

MEETING ABSTRACTS

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

Lisbon, Portugal. 31 March - 01 April 2023

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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 31<sup>st</sup> March and 1<sup>st</sup> 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 Capelo 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

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**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



The oral health indicators show that the population analyzed has a DMFT index of 20.82 and 78% of the population presented with periodontal disease (PSR 2-4). Salivary bacterial analysis demonstrated that in saliva Firmicutes (20%) are more prevalent than Bacteroidetes (3%) and the mean F/B ratio was 12.84. No significant differences were found between the total bacterial loads of individuals with different DMFT scores. Results indicate that this populations oral health may be improved especially regarding missing teeth and periodontal status. There were no statistical differences in the association between biochemical (pH and total protein concentration) and most microbiological parameters and oral health. However, edentulous individuals presented lower bacterial loads in saliva than dentate individuals.

#### Conclusions

There were differences in the clinically assessed oral health levels and the self-perceived oral health indicating that frequently individuals have low expectations regarding their oral health.

#### P80

##### - Characterization of the oral health status and literacy among a sample of Portuguese elderly

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#### Background

Health literacy is a main factor in health for its improvement, allowing the individuals to have a greater capacity to engage and participate in collective health promotion actions. In dentistry, oral health literacy (OHL) is the ability to understand information regarding dental services, as well as the prevention, control, and treatment of oral problems. The aim of this study was to characterize the oral health status, behaviors and oral health literacy of a sample of participants in the "Atividade Senior" program developed by the municipality of Viseu, Portugal.

#### Materials and methods

An observational cross-sectional study was designed with a sample of 206 participants of the program that accepted responding to the questionnaire and the application of the Rapid Estimate of Adult Literacy in Dentistry (REALD-29PT), validated for the Portuguese population. An intra-oral observation was accomplished to determine the oral health status of the participant and the decayed, missing and filled teeth index was determined (DMFT index). All the participants signed an explicit and informed consent, and the research was approved by the Health Ethics Committee of the Universidade Católica Portuguesa, with the approval registration number 100.

#### Results

As for gender, 69.4% (n=143) are women and 30.6% (n=63) men, with an average age of 70.0±7.16. Regarding oral health behaviors, 31.7% brush once a day, 81.6% do not use dental floss nor other methods of interdental hygiene and 55.8% had a dental appointment in the last 12 months. The DMFT index was 10.38±8.55, with the higher score corresponding to the missing teeth component (11.96±8.56) and 43.9% of the sample use a dental prosthesis. Regarding the application of the REALD-29PT, we can verify that 22.7% have low OHL (score from 0-14), 43.7% moderate OHL (score from 15-22) and 33.6% high OHL (score 23-29).

#### Conclusions

Oral health literacy presents a satisfactory level among more active older adults. However, the reinforcement of oral health promotion strategies is needed to improve oral health status and literacy among the community. These strategies should pass by the development of teaching methods based on oral health behaviors for the community and the implementation of oral health promotion programs directed to adults.

#### P81

##### - Characterization of soft and hard tissue lesions in an oral medicine unit in the central region of Portugal: a 5-year retrospective study

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BMC Proceedings 2023, 17(9):P81

#### Background

The present study aims to assess the prevalence of different types of soft and hard tissue lesions diagnosed through anatomopathological examination, in a sample from the central region of Portugal; to analyze the risk factors associated with these lesions; as well as the prevalence of malignant neoplasms.

#### Materials and methods

A search of the anatomopathological records of soft and hard tissue lesions was carried out, between January 2017 and December 2021. The following variables were analyzed: gender, age at the time of biopsy, exposure to risk factors, anatomical location, and the prevalence of malignant neoplasms. All data were anonymized and kept confidential throughout the investigation, being for the exclusive use of the research team.

#### Results

52 biopsies were performed. The most diagnosed pathology was fibroma, followed by epulis. The gender most affected was the female with 59.62% and the mean age of patients was 56.54 years. Smoking habits and the use of ill-fitting dentures were the most common risk factors among the patients. The prevalence of malignant neoplasms was 5.77%, with a higher incidence among females (3.85%) and in the age group between 71-80 years (3.85%).

#### Conclusions

The various lesions diagnosed confirm that biopsy followed by anatomopathological examination is a highly relevant procedure, together with clinical examination and a detailed anamnesis, to obtain an accurate and definitive diagnosis of oral cavity lesions.

The study protocol was approved by the Ethics Commission for Health of the Universidade Católica Portuguesa (Comissão de Ética para Saúde da UCP, Report number 169, November 18, 2021).

#### P82

##### - Correlation between the Yesavage Geriatric Depression Scale and the Oral Health Status of the Elderly Patient - Pilot Study

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BMC Proceedings 2023, 17(9):P82

#### Background

The present study intends to assess the prevalence of signs and symptoms of depression in elderly people in the district of Viseu, and to analyze how these are associated to the oral health status and quality of life.

#### Materials and methods

An observational descriptive cross-sectional pilot study was designed with a sample of 20 participants residing in two institutions in the municipality of Viseu, Portugal. Data collection was carried out through the application of a questionnaire composed of general sociodemographic and oral health aspects, the Geriatric Oral Health Assessment Index (GOHAI), the Yesavage Geriatric Depression Scale (GDS-15) and also through the application of the decayed, missing and filled permanent teeth index (DMFT index).

