BMC Proceedings 2023, **17**(Suppl 9):22
https://doi.org/10.1186/s12919-023-00269-8

BMC Proceedings

MEETING ABSTRACTS **Open Access**

Center for Interdisciplinary Research in Health (CIIS) National Meeting 2023

Lisbon, Portugal. 31 March - 01 April 2023

Published: 21 August 2023

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BMC Proceedings 2023, **17(9):**

The Center for Interdisciplinary Research in Health (CIIS) is the research center of the Universidade Católica Portuguesa (UCP) focused on health care. The Center is organized in five platforms, and distributed in four geographies across Portugal: Lisbon, Porto, Viseu and Sintra (Table 1). The center has currently 155 active researchers and attracted funds exceeding 10M€.

For the first time ever, CIIS has organized a National Event that included researchers from all platforms and disciplines, in a truly interdisciplinary and translational scientific event, counting 117 registered participants and 120 abstracts. The meeting took place at the Faculty of Medicine, in the Sintra campus, on the 31st March and 1st April 2023. The Scientific Committee of the CIIS National Meeting decided that the theme for the meeting is *Interdisciplinary Health Care*. Rather than clustering researchers by platform or discipline, we decided to create three working sessions that are inclusive to everyone and not restricting the presentations by discipline, being therefore, interdisciplinary. These are: 1 – *Translational Care*; 2 – *Clinical Care*; and 3 – *Community Care*.

The meeting was held in the presence of the Universidade Católica Portuguesa Rector Professor Isabel Capeloa Gil, the Vice-Rector Professor Peter Hanenberg, the Director of the CIIS, Professor Marlene Barros, the Director of the Faculty of Medicine, Professor António Almeida and the guest speaker Professor Tomáš Zima, Charles University, Prague, Czech Republic, and hosted by the Deputy Director of the CIIS, Professor Paulo J. G. Bettencourt.

For two days, papers were presented by invited speakers within each session, and posters were presented by CIIS researchers and students, in a highly anticipated poster session. All abstracts were peer-reviewed. To bring further excitement to the poster session, the Meeting´ Scientific Committee selected the best poster from each platform to receive the Best Poster Award. Finally, the CIIS platform coordinators presented their plans and vision for the future.

Following the success of this meeting, the Scientific Committee of the National Meeting, decided to implement yearly meetings of the Center.

We would like to acknowledge all CIIS members, staff and students that accepted the challenge of participating in this event, presenting their most recent data, sharing their knowledge, and making this truly an interdisciplinary health care event.

We hope this meeting has contributed to share the latest scientific achievements of all members and promoted the beginning of new collaborations for the future, keeping in mind the main goal of improving health care with an interdisciplinary view, to ultimately improve quality of life, with humanity and spirituality at the center of all scientific quests.

Acknowledgements
The authors acknowledge the funding from Fundação para a Ciência e a Tecnologia (FCT), under the project UIDP/04279/2020 and UIDB/04279/2020.

Table 1 Platforms of the Center for Interdisciplinary Research in Health

Name	Location	Head
Neurosciences	Lisbon and Porto	Prof. Ana Mineiro
Nursing	Lisbon and Porto	Prof. Paulo Alves
CatólicaMed	Sintra	Prof. Paulo Bettencourt
SalivaTec	Viseu	Prof. Nuno Rosa
Precision Dental Medicine	Viseu	Prof. André Correia

Background
According to the Bayesian Brain Hypothesis, pain results from the interaction of the certainty that individuals have in the priors, encompassing emotions, expectations, and conditioning responses from previous experiences, as well as the confidence of the ascending sensory information. In this study, we aimed to assess factors contributing to these certainties and possible associations between these two components.
Materials and methods
Healthy volunteers underwent an experimental placebo paradigm (EPP) to assess their confidence in the priors. Expectations of benefit were induced by pairing red and green cues to high and low stimuli intensity during a conditioning phase, followed by a second phase where the stimuli intensities were equal for both colors/cues. Expectations were measured before, during, and at the end. In addition, the participants performed the Focused Analgesia Selection Test (FAST), which measures the within-subject variability in pain reports. Questionnaires assessing emotions (The Hospital Anxiety and Depression Scale, HADS) and beliefs (Pain Catastrophization Scale, PCS) were also used to assess individual differences. Study approval was obtained from the Ethical Committee of the Universidade Católica Portuguesa. The individuals who agreed to participate provided written informed consent.
Results
Twenty-six participants completed the study. No correlations were found between the FAST outcomes, the conditioning, the test phase, or expectations at the EPP. Correlations were found between the HADS anxiety and the placebo (Spearman's r=-.606, p<.001). Expectations before the conditioning (Spearman's r= .402 e p= .042) and after (Spearman's r= .443, p= .023) the placebo were positively correlated with the PCS.
Conclusions
The ability to perceive ascending sensory signals, as measured by the within-subject variability in pain reports was not related to the intensity of conditioning or placebo response in the pain task in healthy individuals. Aligned with previous studies, we found that individuals with higher anxiety levels were less vulnerable to the placebo effect, and catastrophization may have a critical role in expectations of pain reduction during the conditioning by considering the treatment to be more effective.

