

The effect of an online music programme on mother-child behavioural synchrony

Michela Santangelo¹, Elena Florit^{1*}, Chiara Barachetti¹, Marinella Majorano¹

¹*Department of Human Sciences, University of Verona, Verona, Italy*

*Corresponding Author E-mail: elena.florit@univr.it

ABSTRACT

BACKGROUND: Early mother-child interactions are characterized by rhythmic repetition of patterns that allow them to coordinate and to “tune in” to each other affectively. This synchrony or co-regulation can occur at multiple levels: behavioural, physiological and neural. Interpersonal synchrony promotes social bonding, and a good example is engagement in musical activities. Research suggests that moving or singing together in response to a rhythm is likely to have positive effects on caregiver-child relationships. This study examines the effects of a highly interactive online music programme on mother-child behavioural synchrony. **METHOD:** Fifteen children ($M=16.09$ months; $SD=3.80$) and their mothers participated in an online programme conducted by a researcher. The programme lasted 12 weeks and included weekly sessions of listening, movement, musical instrument playing, and turn-taking activities. Musical stimuli consisted of rhythms, notes of different pitches, and songs. To assess mother-child behavioural synchrony before and after the music programme, dyads were videotaped for five minutes while playing with musical instruments. Gaze and affect were coded independently for each participant using ELAN software. Specifically, gaze towards the partner (mutual), gaze towards an object, and gaze away were coded. Positive, negative, and neutral facial expressions were also considered for “affect” coding. **RESULTS:** Paired sample t-tests show a significant increase in mother-child behavioural synchrony (i.e., increase in positive affect and mutual gaze) after the music programme ($W = 0.00$; $p = .031$). **DISCUSSION:** After participating in an online music programme, mother and child showed an increase in behavioural synchrony, as evidenced by an increase in the frequency of mutual gaze and expressions of positive affect. Additional follow-ups and assessments of other joint activities (e.g., free play) may shed light on the impact of interpersonal synchrony on child development.

Keywords: behavioural synchrony; music engagement; music programme; mother-child interactions.

