

Mestrado Integrado em Medicina Dentária

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**"Ser Criança"- Caries prevalence in children
from North of Portugal**

Dissertação apresentada à Faculdade de Medicina Dentária da universidade
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Dentária

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Viseu, julho de 2024

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DEDICAÇÃO/AGRADECIMENTO

Neste ano de 2024, um ano cheio de grandes mudanças e crescimento, tanto a nível pessoal como educacional, termina-se um ciclo, e começa-se outro.

Medo, eu acho que no fundo todos nós sentimos isso às vezes em nossas vidas, o que nos diferencia é a maneira como cada um de nós reage e age em função desses fatores. Desistir não é uma opção, aliás nunca foi. Perseverar e continuar com o apoio de todos foi fundamental para a conclusão do meu percurso académico. Desta forma, deixo aqui meus mais sinceros agradecimentos.

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A todos os integrantes do Ser Criança, e aos meus antecessores, sem os quais não teria tido a oportunidade de realizar este trabalho, pela dedicação e apoio incansável demonstrado. Espero que possamos alcançar todos os objetivos do Projeto Ser Criança que tanto me orgulha.

Aos meus pais por sempre serem meu refúgio em todos os momentos da minha vida. Por apoiar todas as minhas decisões e me permitir ser a melhor versão de mim mesma todos os dias. Mesmo estando longe de vocês nesses cinco anos, sei que vocês sempre se mantiveram informados e em contato.

À minha irmã Cláudia por ser uma referência de persistência e sucesso, e porque indiretamente também me motiva a nunca desistir daquilo que realmente quero.

À minha amiga Andreia que esteve comigo nessa reta final, me ajudando e me apoiando também, tanto moral quanto pessoalmente. O tempo passa mais rápido quando estamos nos divertindo e estamos menos cansados. E por fim, gostaria de

dedicar esta dedicatória a todos (amigos, conhecidos e outros) porque sem dúvida todos tiveram um papel a desempenhar e se cheguei até aqui é graças a todos vocês.

ABBREVIATIONS AND ACRONYMS INDEX

ADA – American Dental Association

CES-UCP - Ethics Committee for Health of

the Catholic University of Portugal

DGS - General Directorate of Health

INE - National Statistics Institute

FMDUCP – Faculty of Dental Medicine of

the Catholic University of Portugal

OHL - oral health literacy

OHRQOL - oral health relates quality of life

WHO -World Health Organization

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RESUMO

A introdução à saúde oral desempenha um papel fundamental na saúde geral e na manutenção da higiene oral, prevenindo o aparecimento de diversas patologias. A cárie dentária é a doença crónica mais prevalente e é comum na infância em todo o mundo, afetando pessoas de todas as idades em todas as fases da vida. Lesões de cárie não tratadas podem causar dificuldade para comer e dormir e são uma das principais causas de absentismo na escola e no trabalho. O presente estudo contou com crianças dos 3 aos 11 anos matriculados no ano letivo 2022/2023. Setenta e cinco crianças foram incluídas nesta pesquisa desde 2022, e foram submetidas ao exame clínico oral através dos índices CPOD/ceod e PUFA. Dados demográficos também foram recolhidos. Os resultados mostraram que a maioria das famílias vive em aldeias, os pais das crianças são na maioria casados, a qualificação de alfabetização tende a ser entre 7-9 (ano) ou 10-12 (ano) para homens e 10-12 (ano) para mulheres; a maioria dos pais estão a trabalhar, entre outras características. O CPOD teve média de 0,078 e o PUFA teve média de 0,28. O IMC das crianças apresentou valores normais. Nesta área, houve melhorias significativas. Conclui-se que a prevalência de cárie é baixa na população estudada, assim como as alterações pulpares.

palavras-chave: dmft, socioeconómico, cárie dentária, crianças, saúde bucal

ABSTRACT

Introduction to oral health plays a fundamental role in general health and the maintenance of oral hygiene, preventing the onset of various pathologies. Dental caries is the most prevalent chronic disease and is common in children worldwide and affects people of all ages at all stages of life. Untreated carious lesions can cause difficulty in eating and sleeping and are one of the main causes of absenteeism from school and work.

This study included children aged 3 to 11 enrolled in the 2022/2023 school year. Seventy-five children were included in this research which has been conducted since 2022. Children underwent an oral clinical examination using the DMFT/dmft and PUFA indices. Demographic data were also collected. The results showed that most families live in villages, the parents of the children are mostly married, the literacy qualification tends to be between 7-9 years or 10-12 years for men and 10-12 years for women; most parents are working, among other characteristics. The DMFT had an average of 0.078 and the PUFA had an average of 0.28. The children's BMI presented normal values. In this area, there were significant improvements. It is concluded that the prevalence of caries is low in the studied population, as well as pulpal changes.

Keywords: dmft, socioeconomic, dental caries, children, oral health

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1. INTRODUCTION

Dental caries is the most widespread chronic disease in the world, and it is a major public health issue. It is the most common disease during childhood, but it affects people of all ages throughout life. (1) (2) (3). Considering that it is the most common of the diseases of the oral cavity, highlighting its etiological factors and focusing on its prevalence in Portugal and in the world is important. According to current data, the global prevalence of untreated decay in permanent teeth is over 40% across all ages, and it is the most common out of 291 diseases studied in the Global Burden of Disease Study. Untreated cavities frequently cause oral pain. (4)

In Portugal, six major epidemiological surveys on oral health have been carried out, at national level, in 1983, 1990, 1999 (INE), 1999, 2006 (DGS) and 2015 (OMD). Furthermore, several other smaller ones have been published in reviews. Analyzing these data reveals a significant improvement in the oral health of Portuguese people over the past years. For example, the percentage of children free of cavities has almost tripled (from 15% in 1983 to 44% in 2006). At the age of 6 the numbers were higher 33% in 2000 against 51% in 2006. In addition, in 2006, 12-year-old children were identified as having sealants in 55% of the cases and the mean of sealants per individual was 3.61. Furthermore, moderate (2.2%) and severe (0.2%) levels of fluorosis were detected. (5) In 2013, DGS and OMD carried out a national study, introducing new age groups (18, 35-44 and 65-74 years). This study had as special interest the evaluation of the impact of the new operationalization strategy (use of "cheque dentista"). This study was an observational, cross-sectional, descriptive, and analytical representative of the country and each of its 7 health regions (North, Centre, Lisbon, Alentejo, Algarve, Madeira, and Azores). The team of examiners included several dentists/teachers from Portuguese Faculties of Dental Medicine and dentists from Health Services of Madeira and the Azores. The team of examiners were oral hygienists and nurses from Health centers. The examination sites were Kindergartens and public and private Elementary Schools, National Defense Centers (Military) and Health Centers. Fieldwork lasted until the end of 2014 and the results showed that the level of children until 6 years old free of cavities reached 54% with a cpod index of 1,65

and it is expected that in 2020 the score should be 59% with a cpod index of 1,35. Children under 12 years old obtained 53%, 9% less than in 2006. The fluorosis of children around 12 years old didn't change much from 2006 with 2,2% moderate 0,2% severe 4% soft 9,8% extremely soft 9% doubtful and 73,6% normal. (6)

