

Implications: The next step will be to test the feasibility of the intervention, co-designed with the target audience, which can lead to better results as it considers the real needs of the studied population.

Keywords: Patient and Public Involvement, Cerebral Palsy, Leisure

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

Acknowledgments: Dr. Marjolijn Ketelaar, author of the Involvement Matrix, and all research participants.

Ethics committee approval: Ethics Research Committee (ERC) of the Faculty of Health Sciences of Trairi (FACISA) of the Federal University of Rio Grande do Norte (UFRN) - (CAEE: 51319321.1.0000.5568)

<https://doi.org/10.1016/j.bjpt.2024.100671>

75

HEART RATE VARIABILITY AND FUNCTIONAL CAPACITY OF INDIVIDUALS WITH TYPE 2 DIABETES AFFECTED BY COVID-19 IN THE LONG TERM

Camila Alves Quintino de Souza¹,
Deysiane Peres da Silva Clemente de Oliveira¹,
Amanda de Castro Baio¹, Laryssa Dias Fernandes¹, Tiago Peçanha^{1,2},
Lilian Pinto da Silva^{1,3}

¹ Programa de Pós-Graduação em Ciências da Reabilitação e Desempenho Físico-Funcional, Faculdade de Fisioterapia, Universidade Federal de Juiz de Fora, Juiz de Fora, Minas Gerais, Brasil

² Department of Sport and Exercise Sciences, Musculoskeletal Science and Sports Medicine Research Centre, Faculty of Science & Engineering, Manchester Metropolitan University, Manchester, UK

³ Programa de Pós-Graduação em Educação Física, Faculdade de Educação Física e Desporto, Universidade Federal de Juiz de Fora (UFJF), Juiz de Fora, Minas Gerais, Brasil

Background: COVID-19 can worsen the clinical and functional condition of individuals with chronic diseases such as type 2 diabetes (DM2). There is a lack of knowledge regarding the long-term autonomic and functional impairments of individuals with T2DM affected by COVID-19.

Objectives: To assess whether individuals with DM2 affected by COVID-19 for one year or more have reduced heart rate variability (HRV) and functional capacity compared to those without a history of this disease.

Methods: This cross-sectional case-control study. The sample consisted of individuals with DM 2, with a history of COVID-19 (DMCoV Group), and without a history of COVID-19 (DM Group). All participants had their level of physical activity assessed using the International Physical Activity Questionnaire (short version). Heart rate (HR) and the following HRV measurements were evaluated at rest: standard deviation of normal R-R intervals (iNN) (SDNN); root mean square differences between successive iNN (RMSSD); percentage of successive iNN with difference >50ms (pNN50); low (LF) and high frequency (HF) spectral components in absolute (ms²) and normalized (u.n) units. Functional capacity was evaluated based on the distance covered in the Incremental Shuttle Walking Test (ISWT) in meters. Data distribution was assessed using the Shapiro-Wilk test. Variables with normal distribution are expressed as mean ± standard deviation and the others as median [interquartile range]. Categorical variables were compared using the chi-square test, and numerical variables using the unpaired t-test or the Mann-Whitney test. For all tests, a significance level of 5% was adopted.

Results: Twenty-three individuals of both sexes participated in the study, nine from the DMCoV group and fourteen from the DM group (61.78±10.39 years vs. 55.29±9.69 years, P=0.142; 33.3% women vs. 50% women, P=0.669). There was no significant difference in the

level of physical activity between the DMCoV and DM groups (P=0.235): very active (33.3% vs. 35.7%), active (22.2% vs. 50.0%), irregularly active (22.2% vs. 14.2%) and sedentary (22.2% vs. 0.0%). HR (71.9±10.5 bpm vs. 72.6±11.5 bpm; P=0.876), HRV measurements (SDNN(ms): 39.0±20.8 vs. 25.7±13.5; P=0.076. RMSSD(ms): 20.7[9.3-57.8] vs. 13.2[9.1-26.7]; P=0.403. pNN50(%): 2.2[0.5-27.0] vs. 0.4[0.0-2.7]; P=0.159. LF(ms²): 346.0[65.0-614.0] vs. 199.0[29.5-343.5]; P=0.277. HF(ms²): 125.0[26.5-705.0] vs. 82.0[26.8-253.8]; P=0.439. LF(un): 64.2±16.8 vs. 59.4±17.4 P=0.518. HF(un): 35.6±16.8 vs. 40.2±16.7; P=0.528) and functional capacity (272.5±112.7 meters vs. 373.9±105.6 meters; P=0.051) showed no significant difference when comparing the groups DMCoV and DM.

Conclusion: COVID-19 did not impair long-term cardiac autonomic modulation in individuals with T2DM. On the other hand, the fact that individuals with a history of COVID-19 walked an average of a hundred meters less on the ISWT compared to those without this history suggests impairment of functional capacity caused by COVID-19.

Implications: The findings of this study are preliminary and point to the need for future investigations involving a larger sample size and including other measures of modulation and cardiac autonomic function to confirm the results found.

Keywords: Diabetes Mellitus, COVID-19, Autonomic Nervous System

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

Acknowledgment: The authors would like to acknowledge that this study was partly financed by the Coordenação de Aperfeiçoamento de Pessoal de Nível Superior (CAPES) - Finance Code 001.

Ethics committee approval: Ethics Committee for Research with Human Beings of the Federal University of Juiz de Fora (UFJF) - (CAAE:58643922.10000.5147).

<https://doi.org/10.1016/j.bjpt.2024.100672>

76

UNPLANNED EXTUBATION: CHARACTERISTICS OF NEWBORN INFANTS HOSPITALIZED IN A NEONATAL INTENSIVE CARE UNIT

Camila de Souza Espíndola¹, Tais Beppler Martins¹,
Sara Gurekewicz Bitencourt¹, Emanuella Cristina Cordeiro¹,
Silvana Alves Pereira², Dayane Montemezzo¹

¹ Departamento de Fisioterapia, Universidade do Estado de Santa Catarina (UDESC), Florianópolis, Santa Catarina, Brasil

² Departamento de Fisioterapia, Universidade Federal do Rio Grande do Norte (UFRN), Natal, Rio Grande do Norte, Brasil

Background: Unplanned extubation is an adverse event associated with endotracheal intubation and the use of invasive mechanical ventilation. Extubation failure and the need for reintubation are considered procedures that increase neonatal morbidity and mortality.

Objectives: To analyze the characteristics of newborns who had an unplanned extubation event during their stay in a neonatal intensive care unit (NICU).

Methods: The data from this study belong to a multicenter study called "Predictive factors for extubation failure in newborns admitted to a NICU: a multicenter study". Data were collected from hospitalization records from July 2017 to 2019. Newborns who used invasive mechanical ventilation through an orotracheal tube for at least 24 hours were included. Data collection was carried out in six NICUs in five Brazilian cities: Manaus-AM (North), Natal-RN (Northeast), Brasília-DF (Central-West), Belo Horizonte-MG (Southeast) and Florianópolis and São José-SC (South). The information extracted from the medical records was transcribed into Microsoft