

I. ABSTRACT

Introduction/Objective:

The objective of this preliminary study is to determine and evaluate whether there is an association between the caregiver's oral health literacy (OHL) and the oral health status (OHS) of their child (children).

Subjects/Materials and Methods:

This preliminary cross-sectional study's inclusion criteria includes caregivers seeking treatment for their children (≤ 8 -years old) at a community dental office. The caregivers did have a cognitive, visual, or hearing impairment. Eligible individuals for this study must have a limited understanding of English, and must be able to verbally communicate. Excluded individuals are any children and any adults with a self-reported cognitive, visual, or hearing impairment, or have no understanding of English. A convenience sample of 150 caregiver-child dyads presenting at the office were recruited, where they provided written consent along with a Health Insurance Portability Act Waiver to participate. We then utilized the Research Electronic Data Capture (REDCap) application for OHL instrument data collection; and the patient's electronic health record for (EHR) for OHS.

Correlation coefficients were calculated between each pair of continuous variables, such as decayed teeth, missing teeth due to caries, and filled tooth surfaces (dmfs) and the Rapid Estimate of Adult Literacy in Medicine and Dentistry (REALMD-20) score.

Results/Discussion:

In this study, we administered the REALMD-20, a screening instrument, to 150 patients and analyzed the results. Based on the results from the preliminary study we have not found an association between the REALMD-20 screening scores and the child's caries experience as measured by dmfs/dmft. The results showed that mean REALMD-20 score is 18.09 and standard deviation of 1.55. We will continue this study by analyzing different data collected, and screening caregiver-child dyads to further determine an association.

III. MATERIALS AND METHODS

1. Study Population:

Caregivers seeking treatment for children aged 8 years or younger at a community dental office. The sample size is 150 caregiver-child pairs.

2. Inclusion Criteria:

Eligible individuals are caregivers without cognitive, visual, or hearing impairments.

3. Exclusion Criteria:

The study excluded adults and children self-reporting cognitive, visual, or hearing impairments. Individuals were excluded from the study sample if there is a lack of English proficiency.

4. Recruitment Method & Consent:

This study included convenience sampling among the patients of the dental office. Written consent and Health Insurance Portability and Accountability Act (HIPAA) waiver was obtained from each participant of the study.

5. Data Collection:

Our researching utilized the Research Electronic Data Capture (REDCap) application to assess the Caregiver's OHL using the Rapid Estimate of Adult Literacy in Medicine and Dentistry (REALMD-20). Extraction of relevant information regarding decayed teeth, missing teeth due to caries, and filled tooth surfaces (dmft/dmfs) from Electronic Health Records (EHR) for Oral Health Status (OHS)

6. Analysis:

There was computation of correlation coefficients. We performed a relationship analysis between decayed teeth, missing teeth due to caries, filled tooth surfaces, and scores from the Rapid Estimate of Adult Literacy in Medicine and Dentistry (REALMD-20) assessment.