Oral health, as already mentioned, plays a key role in general health and maintaining oral hygiene, preventing the appearance of various pathologies.(7) The burden of dental caries for 12-year-olds is highest in middle-income countries, where nearly two-thirds of caries go untreated. Low-income countries have a lower prevalence, but dental caries go largely untreated, reflecting weak oral care systems. And even in high-income countries, more than half of dental cavities go untreated. Dental caries share the same social determinants, and the same inequalities, as many other oral diseases. The American Dental Association (ADA) defines oral health literacy (OHL) "(...) as the degree to which individuals have the ability to obtain, process and understand health information and services necessary to make appropriate oral health decisions". The limited oral figures for literacy and oral knowledge continue to be alarming. This theme includes the insufficiency of certain parameters such as: prevention, diagnosis, and compliance with educational mechanisms. (8)

The importance and development of oral health can be reinforced by alerting society, by using oral health promotion strategies that promote communication between practitioner and patient. In the field of children's oral health, the role of parents and kindergarten teachers will be essential not only for success, but also for strengthening the educational structure. (9) (10). Dental caries is considered the most prevalent pathology of the oral cavity, assuming an elementary role in the impact and extent of oral health worldwide. Lack of oral health care, dental public health, and the persistence of dental caries are considered relevant problems especially among preschool and school-aged children. (1-3) This absence of up-to-date epidemiological information hampers the development of adequate strategies to reduce the disease burden. Dental caries is the disease with the highest prevalence, affecting nearly half (44%) of the world's population in 2010. These results support the point of view that the good structuring of oral health programs to support the country's preschool and school

population is essential to combat the disease through the promotion of oral health. (11)
(12) (13)

Despite its very specific nature, there are few standardized global data on dental caries. This is largely due to the lack of integration of oral health data into national disease surveillance programs, especially in low and middle-income countries. Conducting independent national oral health surveys is costly and complex, and therefore not a priority. Thus, in Portugal, there are studies that confirm these data, but more research is still needed to fully understand the level of oral health among the population. In addition, most of the medical and dental treatment provided remains limited to the private sector, and the Portuguese national health system still does not respond effectively to the needs of the most disadvantaged communities. The degree of the risk at early ages turns out to be closely linked to the preventive behavior that the child will have in adulthood. Within the framework of the social problems of children presented previously, dentists, teachers, and students of the Faculty of Dental Medicine from Universidade Católica Portuguesa propose to carry out a project through dental observational interventions with Reencontro association. This partnership created the "Ser Criança" project where the main focus is to prevent and correct bad oral health hygiene. The focal point in this study is to analyze the prevalence of caries with the socioeconomic impact that influences the social sphere.

2. MATERIALS AND METHODS

2.1 HEALTH ETHICS COMMITTEE APPROVAL

Prior to starting any study, the approval of the Ethics Committee for Health of the Catholic University of Portugal (CES-UCP) is required. It was obtained in 2020, 2021 and 2022 by a different researcher each year with the aim of continuing the project. (Annex I)

2.2 SAMPLE STUDIED

The participants are children from the preschool and school network (1st cycle), whose guardians consented to participate in the research, who belong to the Reencontro Association (Annex II) As inclusion criteria: age group 3 to 5 years old with deciduous dentition, age group 6 to 11 years old with mixed dentition, both genders, parents, and caregivers fluent in Portuguese were considered.

For this Project the main actors are children aged 3 to 5 years old and children aged 6 to 11 years old enrolled for the school year 2022/2023. Seventy-five children were included in this Research from 2022. On the day of the child's examination, the child was desensitized through playful educational actions in oral health. After data collection, the child was taken to a clinical examination to record the prevalence of caries.

2.2.1. DMFT INDEX AND PUFA INDEX

During the examination, all children underwent an intraoral examination, in which the DMFT and the Pufa index were analyzed. The DMFT index, formulated by Klein and Palmer in 1937, is used by the World Health Organization (WHO) to assess the prevalence of dental caries in several countries. The acronym DMF originates from the words "decayed", "lost», and "filled", and the D/d indicates that the unit of measurement is the tooth. The indices most used to measure the frequency of dental caries in populations are the "DMF- T", for permanent teeth, and the "dmf-t", for temporary teeth.

In addition to the DMFT value of each patient being calculated, the state of their teeth was also recorded according to the category in which they belonged DD or DP (permanent or deciduous dentition). In total there are 9 possible conditions for a tooth in order we have: healthy (0); decayed (1); rest. w/ decay (2), rest. without caries (3), absent for caries (4); absent (other) (5), sealant (6); prosthesis, implant (7); unerupted (8); trauma (T) and unregistered. (9) (Annex III)

Next, the intraoral examination includes the complementary index for assessing the consequences of untreated dental caries, this index is called PUFA. This index encompasses pulpal involvement, ulcer due to root fragments, fistula, and abscess.

p/p: p/p pulpal involvement is recorded when the opening of the pulp chamber is visible or when the coronal tooth structures have been destroyed by the carious process and only roots or root fragments remain.

u/u: record of ulceration due to trauma resulting from "sharp" parts of the tooth when the sharp edges of a tooth with pulpal involvement or root fragments cause traumatic ulceration of surrounding soft tissues, e.g., tongue or buccal mucosa.

f/f: fistula exists when the pus is released and is associated with the tooth with pulpal involvement.

a/a: there is an abscess when the pus is associated with swelling and consequently related to a tooth with pulpal involvement. (Annex IV)

2.2.2. SOCIOECONOMIC EVALUATION

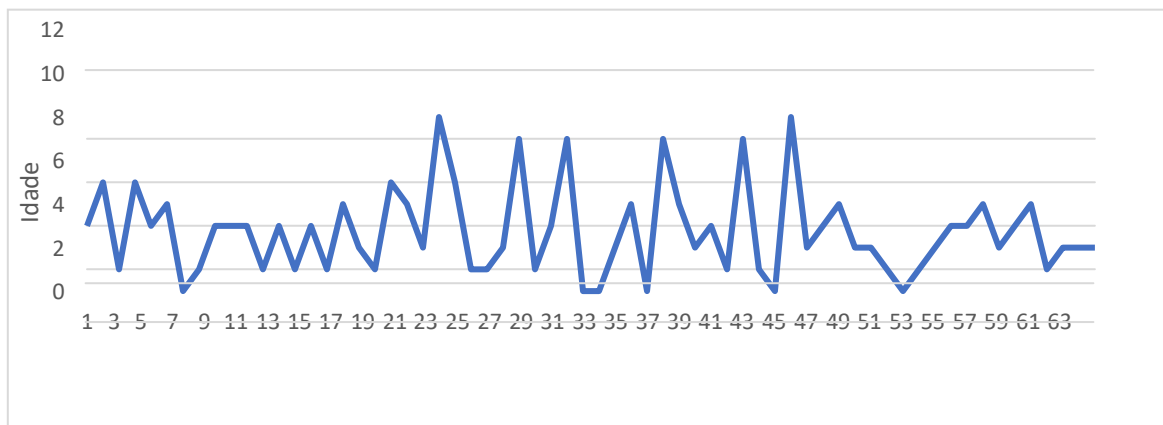
The socioeconomic level of the research subjects was assessed using a questionnaire completed by the children's parents. In which the characterization of the: the child's gender, age, weight, size, the child's residence, the parents' marital status, the parents' literal qualifications, the parents' profession, the parents' professional situation and the environment where the child lives appears. Following oral health: the child's oral health, the frequency with which he/she brushes the teeth, the time dedicated to doing it, the times during when brushing occurs, the method used by the child, the information provided by the professional, the use of dental floss, the type of toothbrush used, the products the child uses for oral hygiene, the number of times the child has been to the dentist, the reason for the appointment, information about the "Cheque Dentista", the child's behavior before consultations, the sealants if present and finally, pain and gingival inflammation in the last 12 months, if any. (Annex V)

2.3. DATA ANALYSIS

The results obtained were organized, tabulated, and submitted for statistical treatment into the SPSS program. The descriptive statistical analysis determined the absolute or relative frequency of the variables investigated.

