

airway disease, deterioration of pulmonary gas exchange, and advanced age.

**Implications:** These associations of pulmonary variables with CPET may be clinically important and support the use of the eACP equation to improve patient outcomes.

**Keywords:** Cardiopulmonary exercise test, Rheumatoid arthritis, Lung function

**Conflict of interest:** The authors declare no conflict of interest.

**Acknowledgment:** FAPERJ and CNPq.

**Ethics committee approval:** The protocol was approved by the Research Ethics Committee of the Hospital Universitário Pedro Ernesto (CAAE 87594518.4.0000.5259) and all participants signed the consent form.

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### EARLY DETECTION OF NEUROMOTOR DELAYS AND IMPAIRMENTS IN INFANTS AT BIOLOGICAL RISK: PREVIOUS RESULTS

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**Background:** A risk factor is described as a condition related to a possible negative or unfavorable outcome, which may be environmental, physical, or biological. Prematurity, a biological risk factor, is the major cause of neonatal mortality, associated with neurological sequelae, and has occurred in 1 out of 10 live births in São Carlos in 2019. Thus, access to scales with high sensitivity and predictability is pivotal to early detection (in the first four months of age) of delays or neuromotor impairments. A systematic review showed the predictive value of the General Movement Assessment (GMA) and Hammersmith Infant Neurological Examination (HINE) instruments associated with magnetic resonance imaging for early detection up to five months of age.

**Objectives:** To early detect motor impairments and delays during the first four months of life in infants with biological risk.

**Methods:** It is an observational, cross-sectional, and case-control study. Five infants from the biological risk group and five healthy full-term infants from the control group were assessed. Parents and legal guardians had to assign the informed and the image consent form. The identification form was used to characterize the personal and environmental factors. GMA and HINE instruments were performed to evaluate the neuromotor development. The data collection occurred in the home environment or at the Movement Analyses Research Lab (NENEM/UFSCar).

**Results:** The infants from the control group presented a mean chronological age of two months and 12 days, and the infants from the biological risk group presented a mean corrected age of one month and two days. The majority of the sample was from the female sex (90%), born at eutocytic birth (80%), with adequate weight for the gestational age at birth (90%), born from multiparous mothers (100%), and with gestational difficulties (60%). The most frequent sociodemographic characteristics were single parents (60%), both with complete high school education (80% for mothers and 70% for fathers), the mother's mean age of 30.3 years and the father's 27.2 years. Regarding the GMA results, all infants from the biological risk group were evaluated during the writhing movements period, in

which 80% scored as moderately abnormal and 20% as definitely abnormal; only 20% of infants from the control group presented abnormal general movements. At HINE evaluation, 60% of the infants from the risk group presented resistance to shoulder passive movement and absence of alternate kicks in vertical suspension; 60% were unable to follow an object with their eyes; 80% had no auditory response; 100% had persistently fisted hands and 100% presented good suction. The tremors and cramped synchronized movements presence were observed in 60% of the infants from the biological risk group during the assessment throughout both instruments.

**Conclusion:** Infants from the biological risk group presented signs of neuromotor deficits at two months of chronological age.

**Implications:** Performing early detection before four months old might allow more efficient physiotherapeutic intervention.

**Keywords:** Early detection, Infants, Preterm

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### AN INTERVENTION PROGRAM WITH INTERACTIVE MEDIA FOR EARLY CHILDREN: A FEASIBILITY STUDY

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**Background:** the insertion of digital media devices has been increasingly prevalent in children's daily lives. The literature lacks evidence about the repercussion of media on children's development, therefore, further studies are needed to monitor the use and effect of these media.

**Objective:** to verify the viability of an intervention program based on active interactive media for children aged between 24 and 36 months.

**Methods:** Feasibility study in which 32 children enrolled in the nursery II of the educational institution, aged 24 to 36 months, and their parents/guardians, were invited to participate this study. Children were randomized into two groups: 1) GMIA: children used media actively (games) and GMIP: children used media passively (viewing content). Both groups participated in the intervention for 30 minutes, twice a week, for 4 weeks. Measures: Primary outcome: feasibility of the study regarding the criteria related to the intervention program with interactive media. Secondary outcome: adherence, acceptability, structure, and adequacy of the program to the school environment; degree of satisfaction and acceptability of messages and links and preliminary child development outcomes. Before and after 4 weeks of intervention, the children were assessed for child development, receptive vocabulary, and analysis of the Daily Record Chart on the use of interactive media at home.

**Results:** Of the 32 eligible children, 22 children participated in the intervention, with an average of 17 children per meeting. As for acceptability, all parents (n= 32) signed the informed consent form,