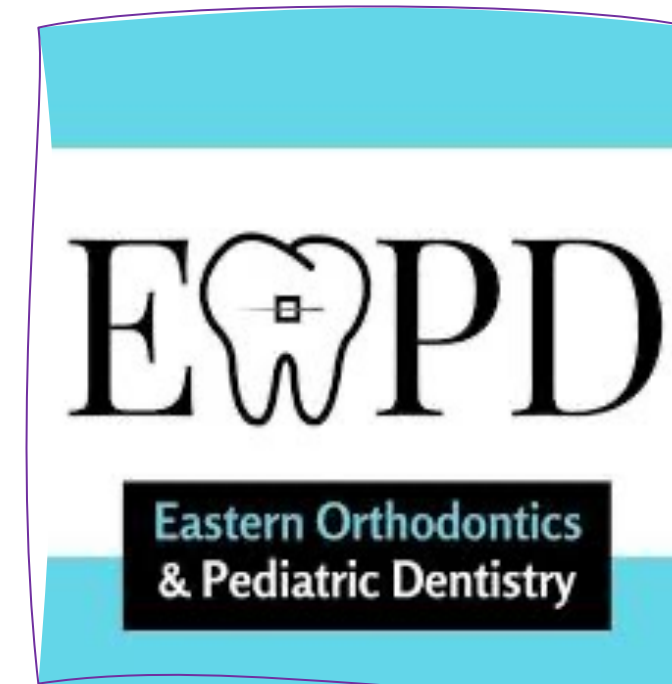


Table 1

REALMD-20 score	Literacy Level
0-5	3rd grade or below equivalent
6-13	4th-6th grade
14-18	7th-8th grade
19-20	high school or more