3. RESULTS

3.1 GENERAL DATA



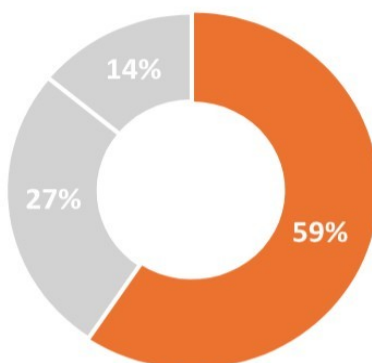
Graphic 1 : Distribution of the number of children by age

This graphic represents the sixty-four children of this project whose age is between three to eleven years old. They were divided in two samples one represents the preschoolers the other the 1st cycle students. For the first one, the maximum age acceptable was five years old and eleven for the other. In those two samples, thirty-three children were included in the first one and thirty-one for the second. Contrary to expectation, fourteen children were four years old, thirteen were five to six years old, eight were seven years old, six were three years old, four were eight to ten years old and two were eleven. Thirty-six participants were female and twenty-eight were male.

3.1. SOCIODEMOGRAPHIC

Residence:

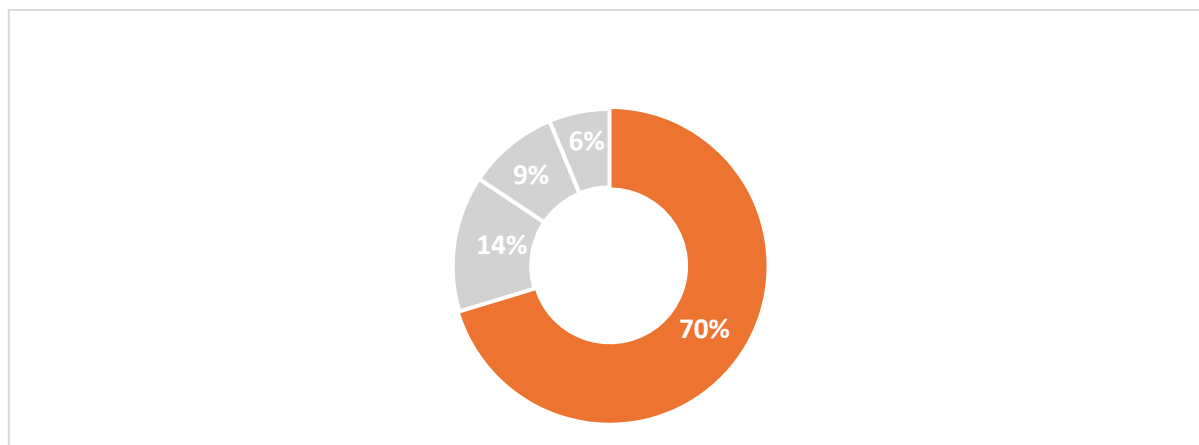
aldeia representa a maioria dos « Local que reside ».



Graphic 2 : Distribution of families depending on their residence

According to the results, families live mostly in villages thirty-eight more exactly, seventeen live in cities and nine live in towns. In percentage this means 59%, 27% and 14%.

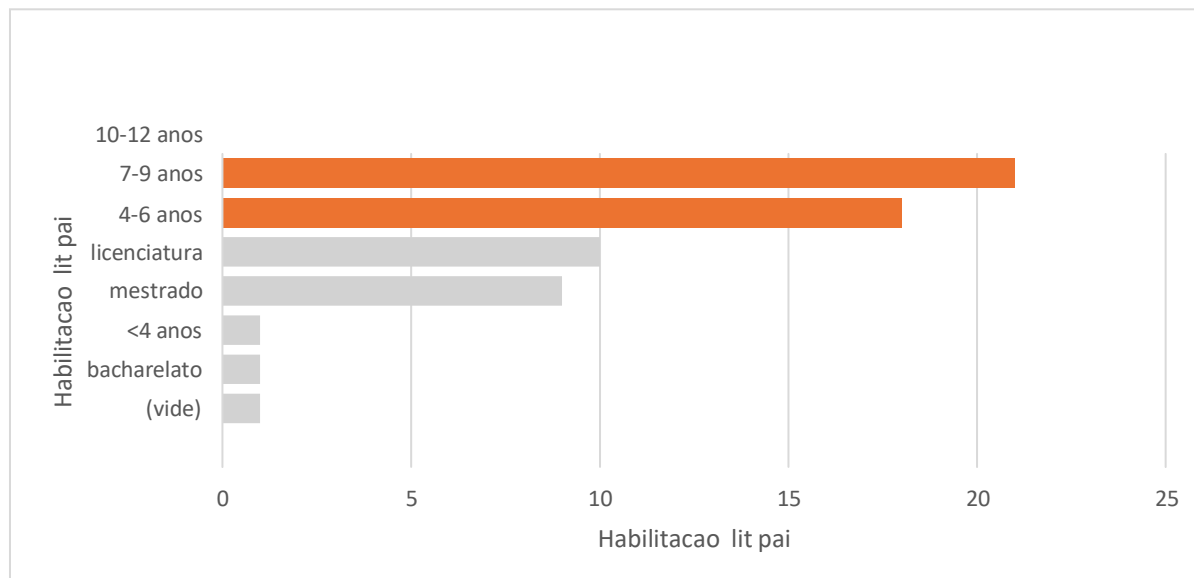
Parents' marital status:



Graphic 3 : Distribution of parents depending on their marital status

The value for this table is forty-five married couples, six live together, nine are divorced and four are single. Transformed in percentage, the results are 70%, 9%, 14% and 6% respectively.

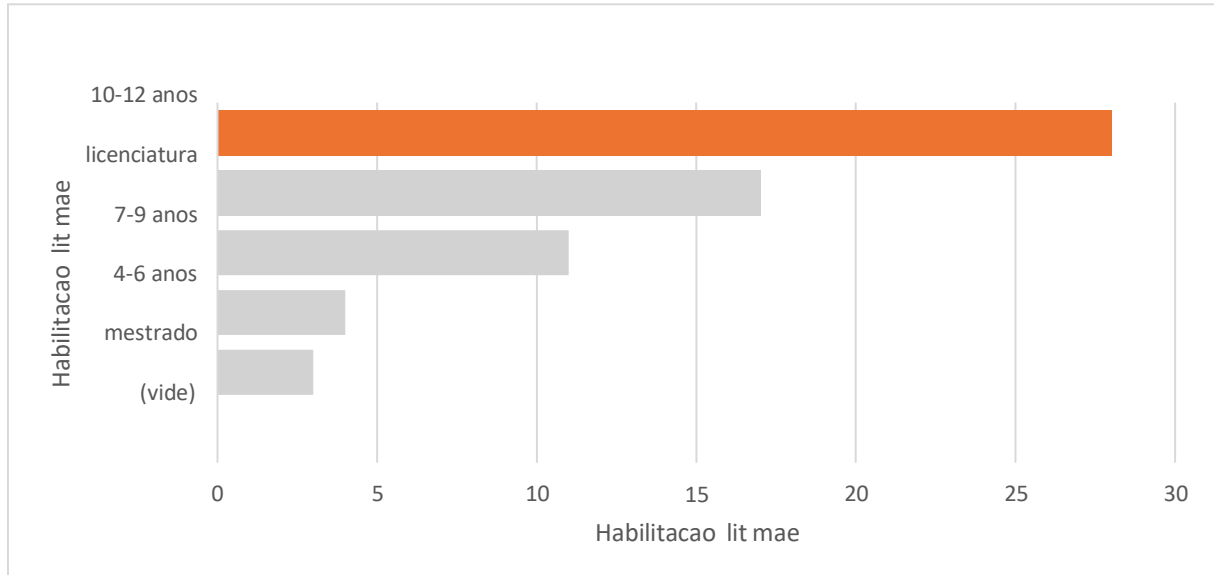
Father's literary qualification:



Graphic 4 : Distribution of fathers depending on their literary qualification

Here the table shows the level of father's literary qualifications. Most of them drop out of school between the seventh to twelfth grade. Twenty-one fathers for the first category and eighteen for the second one. Ten of them went to the fourth-sixth grade, nine of them made it to the license. The lowest values were: one person coursed a master, another one dropped out of school before reaching the fourth grade, and one did a bachelor. Three people didn't want to take part in this specific question of the survey.

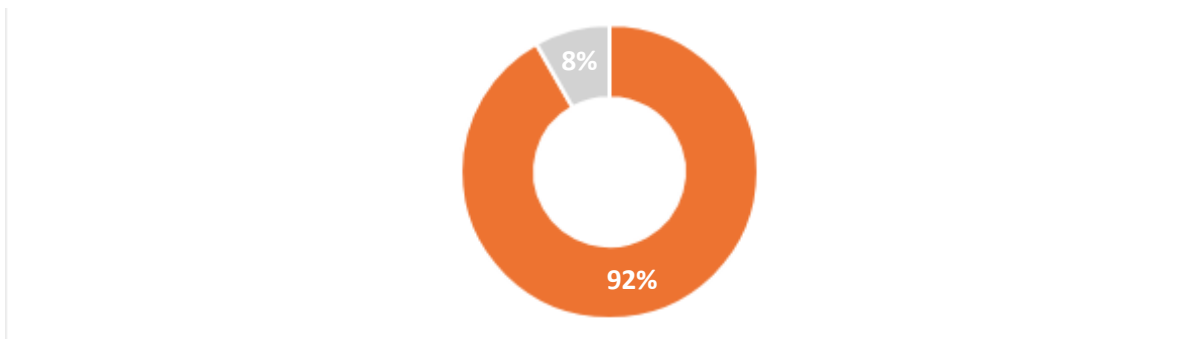
Mother's literary qualification:



Graphic 5 : Distribution of mothers depending on their literary qualification

Now for the mother's literary qualification, most of them were between three categories: twenty-eight females studied until the tenth-twelfth grade, seventeen made a license and eleven dropped out between the seventh and the ninth grade. Four people dropped out of school between the fourth to the sixth grade and three decided to obtain a master. One person didn't want to answer the quiz.

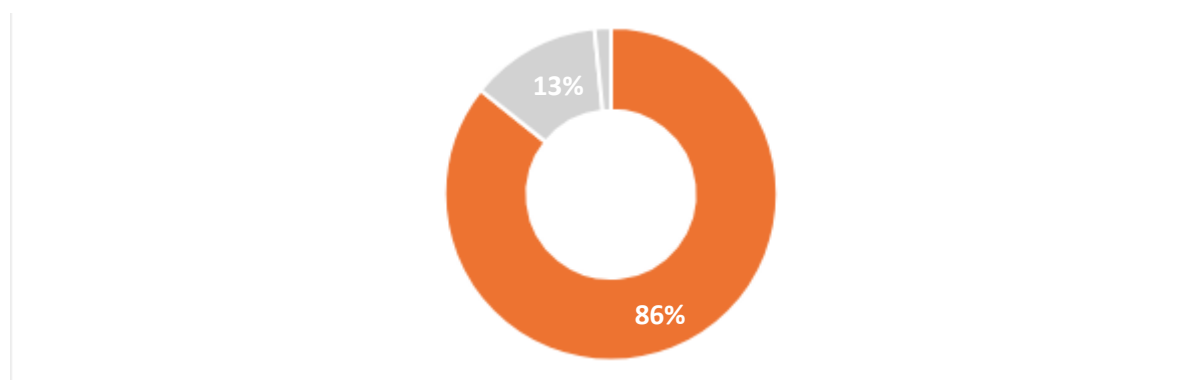
Father's professional situation:



Graphic 6 : Distribution of fathers depending on their professional situation

Most men were employed, fifty-six of them more precisely, five of them were unemployed and three didn't want to answer this question. The score was 92% and 8%.

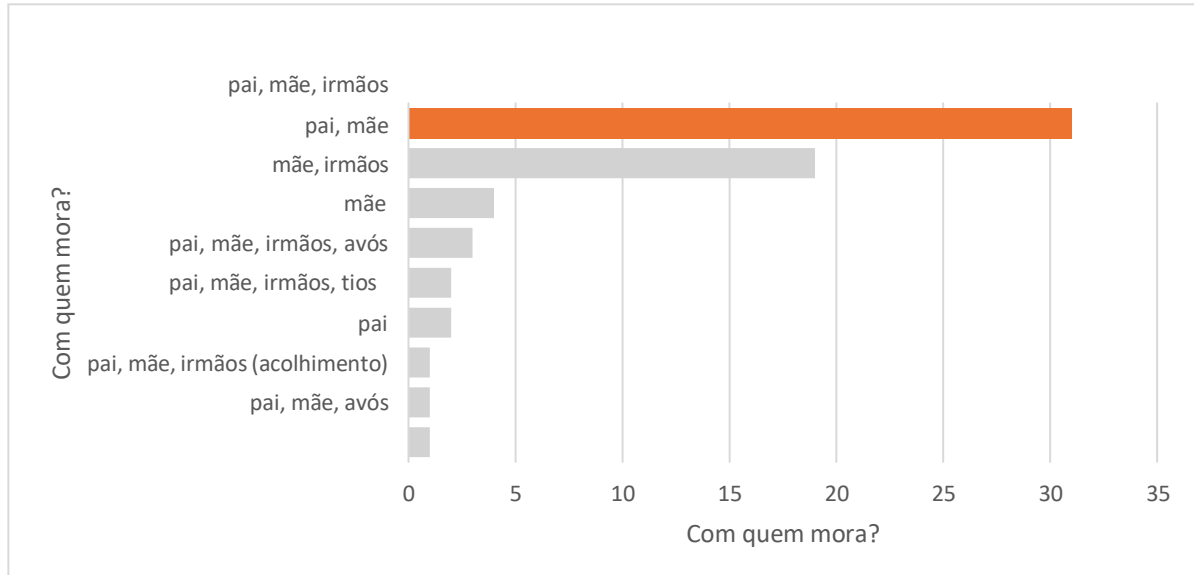
Mothers' professional situation:



Graphic 7 : Distribution of mothers depending on their professional situation

In the women's case, fifty-four of them were employed and eight were unemployed, there was also one student between them. One person didn't want to take part in answering this question. In this table the numbers were 86%, 13% and 2%.

