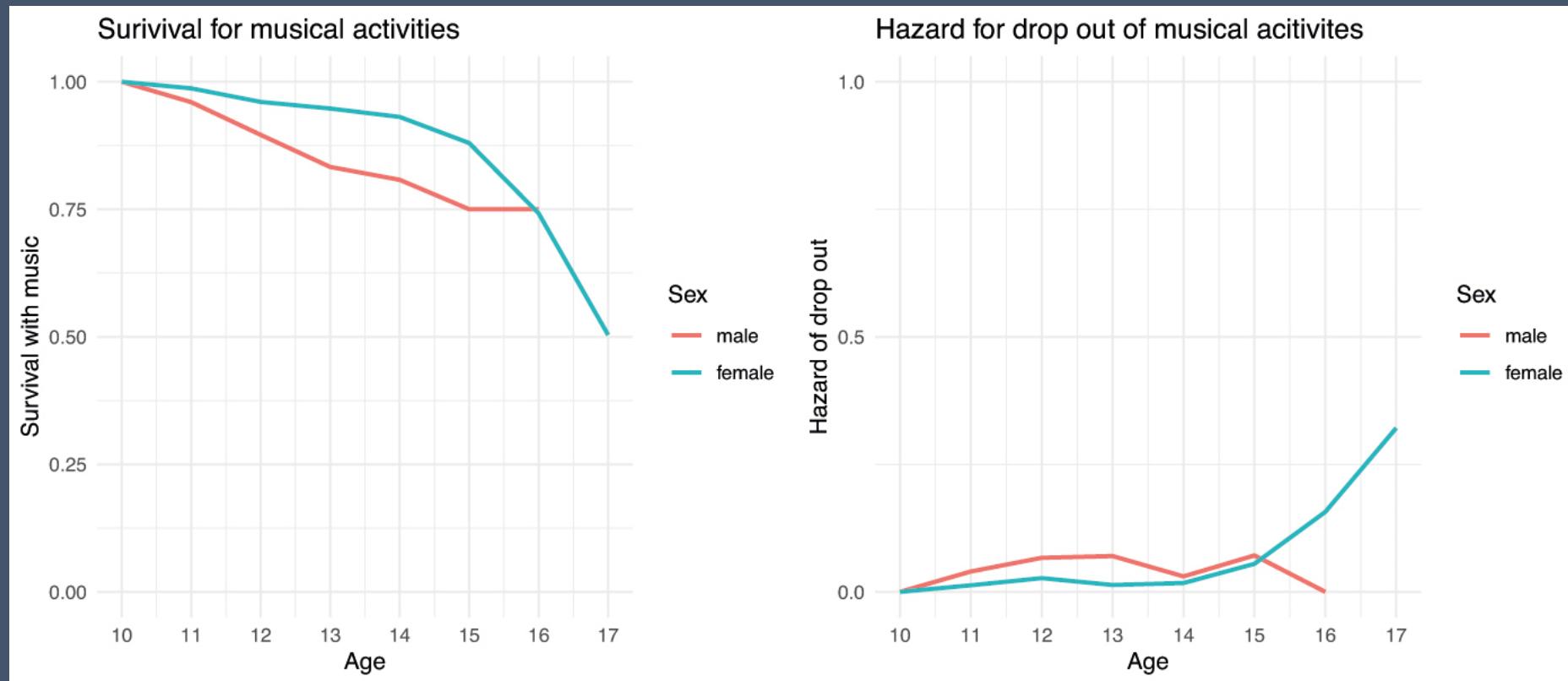
---

- A *musical activity* variable was computed to indicate if a pupil engaged in any of the five possible musical activities
  - in an orchestra,
  - with friends,
  - at special occasions,
  - as part of a group,
  - or in individual music lessons.
- A **binary dependent variable (dropout event / no dropout event)** was computed from the binary items of the CCM measure