IV. RESULTS

Figure 1.1

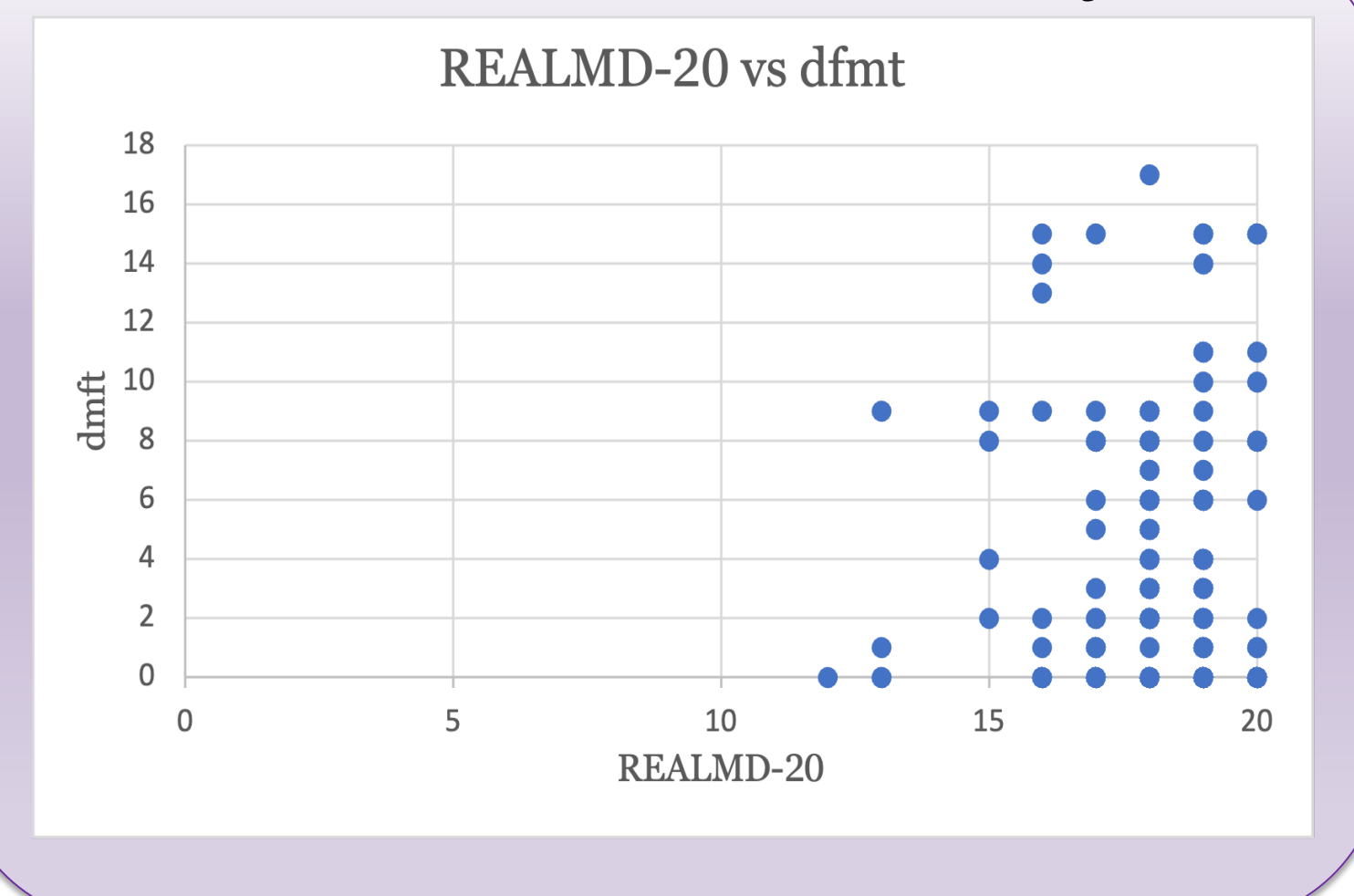


Figure 1.2