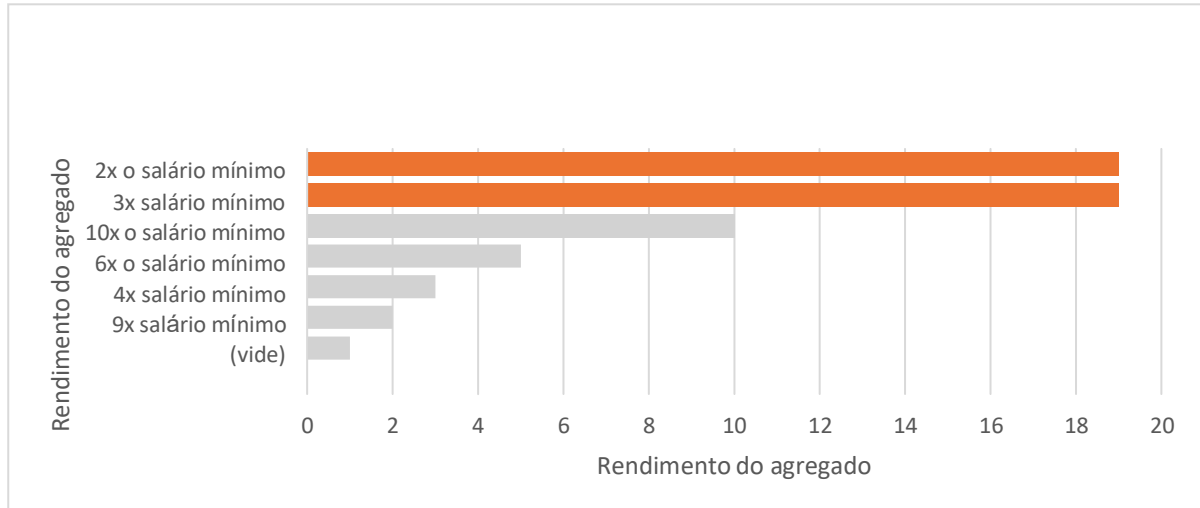
Housing, household:



Graphic 8 : Distribution of people in each household depending on with

Most houses were composed of the father, the mother, and the brothers thirty-one of them exactly. Eighteen households had the mother and the father. Four of them were single moms with other kids. Three were single moms. Two families with more than one child lived with uncles or grandparents. And finally, one single father, one host couple with kids and one couple who lived with the grandparents.

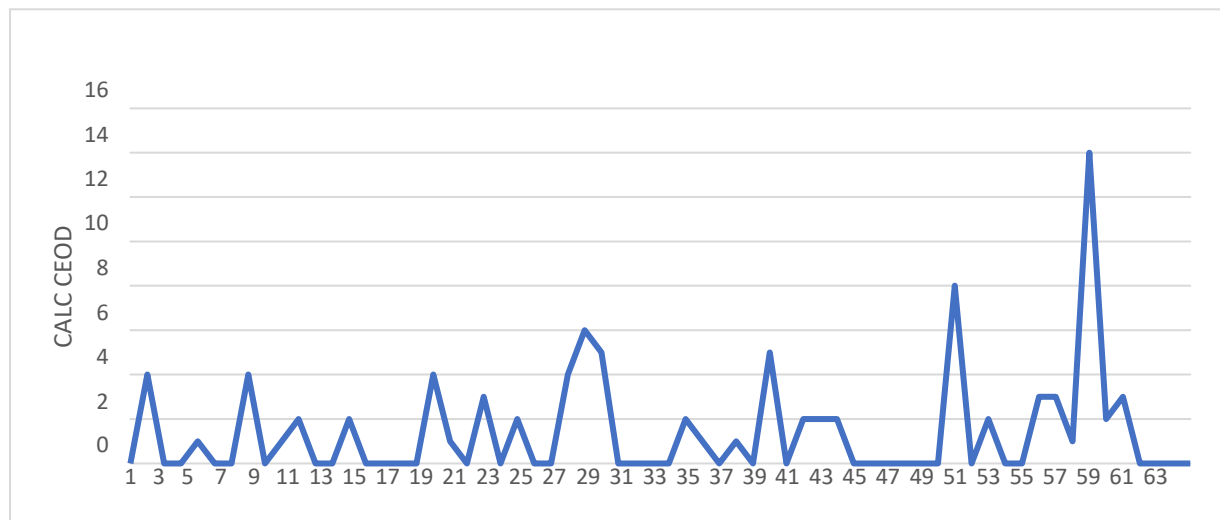
Household income:



Graphic 9 : Distribution of people depending on their household income

Nineteen people affirmed that their salaries were above two times the minimum wage and another nineteen the minimum wage. Ten of them said they achieved three times the minimum wage, five of them ten times more than the minimum wage, three of the sixty-four six times more, two of them four times and one said nine times. Five people didn't take part in this question.

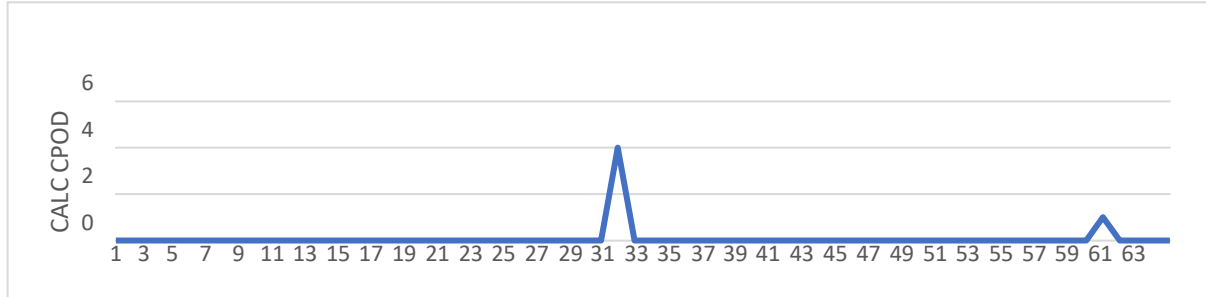
CEOD index:



Graphic 10 : Distribution of children depending of the results of the ceod

Globally seventy-one caries were found in the children participating on the survey. Two extractions were done on those children and nineteen obturations were verified. In total, the values fluctuated between zero to fourteen with an average of 1.4375. If the analysis is made individually, a person has a CEOD of fourteen, another of eight and another of six. Two people had a CEOD of five. Four children had four and three. Six had one. Nine had two and finally thirty-six had zero.

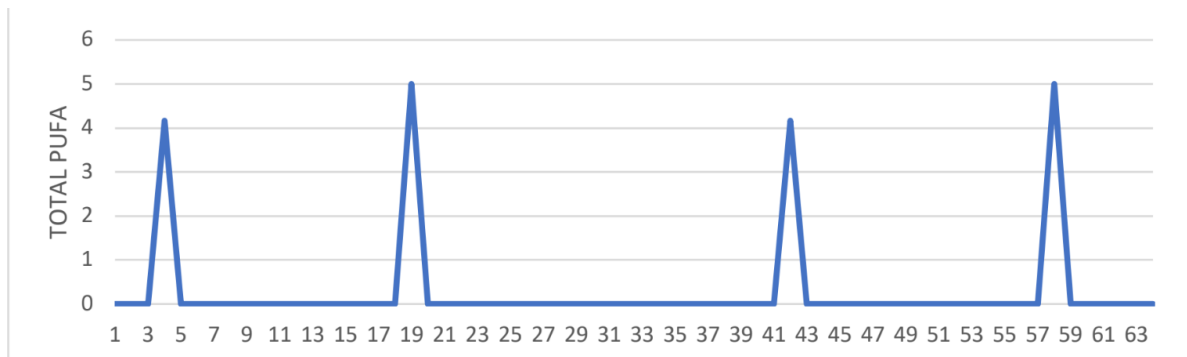
CPOD index:



Graphic 11 : Distribution of children depending of the calcul obtain by the cpod

Four caries were found out in a child and in another one, one obturation was confirmed. The remaining sixty-two children didn't have any problem at all. Overall, the result fluctuated between 0 to 4 with an average of 0.078.

