October 25, 2023

Dear Editors,

We would like to submit the attached article, “Music@Home - Retrospective: A New Measure to Retrospectively Assess Child Home Musical Environments,” for consideration in *Behavior Research Methods*.

Early home musical environments (i.e., the degree to which children engage in musical behaviors at home) significantly impact sensory, cognitive, and socioemotional development. As a result, the long-term associations between the childhood home musical environment with adult behavior, cognition, and mental health is of great interest to the fields of developmental psychology, music cognition, and music education. However, longitudinal assessments of such engagement from childhood into adulthood are resource intensive and largely infeasible due to the fact that the only existing assessment of the childhood home musical environment is a caregiver report intended for either infant or preschool-aged children.

To address this shortcoming, we developed the Music@Home – Retrospective, a retrospective self-report measure characterizing key aspects of adults’ (18+ years) childhood home musical environment. Items on this scale were derived partly from adapting items on the only other existing (caregiver-report) measure of the home musical environment: the Music@Home – Preschool questionnaire, and additional items assessed participants’ current adult attitudes towards their childhood home musical environment.

Across two studies (total n = 578), we conducted both an exploratory and confirmatory factor analysis, which revealed a five-factor solution to the items on the Music@Home – Retrospective scales. Importantly, three of these factors contained items which loaded on identically as they did on the original Music@Home – Preschool questionnaire (Caregiver Beliefs, Caregiver Initiation of Singing, Child Engagement with Music). We also identified two novel factors unique to the Music@Home – Retrospective (Attitude towards Childhood Home Musical Environment and Social Listening Contexts) which offer unique insight into the long-term associations the childhood home musical environment may have with adult socioemotional behaviors. Finally, we demonstrate that the Music@Home – Retrospective has excellent overall test-retest reliability (General Factor ICC = 0.84).

We also present demonstrating the utility of measuring the childhood home musical environment in adults. Highlights of these findings are as follows:

* Caregiver Beliefs, Child Engagement with Music, and overall Music@Home – Retrospective scores were significantly positively associated with performance on a melodic perception task
* Caregiver Singing, Attitude towards Childhood Home Musical Environment, and overall Music@Home – Retrospective scores were significantly negatively correlated with adult trait level anxiety
* All Music@Home – Retrospective scores (i.e., factor and general scores) were significantly positively associated with adult self-reported resilience

Potential reviewers are as follows:

Haley Kragness, Ph.D., Bucknell University, hk021@bucknell.edu

Laura Cirelli, Ph.D., University of Toronto – Scarborough, laura.cirelli@utoronto.ca

Miriam Lense, Ph.D., Vanderbilt University, miriam.lense@vanderbilt.edu

Dominique Vuvan, Ph.D., Skidmore College, dvuvan@skidmore.edu

Daniel Müllensiefen, Ph.D., Goldsmiths University of London, d.mullensiefen@gold.ac.uk

Fabia Franco, PhD., Middlesex University, f.franco@mdx.ac.uk

There are no conflicts of interest for this manuscript. None of the material presented in this submission has been published or is under consideration elsewhere. We hope and believe that this article will be of interest to readers of *Behavior Research Methods*. Thank you for your attention and we look forward to hearing from you.

Sincerely,