CONGRESS PROCEEDING

Evaluation Of Oral Health Literacy Of Pregnant Women

Gönül Yeter * and Fatih Şengül

Department of Pedodontics, Ataturk University, Faculty of Dentistry, Erzurum, TURKEY

*Corresponding Author; gnlim@hotmail.com

Abstract

Oral health literacy is the capacity of individuals to receive and understand the health information and services necessary to make appropriate oral health decisions. Low oral health literacy is associated with insufficient oral health knowledge and behaviors. The aim of our study was to assess the level of oral health literacy of pregnant women and their ability to recognize words on the Turkish version of Rapid Estimate of Adult Literacy in Dentistry (TREALD-30) scale, as well as their knowledge of the meaning of words. 300 pregnant women between the ages of 18-45 who were admitted to the Obstetrics and Gynecology outpatient clinic of Ataturk University Faculty of Medicine participated in our study. The TREALD-30 scale, consisting of 30 words, determines the ability to read dental words. Participants received 1 point for each correctly read word in TREALD 30. A total of 0-30 points were scored. In addition, the word scores that participants knew the meaning of were evaluated under the heading TREALD-30-M. Analysis of the collected data was carried out in SPSS v26 program. The average age of the participants was 31.2 years and the average educational status was 13 years. It was found that 31% of participants had their first pregnancy. 66.7% of respondents were housewives and 9.7% were health workers. The number of words that can only be read was determined as 29 ± 2, the number of those that can be read by knowing their meaning was 17 ± 4, and the number of those that cannot be read was determined as 3 ± 6 words. As the level of education increased, oral health literacy increased ($p<0.001$). Health workers showed higher TREALD-30 and TREALD-30-M scores compared to housewives ($p<0.001$). In order to increase the level of oral health literacy of expectant mothers, health improvement programs are required.

Key words: Oral health literacy; pregnant women; TREALD-30

Introduction

Health literacy is the degree to which people have the capacity to acquire and understand the health information and services necessary to make appropriate health decisions.[1] Pregnant women with high levels of health literacy are reported to have better behaviors and views on iron and folic acid use, weight gain during pregnancy, and breastfeeding.[2] Therefore, the high level of health literacy of pregnant women is important for the health of both their own and their babies, as it makes it easier to access and interpret accurate health-related information in the prenatal period. Oral health literacy is defined as "The capacity of individuals to receive and understand the health information and services necessary to make appropriate oral health decisions".[3] It is noted that low oral health literacy is associated with negative consequences such as poor oral health, insufficient oral health knowledge and behavior.[4] The fact that health literacy affects the ability to understand and use health information may suggest that oral health literacy also affects the ability to understand and use oral health-related information. In order to measure oral health literacy, various tests have been developed in the form of word recognition, conceptual knowledge and reading comprehension.[5] The aim of our study is to determine the level of oral health literacy of pregnant women and to evaluate both the pronunciation and knowledge of the meaning of words on the Rapid Estimate of Adult Literacy in Dentistry (REALD-30) scale.

Methods

300 pregnant women between the ages of 18-45 who were admitted to the Obstetrics and Gynecology outpatient clinic of Ataturk University Faculty of Medicine participated in our study. The ethics committee approval of our study was obtained from the Clinical Research Ethics Committee of the Ataturk University Faculty of Medicine with the letter "Meeting Number: 02 / Decision No: 10". REALD-30 quickly and easily assesses the ability to read common dental words correctly. The validity and reliability of the Turkish version of the REALD-30 was studied by Peker et al. in 2017 under the name TREALD-30.[6] This word recognition test contains commonly used 30 dental words. Participants were given a copy of the TREALD-30 and told to read each word aloud. When participants were unable to read a word, they were asked to say "pass"

and move on to the next word. After 1 point was given for each correctly pronounced word, a total of 0-30 points were scored. It was also questioned whether participants knew the meaning of the words. On the oral health literacy scale, word scores known for meaning were also evaluated with the same scoring under the heading TREALD-30-M. The data obtained were analyzed in SPSS v26 program. Descriptive statistics are presented as percentage, average and standard deviation. The suitability of numerical variables for normal distribution was investigated by the Kolmogorov Smirnov test. One-way analysis of variance was used in cross-group comparisons of normal distributed numerical variables. The level of statistical significance was accepted as $p<0.05$.

Conclusion

A total of 300 pregnant women were evaluated. The average age of the participants was 31.2 ± 5.1 years and the average educational status was 13 ± 4 years. 66.7% of respondents were housewives and 9.7% were health workers. The majority of respondents (79.3%) stated that they had a middle income. 31% of participants had their first pregnancy and 38.7% had at least 2 children. The distribution of reading and knowing the meaning of the words used in the TREALD-30 scale is given in Figure 1. Of the 30 words on the TREALD-30 scale, the number of words that participants could only read was 29 ± 2, while the number of words that they could read by knowing the meaning was 17 ± 4 and the number that they could not read was 3 ± 6 words. While the words sugar, smoking, brush, and caries could be read correctly by all, participants were found to have difficulty reading temporomandibular, malocclusion, halitosis, analgesia, bruxism, and periodontal. Less than 15% of participants were able to read the words halitosis, apical resection, malocclusion, temporomandibular, bruxism, hypoplasia, pulp and hyperemia knowing their meaning. When evaluated according to age groups, TREALD-30 and TREALD-30-M scores of participants older than 35 years were found to be higher than those of other age groups ($p<0.001$). It was found that participants who graduated from primary and secondary school had the lowest TREALD-30 scores ($p<0.001$). In terms of the TREALD-30-M score, a statistically significant difference was found between all education levels ($p<0.001$). While the TREALD-30 scores of housewife participants showed a statistically significantly lower score ($p=0.001$), the TREALD-30-M scores were different in all occupational groups ($p<0.001$). High-income participants had higher TREALD-30 and TREALD-30-M scores ($p<0.001$).