Pufa index:



Graphic 12 : Distribution of children depending of the results of the pufa

PUFA records were of two people who had a score of five and two people who had a score of 4,16666667. The remaining sixty children had no problem found in them. Overall, the result fluctuated between 0 to 5 with an average of 0.28.

4. DISCUSSION

With regard to the methodology used to create this protocol, more specifically the fact that it follows the standards and guidelines imposed by the WHO, this was carried out in such a way that it is possible to guarantee the comparability of the data collected in a wide range of environments, in order to encourage the systematic exchange of data on oral diseases and conditions and to ensure that the data collected are reliable and comparable within and between countries, and, most relevant, to allow the visualization of the evolution of oral health in childhood.

The form used for data collection and evaluation was selected for its reliability and scientific validity, with the benefit that it is designed to be adaptable to a diverse number of situations. In this sense, the results obtained in the "DMF-T", "dmf-t" and PUFA are of striking relevance, since they allow us to understand the evolution of children's habits, but also to discover the level of the problems. In this way, it is relatively simpler to find methods for the formulation and evaluation of oral health programs, even though the form allows knowing the diagnosis of dental conditions and allows the professional to treat and advise those in charge of education about the care to be considered. Regarding the socioeconomic assessment questionnaire, this allows the practitioner to correlate the patients' dental status with their quality of life, and thus provide better advice and try to change the bad habits acquired by the patients.

Thanks to the questionnaires completed by patients for health professionals, we obtained the results that allow the diagnosis. These are central to the elaboration of the treatment plan for children and advising parents on the importance and technique necessary to obtain and maintain good oral hygiene is a common practice these days, exacerbated by the bad habits acquired by children, but it has been used with some frequency in the last 30 years. That said, the scientific validity of the procedure is well documented as studies to analyze the development of oral health over the years began in 1983. As stated earlier in this work there have been six major epidemiological studies on oral health in 1983, 1990, 1999 (INE), 1999, 2006 (DGS) and 2015 (OMD). Furthermore, several other smaller ones have been published in reviews. Analyzing these data reveals a significant improvement in the oral health of

Portuguese people over the past years. For example, by the age of 12, the percentage of children free of cavities has almost tripled (from 15% in 1983 to 44% in 2006). And at the age of 6 the numbers were higher 33% in 2000 against 51% in 2006. In addition, in 2006, 12-year-old children were identified having sealants in 55% of cases and the mean of sealants per individual was 3.61; also, moderate (2.2%) and severe (0.2%) levels of fluorosis were detected. (5) Fieldwork lasted until the end of 2014 and the results showed that the level of children until 6 years old free of cavities reached 54% with a cpod index of 1,65 and it is expected that in 2020 the score should be 59% with a cpod index of 1,35. Children under 12 years old obtained 53%, 9% less than in 2006. The fluorosis of children around 12 years old didn't change much from 2006 with 2,2% moderate 0,2% severe 4% soft 9,8% extremely soft 9% doubtful and 73,6% normal.(6)

Sixty-four children were included in this study, they were divided in two samples one represents the preschoolers the other the scholars. For the first one, the maximum age acceptable was five years old and eleven for the other. In those two samples, thirty-three children were included in the first one and thirty-one for the second. According to the results, families live mostly in villages then in the second category in cities and the last one in towns. Couples tend to get married or at least to stay together. Most of the fathers did drop out of school between the seventh to twelfth grade. For the mothers we can see that they tend to study more than men. Parents usually don't stay at home but go to work and their income was above two times the minimum wage and, in another category, the minimum wage. Most housing was composed of the father, the mother, and the brothers. To sum up these facts, for the upbringings of children, most families chose to live in the countryside and their income is average, parents tend

to stay married or live with their partner, it allows them to give a better educational concept of family, relationships, and behaviors.

Globally seventy-one caries were found in the children participating on the survey. Two extractions were done on those children and nineteen obturations were verified. In total, the values fluctuated between zero to fourteen with an average of 1.4375. Four caries were found out in a child and in another one, one obturation was confirmed. The remaining sixty-two children didn't have any problem at all. Overall, the result fluctuated between 0 to 5 with an average of 0.078. PUFA records were of two people who had a score of five and two people who had a score of 4,166666667. In general, the result fluctuated between 0 to 5 with an average of 0.28. More than half of the children had a normal BMI; the fluctuations could go from 8,96 to 41. To conclude the intraoral analysis, most of the parents worry about their children's health unfortunately due to personal reasons or complicated family situations, there is still an extremely slim minority that don't prioritize the health care of their progeniture and in the worst-case scenario the child is neglected.

To sum everything up, compared to the previous data, an upgrade can be verified unfortunately the results that were provided for the future were not attained. The limited oral figures for literacy and oral knowledge continue to be alarming. This theme includes the insufficiency of certain parameters such as: prevention, diagnosis, and compliance with educational mechanisms. (8) Alerting society and informing the tutors of oral health hygiene problems and solutions by using promotional strategies and innovative concepts that promote communication between practitioner and patient is the key to minimize the numbers of getting out of control. In this field, the role of parents, kindergarten teachers and dentists will be essential for strengthening the educational structure and instill a good oral and life hygiene (9) (10). As dental caries is considered the most prevalent pathology of the oral cavity, having a lack of oral health care, dental public health, and the persistence of dental caries are considered relevant problems especially among preschool and school-aged children, if assuming that the main objective is to eradicate or even eliminate its quantity. (1-3) This absence

of up-to-date epidemiological information hampers the development of adequate strategies to reduce the disease burden. These results support the point of view that the good structuring of oral health programs to support the country's preschool and school population is essential to combat the disease through the promotion of oral health. (11) (12) (13) Even though, most of the medical and dental treatment provided remains limited to the private sector, and the Portuguese national health system still does not respond effectively to the needs of the most disadvantaged communities, a significant improvement has been build up in this field and slowly but surely the number of children oral problem is being reduced. The degree of the risk at early ages turns out to be closely linked to the preventive behavior that the child will have in adulthood.

5. CONCLUSION

In conclusion, the prevalence of caries and pulpar involvement is low in the population studied.