#### Results

The mean age of the sample was 80±7.74 years, with 85% of the female gender. Of the participating individuals, 55% reported not having dental prostheses. The average GOHAI index was 26.7±5.2. It was also found that 65% of the elderly did not have depression, 30%

had "mild depression" and 5% had "severe depression". For those categorized as "depressed", all considered to have an "average" to "poor" condition of their teeth and almost 3/4 had low self-perception of quality of life related to oral health. Even so, no statistically significant values were detected between the severity of depression, age and the DMFT index.

#### Conclusions

It was found that individuals with symptoms of depression have a greater tendency to manifest a low self-perception of quality of life related to oral health, as well as to report more problems with their teeth and gums, although this is not reflected in the results of the DMFT index.

The study protocol was approved by the Ethics Commission for Health of the Universidade Católica Portuguesa (Comissão de Ética para Saúde da UCP, Report number 33, November 21, 2019). Informed consent was obtained from all participants and all methods were performed in accordance with the Declaration of Helsinki principles for medical research involving human subjects and following the requirements established by Portuguese Law n.º 21/2014 for clinical research.

#### P83

##### - Title: Digital Metric Analysis of mandibles for Forensic sexual diagnosis

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*BMC Proceedings 2023, 17(9):P83*

#### Background

Sexual Diagnosis is a fundamental step towards the Biological Profiling of individuals in Forensic cases. Mandible is one of the most dimorphic bones in the skull, being relevant to sex determination. With technological advancements observed in our era, it was realized the usefulness and precision of Cone Beam Computed Tomography (CBCT) in collection and analysis of bone structures. The main objective of this study is to analyze sexual dimorphism in a collection of Portuguese mandibles belonging to the Portuguese National Institute of Legal Medicine and Forensic Sciences, through a digital metric methodology.

#### Materials and Methods

An observational, cross-sectional study was performed. This study was carried out according to ethics clearance number CE-28/2020. 33 mandibles (14 female, 19 male) and personal belongings were photographically registered. All mandibles were scanned using CBCT and measurements were done through the Simplant Pro 17.01 software. Descriptive and inferential analysis were used to identify the more dimorphic parameters in the sample, and best sex predictors.

#### Results

There was a statistically significant difference in the following parameters: coronoid process height, condyle height, maximum length of mandible and minimum width of mandibular ramus ( $p < 0,05$ ). In the multivariate statistical analysis, by the stepwise methodology, it was possible to identify the coronoid process height as the best sex predictor, accurately in 72.2% of cases. Allowing to differentiate female and masculine jaws with an accuracy of 64.3% and 78.9%, respectively.

#### Conclusions

Images captured by CBCT provide more information and enable the examination of structures that are difficult to access, when compared to 2D observation and analysis. This methodology is increasingly used as it helps in diagnosing and planning treatments in the dental office. In a legal context, this methodology presents itself as an added value in the collection of information for the identification of individuals. The coronoid process height is the most dimorphic parameter and the best sex predictor in the sample. This results are in line with the existing literature.

#### P84

##### - The learning of Dignity by Nursing Undergraduate Students: a Grounded Theory

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*BMC Proceedings 2023, 17(9):P84*

#### Background

Dignity is a fundamental principle in the practice of nurses. However, the literature reveals gaps in the evidence on how students learn to conceptualize the dignity of the people they care for. The purpose of this research was to design a grounded theory on the social learning process of dignity based upon the experiences and perceptions of undergraduate nursing students.

#### Materials and methods

This qualitative study was conducted using the grounded theory method. Data was collected through free reports, individual semi-structured interviews with 20 undergraduate nursing students, and a focus group. Participants were selected across purposeful sampling and analyzed simultaneously using the Corbin and Strauss approach. The investigation was approved by the Research Ethics Committee of the Institute Polytechnic of Setúbal (Ethics code: n°64/A/CC/2021). Also, after explaining the study's objectives, all the participants completed and signed a written consent form.

#### Results

The "Reckoning of dignity" was the study's core category, reflecting the nature of the learning process of dignity. The theory of "Reckoning of Dignity" is based on five main categories: "proto awareness of dignity", "nursing path", "awareness of dignity", "ways of learning" and "becoming able". These categories cover the underlying social factors, learning strategies, and outcomes of the reckoning process of dignity by undergraduate nursing students. The study findings showed that the undergraduate nursing students experience an acknowledgement process of the practical identity of dignity, which is strengthened throughout the social learning process during the undergraduate course.

#### Conclusions

The *theory of reckoning of dignity* can be used as a practical guide to describe and understand the process of how moral and ethical arch occur and can be boosted during the learning process of undergraduate nursing students.

#### P85

##### - The impact of MAIEC application in the community empowerment increase, regarding organizational climate, in a business community – a case study

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*BMC Proceedings 2023, 17(9):P85*

#### Background

According to the Litwin and Stringer model, the organizational climate of a company is a key factor in the development of productivity and well-being of employees. In Community Health Nursing, there is a framework for approaching communities as a care unit - the Community Intervention and Empowerment Assessment Model (MAIEC). The aim of this study was to assess the impact in the level of community empowerment after applying the MAIEC's clinical decision-making matrix, in an educational business community in Porto.