# HAZARD OF DROPPING OUT



# SURIVAL OF GIRLS AND BOYS



# EXPLANATORY MODELS

---

# GLM

Predictors	Estimate	SE	Z value	p
Intercept	-6.06	0.94	-6.435	< .001***
Age	0.33	0.07	5.087	< .001***
Emotional stability	-0.19	0.11	-1.708	.09
Musical home environment	-0.57	0.10	-5.629	< .001***
<b><math>R^2 = .14</math></b>				

Results from the generalized linear mixed model as indicated by a back-fits test predicting musical drop out.  
 $N = 719$ , \*\*\* $p < .001$

# CROSS-SECTIONAL GLM

Predictors	Estimate	SE	Z value	p
Intercept	-3.38	1.05	-3.232	.001**
Musical home environment	-0.71	0.12	-6.093	< .001***
TOM entity	0.50	0.22	2.276	.02*
Conscientiousness	0.30	0.13	2.229	.03*
Emotional stability	-0.23	0.15	-1.504	0.13
<b><math>R^2 = .55</math>, accuracy = .83</b>				

Results from the generalized linear model as indicated by a stepwise regression selection method predicting musical drop out.  
 $N = 404$ , \*\*\* $p < .001$ , \*\* $p < .01$ , \* $p < .05$

# SUMMARY

---

- Musical drop out rates increase when children turn 15 years old which coincides with many other physiological and social changes.
- Although female pupils are more likely to stay musically engaged until they are 15 years old, the decrease of their engagement is even more drastic when they are 15 and 16 years old.
- The measurement of musical home environment proved to be an important predictor, suggesting that children that experience or participate in a lot of musical activities at home with their family are more likely to stay musically engaged.

# OUTLOOK

---

- **Limitations**
  - More younger than older students
  - Too view trajectories
  - Engagement measurement
- A supporting musical home environment is a protective factor against musical drop out.
- Parents as well as music teachers should be aware of the increased likelihood for musical drop out as children grow older.

# WHY DID I EVER STOP MAKING MUSIC?

---



# MORE ON MUSICAL SURVIVAL

PLOS ONE

OPEN ACCESS PEER-REVIEWED

RESEARCH ARTICLE

## Survival of musical activities. When do young people stop making music?

Nicolas Ruth, Daniel Müllensiefen

Published: November 24, 2021 • <https://doi.org/10.1371/journal.pone.0259105>

Article	Authors	Metrics	Comments	Media Coverage	Peer Review
▼					

### Abstract

### Abstract

#### 1. Introduction

#### 2. Method

#### 3. Results

#### 4. Discussion

#### Supporting information

#### Acknowledgments

#### References

Although making music is a popular leisure activity for children and adolescents, few stay musically engaged. Previous research has focused on finding reasons for quitting musical activities, pedagogical strategies to keep students engaged with music, and motivational factors of musical training. Nonetheless, we know very little about how the proportion of musically active children changes with age and what traits influence the survival of musical engagement. This study used longitudinal data from secondary school students in the UK and Germany aged between 10 and 17 years. A survival analysis was applied to investigate the trajectories of musical activities across this age span. Other factors like type of learned instrument, gender, personality and intelligence were taken into account for further analyses using generalized linear models. Results indicate that about 50% of all students drop out of music lessons and other musical activities by the time they turn 17 years old, with most students quitting between

The screenshot shows a PLOS ONE article page. At the top, there are navigation links for 'PUBLISH', 'ABOUT', 'BROWSE', 'SEARCH', and a search bar. Below the search bar is a 'advanced search' link. To the right of the search bar are four yellow buttons with black text: '13 Save', '4 Citation', '1,943 View', and '6 Share'. Below these buttons are buttons for 'Download PDF', 'Print', and 'Share'. At the bottom of the screenshot, there is an 'ADVERTISEMENT' section for 'PLOS ONE COLLECTION Chemical Tools & Probes'.

Video presentation (15min):  
<https://youtu.be/yvWNfs9ki2E>