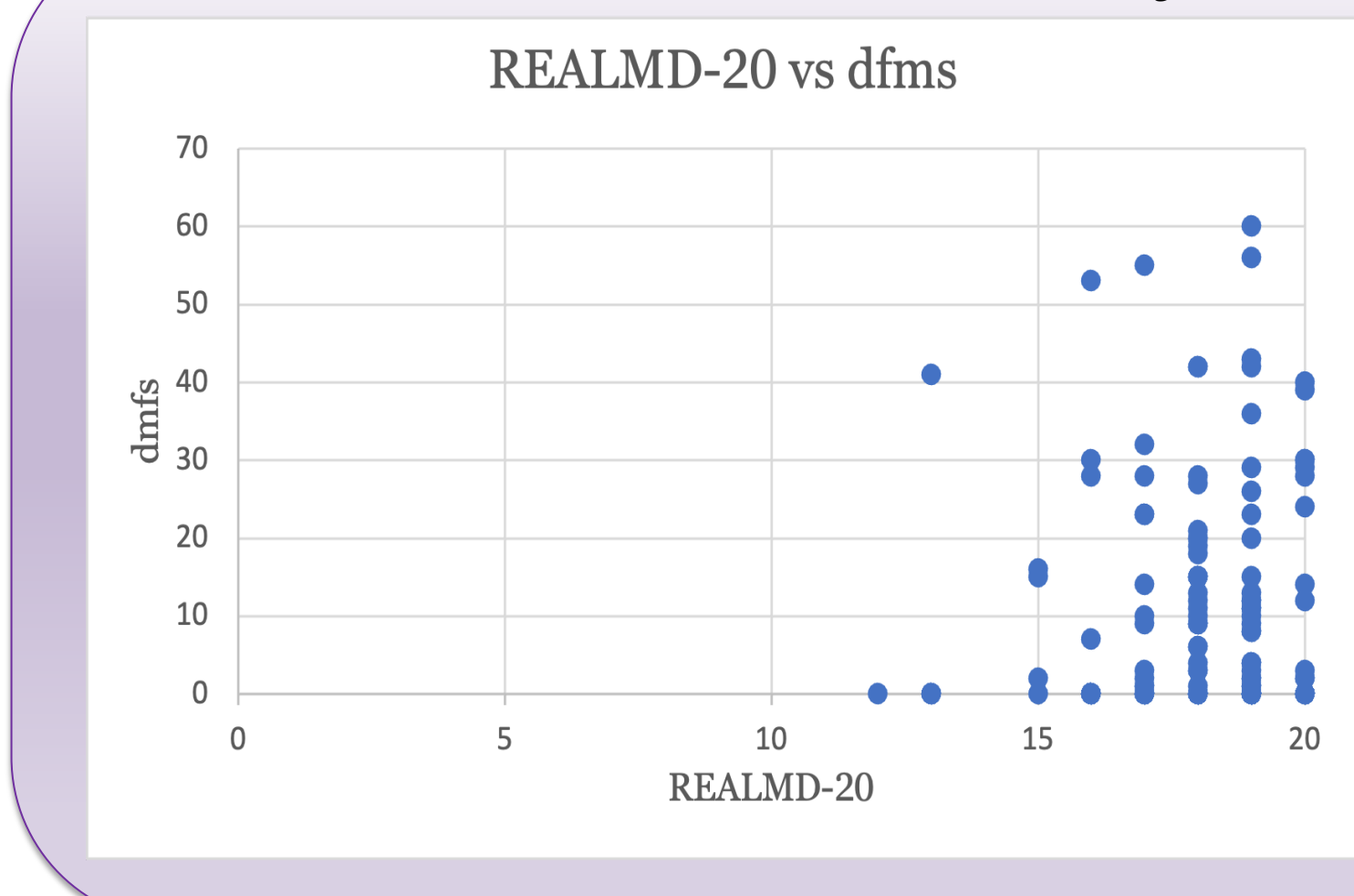
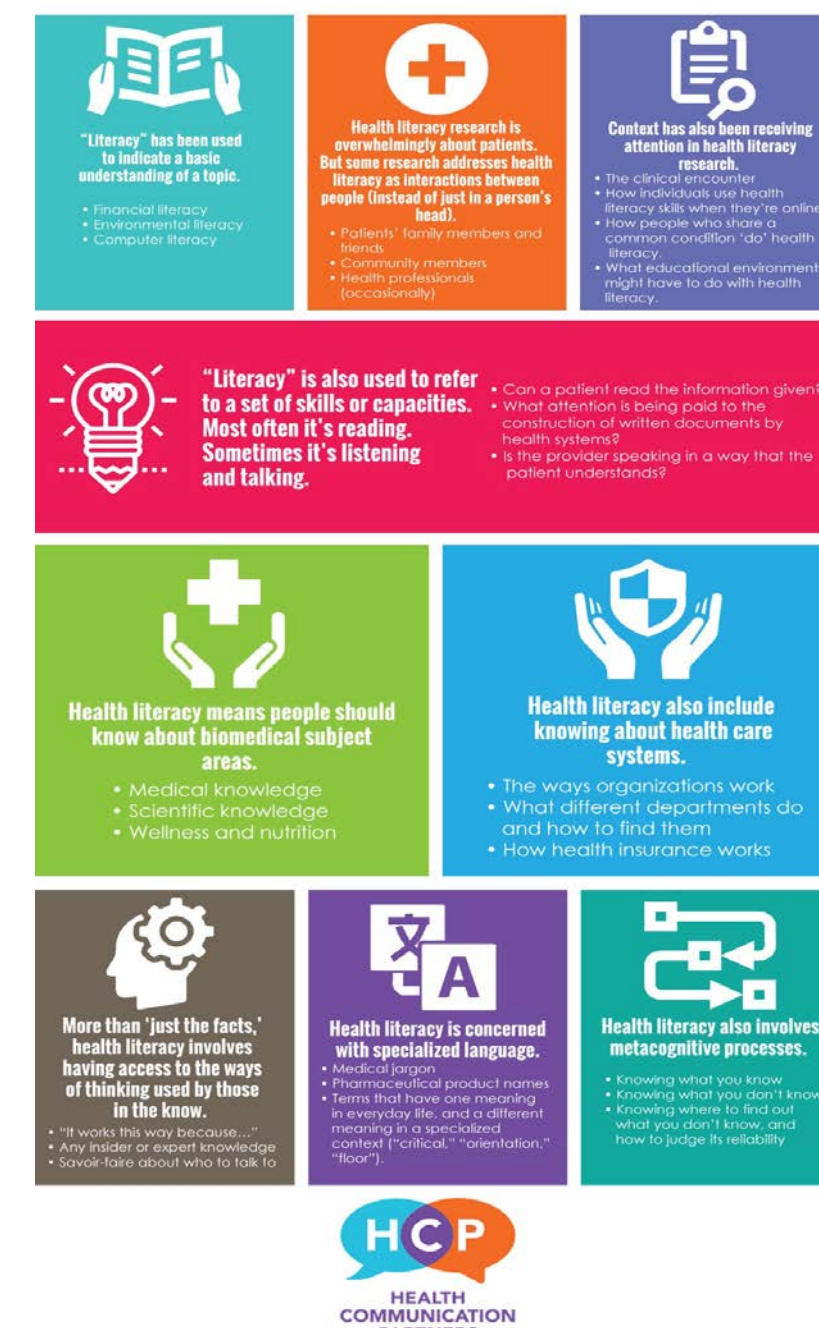