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- Endodontic treatment of a geminated canine - case report
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BMC Proceedings 2023, **17(9):**P32

Background
Dental gemination is a designation used to identify a disturbance occurred during odontogenesis that causes changes in the shape of the tooth. It is recognized as a failed attempt by a single tooth germ to divide by invagination, resulting in a single wide tooth with a bifid crown. It is a rare condition that occurs with greater prevalence in the primary dentition and affects mostly incisor teeth. Its etiology is not clearly understood, although there is evidence that it may be related to genetic factors, trauma and with some syndromes. Despite being generally asymptomatic, it can manifest clinical alterations like malocclusion, impaction of adjacent teeth and even greater susceptibility to caries and periodontal destruction.
Case report
A 22-year-old female patient with Fahr's Syndrome was referred to the endodontic appointment at the Clinica Dentária Universitária of Universidade Católica Portuguesa in Viseu, presenting tooth 23 with symptoms compatible with a state of irreversible pulpitis. Periapical radiographs and CBCT confirmed the diagnosis of geminated tooth with irreversible pulpitis. Endodontic treatment was performed using an operative microscope. The preparation was performed with ProTaper™ Gold F5 using 2.5% sodium hypochlorite irrigation. In the obturation, two techniques were used, continuous wave compaction in the apical third and gutta-percha injection with vertical compaction in the remain canal. The crown was restored with a direct composite. After six months, the tooth maintained the function and there was no symptomatology. The radiograph was normal, predicting a good evolution. Informed consent was obtained for publication.
Conclusion
Dental gemination is an anomaly diagnosed through clinical and radiological criteria. A careful clinical and radiographic examination, as well as the use of an operative microscope, increases the probability of success and improves the prognosis of endodontic treatment. The recognition and adequate treatment of this anomaly allowed to restore the patient's function and aesthetics.

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- FMD-Caries Risk Assessment Index - A new caries risk assessment index including salivary and microbiological factors
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BMC Proceedings 2023, **17(9):**P33

Background
Caries risk assessment, although not routinely performed by most dentists, is an essential tool to personalize caries treatment plans [1, 2]. However, the existing indexes are not easily applied in the dental appointment and most dentists doubt their predictive efficiency, relying mostly on clinical experience [3]. Improvement of the current indexes is desirable to make caries risk assessment a more objective and effective task. Microbiological and salivary factors can provide essential information [4,5] and should be included in the risk assessment. This work aims at developing a caries risk assessment index based on the CAMBRA [6] index modified by adding and changing the factors analyzed to improve the predictability and assessment of risk caries in individuals.
Materials and methods
The CAMBRA caries risk index was modified and was subsequently applied in a cross-sectional observational study involving 80 patients who attended the Dental Clinic of the Universidade Católica Portuguesa - Viseu. Each patient who met the necessary requirements to participate in this study was observed by the researchers who collected patient data through a questionnaire performed an intraoral evaluation and collected of saliva and biofilm samples.
Results
In the 80 patients evaluated, we classified 56.25% (n=45), moderate risk 27.50% (n=22), high risk 13.75% (n=11) and severe risk 2.50% (n=2). The index was easy to apply, took about 5 minutes for the whole procedure and is feasible to apply chairside. Association between the caries risk and total bacterial load in saliva was not statistically significant.
Conclusions
The feasibility of applying the proposed index as a chairside method was verified, as well as the changes necessary to apply the index more generally in the University Dental Clinic, in all the first appointments. In this way, patient follow-up becomes more accurate and more personalized and future dentists are trained in this type of assessment that they will be able to develop in their postgraduate clinical practice. Future work involves the recall of the same patients after 6-8 months to verify is the caries risk status changed.

References
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