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7. ANNEX

Annex I – Ethics Approval



Parecer sobre o projeto nº 30 (pedido de alteração)
Comissão de Ética para a Saúde da Universidade Católica Portuguesa
Mandato 2019/2023

<p>Projeto de Investigação Na reunião do dia 09 de fevereiro de 2023, a CES-UCP apreciou, do ponto de vista ético, os elementos submetidos, que configuram um pedido de alteração.</p> <p>Título: Avaliação do efeito de uma intervenção de educação para a saúde oral num a amostra de crianças</p> <p>Investigador principal: Prof. Doutor Nélio Veiga</p> <p>Equipa de investigação: Prof. Doutora Maria José Correia; Prof. Doutora Ana Sofia Duarte; Prof. Doutora Anna Mello-Mour; Dr. Adriano Moreira</p> <p>Novos elementos da Equipa: alunos do 5º ano de MIMD, Marcelo Loureiro e Marta Figueiredo (C/s anexados e alteração no formulário) Trata-se de um estudo realizado com fim de obtenção do grau de Mestre em Medicina Dentária, na Universidade Católica Portuguesa.</p> <p>Resumo: Trata-se de um pedido de alteração à equipa de investigação, traduzido na entrada de mais dois investigadores. Mantém-se o investigador principal e proponente do projeto, assim como todas as características do projeto. Tendo merecido parecer favorável da Comissão a 6/2/2020, mantém-se o sentido da proposta em relação a este pedido de alteração.</p>
<p>Estiveram presentes na reunião nº 46 da CES-UCP Presidente: Doutora Mara de Sousa Freitas Vice-Presidente: Doutora Teresa Marques Doutor Jerónimo Santos Trigo Doutor Pedro Garcia Marques Dr. Eugénio Fonseca Doutora Ana Mineiro Doutora Marta Brites Mestre Ivone Gaspar</p>
<p>Conclusão Ouvido o Relator, e o plenário da reunião do dia 09 de fevereiro de 2023, realizada por videoconferência, esta CES delibera, por unanimidade, a emissão de Parecer Favorável.</p> <p>Esta CES solicita ao Investigador Principal que, aquando da conclusão do estudo, lhe seja enviada um a síntese dos resultados obtidos e respetivas conclusões, via eletrónica, para o correio eletrónico da CES UCP.</p> <p>A Presidente,  Mara de Sousa Freitas 09/02/2023</p>

Annex II – Collaboration protocol between Universidade Católica Portuguesa and Associação Reencontro

PRÉMIOS BPI "LA CAIXA" INFÂNCIA 2019

Protocolo de colaboração

Este acordo de colaboração pretende especificar e clarificar os objetivos e os termos da parceria entre a Reencontro, associação social, educativa e cultural com sede na Rua das Escolas, n.º 4 e 6 sítio Vila Nova de Tazem com número de contribuinte 509 444 466, representada por Laura Maria da Rocha Oliveira Pinto da Costa, Presidente da Direção com número de contribuinte 185 462 456 e a Clínica Dentária Universitária da Universidade Católica Portuguesa (UCP) – Centro Regional de Viseu com sede na Estrada da Circunvalação, 3504-505, Viseu com número de contribuinte 513 798 714, representada pelo Diretor Clínico, Nélio Jorge Velga, no âmbito da candidatura da Reencontro aos prémios BPI "la Caixa" Infância 2019.

Considerando a complementaridade de finalidades e objetivos das duas entidades, nomeadamente, apoiar crianças e jovens em risco, contribuir para a promoção da saúde e bem-estar familiar e da comunidade em geral, atuando na prevenção precoce.

Considerando o trabalho desenvolvido pela Clínica Dentária Universitária da Universidade Católica Portuguesa (UCP) – Centro Regional de Viseu no apoio a crianças e jovens, a promoção da saúde oral das crianças.

É celebrado o presente Acordo de Colaboração entre as entidades

Resumo do projeto

O problema social que o Ser Criança pretende atender é o da exclusão social infantil, consequente da pobreza e outras formas de privação extrema enfrentadas pelas crianças e as suas famílias.

O facto de na infância uma criança se encontrar inserida num agregado familiar cujas vulnerabilidades estejam muito marcadas, dificulta significativamente o seu desenvolvimento integral. É extremamente importante começar a intervir nas crianças desde a sua primeira infância, de modo a potenciar a igualdade de oportunidades na sociedade e a estancar o processo de reprodução da exclusão social.

Segundo dados do Eurostat de 2017, o grupo etário onde se verifica uma maior incidência do risco de pobreza ou de exclusão social é o das crianças e jovens com menos de 18 anos (24,2%), pelo que se torna importantíssimo proporcionar e facilitar o livre acesso das crianças e das suas famílias a serviços de saúde e de educação não-formal de qualidade que potenciem o seu desenvolvimento pleno em todas as vertentes.

Neste sentido pretende-se:

1. Promover a construção de uma solução-modelo para o problema da exclusão social infantil, passível de fácil escalabilidade e institucionalização, que atua nas suas causas, através da prevenção, do diagnóstico e da intervenção precoce nas condições das crianças que potenciam situações de pobreza e outras formas de privação.
2. Dinamizar colaborações estratégicas, que possibilitam a redução de custos e o aumento da eficiência da solução, pela afetação, livre de encargos, e rentabilização máxima dos recursos internos e externos à Reencontro. Além de garantir a sustentabilidade da solução proposta, isto também aumentará a visibilidade e a capacidade de atração de novos stakeholders e/ou colaboradores, aumentando a probabilidade de alocação de novos recursos.
3. Construir um guia teórico-prático, para posterior envio a entidades (públicas e privadas) que atuam no mesmo âmbito, com o objetivo de aumentar a facilidade e probabilidade de replicação da solução noutras locais.



4. Realizar uma abordagem sistémica e multidisciplinar, envolvendo vários parceiros das áreas da saúde, educação e social, capacitando pais e outros técnicos no que diz respeito ao desenvolvimento Infantil saudável e harmonioso.

A razão desta candidatura da Reencontro aos prémios BPI "la Caixa" Infância, prende-se com a intenção de obter o financiamento necessário para desenvolver e Implementar um trabalho em rede entre vários parceiros que:

1. Promover uma maior articulação entre os serviços de saúde e os serviços de apoio social, nomeadamente IPSS's.
2. Promover e valorizar a educação formal e não formal, criando respostas sociais qualificantes.

Assim, com intuito de dinamizar o Ser Criança em todo o concelho de Gouveia, a Reencontro pretende concretizar um Plano de Investimento de quarenta quatro mil trezentos e oitenta e um euros (44.381,00€). Pretende-se:

1. Desenvolver competências nas crianças para assegurar a sua Inclusão social.
2. Desenvolver competências parentais, capacitando as famílias para a promoção do desenvolvimento infantil.
3. Apresentar uma solução Inovadora e replicável para a exclusão social Infantil focada nas suas causas, através da prevenção, diagnóstico e intervenção precoce nas crianças.
4. Maximizar a rentabilização das parcerias e dos recursos humanos e materiais, para reduzir custos e garantir a sustentabilidade.

O Plano de Investimentos acima apresentada irá ser coberto na sua totalidade com recurso ao financiamento obtido no âmbito dos Prémios BPI "la Caixa" Infância no valor trinta e nove mil

novecentos e quarenta e três euros (39.943€) e a fundos próprios no valor de quatro mil quatrocentos e trinta e oito euros (4.438€).

Objeto

A parceria realizada com a Clínica Dentária Universitária da Universidade Católica Portuguesa (UCP) – Centro Regional de Viseu tem como objetivo ajudar o processo de melhoria da qualidade e da eficiência dos serviços prestados pela Reencontro, nomeadamente no domínio da saúde oral, promovendo a:

- a) Disponibilização de recursos humanos especializados (médicos dentistas e auxiliares) e dos equipamentos/materiais necessários para fazer o diagnóstico da saúde oral das crianças;
- b) Realizar eventuais tratamentos para problemas encontrados.