Figure 2

Score	Literacy Level
0-5	3rd grade or below equivalent
6-13	4th-6th grade
14-18	7th-8th grade
19-20	high school or more

II. INTRODUCTION

A QUICK BREAKDOWN OF SOME HEALTH LITERACY BASICS



Graphic 1

- A basic level of oral health literacy (OHL) may play an important role in contributing to long-term positive oral health outcomes.
- Oral health literacy is defined as the capacity to obtain, process, and understand basic oral health information is critical for patient to effectively initiate and maintain access to care.
- It has been proposed that low OHL is a barrier to optimal patient care with potentially less than ideal outcomes as a result.
- Findings from this preliminary study are expected to provide important information about the association between the caregiver's OHL and the children's OHS. With this information we can advocate, create, and implement community pediatric public health initiatives.

V. RESULTS CONTINUED

- In this stage of our research we have sampled 150 caregiver/child pairs, in which we have received consents and surveyed using the REALMD-20.
- With the data we have collected thus far in the process, we have compared the results of the REALMD-20 and the dmfs/dmft.
- We ran a Pearson Correlation analysis, which has shown that there is no correlation between the REALMD-20 and carries count.
- Tables 1.1 and 1.2 illustrate the comparison between the REALMD-20 and the dmft/dmfs.
- The results from the data we have collected revealed that in this private practice convenience sample the mean score of the REALMD-20 is 18.09 and the standard deviation (SD) is 1.55.

VII. REFERENCES

- Liebel, A. M. (2018, July 27). Infographic: Some health literacy basics. Retrieved July 24, 2024, from Health Communication Partners website: <https://healthcommunicationpartners.com/infographic-health-literacy-basics/>

VIII. ACKNOWLEDGEMENTS

- Dr. VW McCarlie Jr and research team
- Eastern Orthodontic and Pediatric Dentistry Office

VI. DISCUSSION

The aim of this preliminary study is to determine whether or not there is an association between the REALMD-20 screening scores and the child's caries experience as measured by dmfs/dmft.

In this study we have 150 participants, in which we have analyzed the data collected from these individuals. We analyzed the data by running a Pearson-Correlation test, which gave us preliminary results. These results showed that there was no association between the REALMD-20 scores and the dmft/dmfs scores; and that the mean of the REALMD-20 scores is 18.09 and SD is 1.55. While the REALMD-20 scores are on the higher end of the spectrum, the data still shows that over 50% of the sample have a seventh-grade literacy level or above.

During this preliminary study we also collected information on oral health, caries risk, gingivitis levels, calculus levels, and plaque levels. We will further analyze this data with the hopes of gaining more insight on the OHS of the patients. In future studies we will potentially utilize more comprehensive OHL instruments to further analyze the association between the REALMD-20 and caries experience.

The REALMD-20 is a validated instrument used for screening OHL; but it is important to note that it is not a comprehensive instrument capturing OHL. Knowing that the REALMD-20 does not capture OHL comprehensively, it is important to continue research in this field. Further research within the field of oral health literacy is imperative because it can facilitate programs in which the public health system provides dental offices with materials for the caregiver-child dyad to comprehend oral health. Educational programs will likely increase childhood OHS, where children can grow to have good oral habits and eventually become parents who have increased OHL and understand the necessity of favorable oral health over a lifetime. These types of programs could then have a continuous cycle of benefits for the patient population.