Cláusulas

Os termos da parceria em matéria das obrigações de cada uma das partes serão os seguintes:

1. A Reencontro, enquanto coordenador do Ser Criança, compromete-se a:

- a) Proporcionar o acesso, em termos geográficos e económicos, das crianças do concelho de Gouveia até aos 8 anos de idade, inclusive, a serviços de saúde e de educação não-formal (ENF) de qualidade, desde a sua primeira infância, através duma intervenção livre de encargos para os beneficiários e realizada localmente.
- b) Responsabilizar-se pela implementação e operacionalização deste projeto;
- c) Divulgar o projeto junto do público alvo;
- d) Fomentar parcerias;
- e) Promover reuniões com a Universidade Católica Portuguesa (UCP) – Centro Regional de Viseu com o objetivo de acompanhamento e monitorização do trabalho desenvolvido no âmbito do projeto.

2. A Universidade Católica Portuguesa (UCP) – Centro Regional de Viseu, enquanto parceiro deste projeto, compromete-se a:

- a) Afetar recursos humanos/materiais que apoiam o processo de diagnóstico/intervenção médica na promoção da saúde oral;
- b) Participar nas reuniões de monitorização do trabalho desenvolvido no âmbito deste projeto, promovidas pela Reencontro;

Operacionalização

No que se refere ao Instituto de Ciências da Saúde- Viseu, a UCP

- promoção de saúde oral, através da plataforma PROHealth
- motivação das crianças para aprendizagens em áreas científicas, potenciando assim o seu desempenho nestas áreas, através da plataforma SalivaTec

Plataforma PROHealth

A necessidade de cuidados de saúde oral e persistência das doenças orais nas nossas populações ainda é uma realidade importante e é, cada vez mais, considerado como sendo um relevante problema de saúde pública. A maioria dos tratamentos médico-dentários prestados continua a ser ao nível do setor privado, não havendo ainda uma resposta eficiente às necessidades das comunidades mais desfavorecidas a nível sócio-económico por parte do sistema nacional de saúde de Portugal.

A plataforma PRO Health do ICS-Viseu, propõe-se a colaborar neste projeto através de três valências:

1. Avaliação Intra-oral e recolha de dados referentes ao estado de saúde oral dos participantes, bem como, dos fatores de risco relacionados com as doenças orais;
2. Promoção e educação de saúde oral, tendo como foco principal a realização de uma correta higiene oral diária pelos participantes;
3. Realização de tratamentos médico-dentários aos participantes na Clínica Dentária Universitária da UCP (mediante financiamento), tendo como base tratamentos de prevenção primária e secundária (restaurações dentárias, endodontias e extrações, mediante os planos de tratamento definidos).

Pretendemos com a realização destas atividades conhecer a prevalência de doenças orais e outras variáveis que podem influenciar o estado de saúde e a qualidade-de-vida dos participantes. Paralelamente a esta componente, um dos principais objetivos do presente projeto/colaboração passa pela realização de intervenções médico-dentárias na comunidade por médicos dentistas docentes e discentes do Instituto de Ciências da Saúde da Universidade Católica Portuguesa, contribuindo para a melhoria deste grupo de risco específico.

Plataforma SalivaTec

A aprendizagem e literacia nas ciências experimentais é fundamental não apenas para o desempenho académico das crianças para também para um exercício de cidadania esclarecida e responsável. O SalivaTec inclui na sua missão a comunicação de ciência para públicos diversos bem como o desenvolvimento de estratégias e instrumentos para a aprendizagem das ciências experimentais que visam motivar crianças e adolescentes para a aprendizagem e desenvolvimento de trabalho nestas áreas do saber. O SalivaTec pode desenvolver com as crianças envolvidas neste projeto, atividades promotoras de aprendizagens nas ciências experimentais e junto de outros intervenientes (como cuidadores por exemplo) promover a literacia em várias áreas científicas.

Annex V – Socioeconomical questionnaire

Questionário socioeconómico

Escola:	Nome do responsável:	Nome da Criança:																					
CARACTERIZAÇÃO																							
<p>1 - Género da criança</p> <p><input type="checkbox"/> Masculino;</p> <p><input type="checkbox"/> Feminino.</p> <p>2 - Idade: ____ Anos</p> <p>3 - Atualmente, quanto pesa o seu filho(a)? kg</p> <p>4 - Atualmente, quanto mede o seu filho(a)? cm</p> <p>5 - Onde reside a criança?</p> <p><input type="checkbox"/> Aldeia;</p> <p><input type="checkbox"/> Vila;</p> <p><input type="checkbox"/> Cidade.</p> <p>6 - Qual o estado civil dos pais?</p> <p><input type="checkbox"/> Solteiros;</p> <p><input type="checkbox"/> Casados;</p> <p><input type="checkbox"/> Juntos;</p> <p><input type="checkbox"/> Divorciados;</p> <p><input type="checkbox"/> Viúvos(as).</p> <p>7 - Quais as habilitações literárias dos pais? (Assinale a mais elevada.)</p> <table border="1"> <thead> <tr> <th></th> <th>Pal</th> <th>Mãe</th> </tr> </thead> <tbody> <tr> <td>< 4 anos</td> <td></td> <td></td> </tr> <tr> <td>4 – 6 anos</td> <td></td> <td></td> </tr> <tr> <td>7 – 9 anos</td> <td></td> <td></td> </tr> <tr> <td>10 – 12 anos</td> <td></td> <td></td> </tr> <tr> <td>Bacharelato</td> <td></td> <td></td> </tr> <tr> <td>Licenciatura</td> <td></td> <td></td> </tr> </tbody> </table>				Pal	Mãe	< 4 anos			4 – 6 anos			7 – 9 anos			10 – 12 anos			Bacharelato			Licenciatura		
	Pal	Mãe																					
< 4 anos																							
4 – 6 anos																							
7 – 9 anos																							
10 – 12 anos																							
Bacharelato																							
Licenciatura																							



"Ser Criança"- Prevalência de Cárie e relação com a qualidade de vida relacionada à saúde bucal

Mestrado		
Doutoramento		

9 - Qual a situação profissional dos pais?

	Pai	Mãe
Empregado	<input type="checkbox"/>	<input type="checkbox"/>
Desempregado	<input type="checkbox"/>	<input type="checkbox"/>
Aposentado	<input type="checkbox"/>	<input type="checkbox"/>

10 - Com quem mora a criança? (Pode assinalar várias opções.)

- Pai;
- Mãe;
- Irmãos;
- Tios;
- Avós;
- Primos;
- Outros. Quem? _____

11 - Qual dos seguintes valores melhor representa o total de rendimentos em sua casa nos últimos 12 meses?

De até salário mínimo	
Duas vezes o salário mínimo	
Três vezes o salário mínimo	
Quatro vezes o salário mínimo	
Cinco vezes o salário mínimo	
Seis vezes o salário mínimo	
Sete vezes o salário mínimo	
Oito vezes o salário mínimo	
Nove vezes salário mínimo	
Dez vezes ou mais o salário mínimo	

Membros do Júri das Provas Públicas

Presidente: Professora Doutora Maria José Correia
Professora Auxiliar- FDMUCP-Viseu

Arguente: Profa Doutora Tatiane Novaes
Professora Auxiliar da Universidade Cruzeiro do Sul-São Paulo

Orientador: Professor Doutor Nelio Veiga
Professor Auxiliar – FDMUCP-Viseu

Data das provas públicas: 22/ 07 / 2024

Validação e confirmação pelos serviços escolares:

___ / ___ / ___