Discussion

Women often use health services and are open to learning health-related information during pregnancy period. An attempt to increase the level of health literacy, which indicates the ability to understand and use health information, in pregnant women, plays an important role in protecting both the mother's own health and the health of family members.[7] In order to give their children oral hygiene habits, mothers must have good knowledge of oral health and have sufficient level of oral health literacy to understand and use this information.[8] Although the TREALD-30 scale, which we use to measure oral health literacy, is short and easy to implement, it only measures pronunciation and does not evaluate meaning. Since word pronunciation can be performed by most people with a certain level of literacy skills, it was thought that knowing the meaning of words on the scale would give more detailed information about the level of oral and dental health information. For this reason, in addition to the word pronunciation test in our study, whether participants knew the meaning of the words they read was also questioned under the heading TREALD-30-M. In our study, the average reading of words on the TREALD-30 scale by participants

was 29 ± 2 words, while the number of words read by knowing the meaning was 17 ± 4. In a study conducted in the United States, the average reading of words was 23 ± 5.1 and the average knowing of their meaning was 16 ± 4.3.[9] Similar to the participants of this study, all participants in our study had difficulty reading the word temporomandibular while being able to read the words sugar, cigarette, brush and caries correctly. Again, similar to this study, most participants did not know the meaning of the "bruxism, hypoplasia, temporomandibular and apical resection". When the words were examined, it was found that most of the words that were difficult to read passed from a foreign language to our language, so they did not follow the rules of Turkish grammar. Furthermore, it is thought that the words whose meaning is unknown do not have any connotations to the participants, as they are not of Turkish origin. Participants' high level of knowledge about the meaning of the words "fluoride, plaque and enamel" may have been due to the impact of toothpaste ads. In order to increase the level of oral health literacy, instead of Latin words, the use of words that can be easily understood and adopted by the community recommended by the Turkish language institution can be popularized. When the scale results were evaluated although the reading rate of most words was very high, the level of knowledge of their meaning was quite low. This has been interpreted as the TREALD-30 scale being not selective in measuring oral health literacy compared to TREALD-30-M. It was determined that the longer the participants received training, the higher their oral health literacy scores. Similarly, the results from different studies conducted in the United States and Brazil support our findings.[8-10] It is believed that the high TREALD-30 and TREALD-30-M scores of health workers compared to housewife participants are due to the fact that health workers know the meaning of dental words on the scale thanks to their profession. Studies have shown that low-income individuals exhibit a lower REALD-30 score.[8,10] Similarly, in our study, it was found that TREALD-30 and TREALD-30-M scores increased as income levels increased. No significant association was found between the number of children and TREALD-30 scores of participants. People's knowledge, motivation and competence in accessing, understanding, evaluating and applying health information to maintain or improve their quality of life is also effective in making appropriate oral health decisions. Oral health in pregnant women is important, as it can affect not only the expectant mother, but also the future of the child. In order to increase the level of oral health literacy of mothers and expectant mothers, it is important that the education and health system work in cooperation and implement health protection and development programs. In this way, mothers' awareness of both themselves and their children's oral and dental health will increase and positive results will be seen on children.

Conclusion

It is important to conduct different trainings to increase oral health literacy and knowledge before, during and after pregnancy by determining women's health literacy levels. It is believed that studies conducted in the wider population on both oral health literacy and oral and dental health knowledge levels of pregnant women are needed.

Author Contributions

G.Y.: Data collection, article writing, English translation
F.S.: Article writing, statistical analysis

Authors' ORCID(s)

G.Y.   0000-0003-1959-5879

F.S.   0000-0001-6087-148X

References

1. Berkman ND, Davis TC, McCormack L. Health literacy: what is it? Journal of health communication. 2010;15(S2):9−19.

2. Kohan S, Ghasemi S, Dodangeh M. Associations between maternal health literacy and prenatal care and pregnancy outcome. Iranian Journal of Nursing and Midwifery Research. 2008;12(4):146−152.

3. Sabbahi DA, Lawrence HP, Limeback H, Rootman I. Development and evaluation of an oral health literacy instrument for adults. Community dentistry and oral epidemiology. 2009;37(5):451−462.

4. Parker EJ, Jamieson LM. Associations between indigenous Australian oral health literacy and self-reported oral health outcomes. BMC Oral health. 2010;10(1):1−3.

5. Dickson-Swift V, Kenny A, Farmer J, Gussy M, Larkins S. Measuring oral health literacy: a scoping review of existing tools. BMC oral health. 2014;14(1):148.

6. Peker K, Ksse TE, Guray B, Uysal O, Erdem TL. Reliability and validity of the Turkish version of the Rapid Estimate of Adult Literacy in Dentistry (TREALD-30). Acta Odontologica Scandinavica. 2017;75(3):198−207.

7. Janicke DM, Finney JW, Riley AW. Children's health care use a prospective investigation of factors related to care-seeking. Medical care. 2001:990−1001.

8. Hom JM, Lee JY, Divaris K, Baker AD, Vann Jr WF. Oral health literacy and knowledge among patients who are pregnant for the first time. The Journal of the American Dental Association. 2012;143(9):972−980.

9. Khan K, Ruby B, Goldblatt RS, Schensul JJ, Reisine S. A pilot study to assess oral health literacy by comparing a word recognition and comprehension tool. BMC oral health. 2014;14(1):135−146.

10. Vilella KD, Alves SGA, de Souza JF, Fraiz FC, da Silva Assunçao LR. The association of oral health literacy and oral health knowledge with social determinants in pregnant brazilian women. Journal of community health. 2016;41(5):1027−1032.
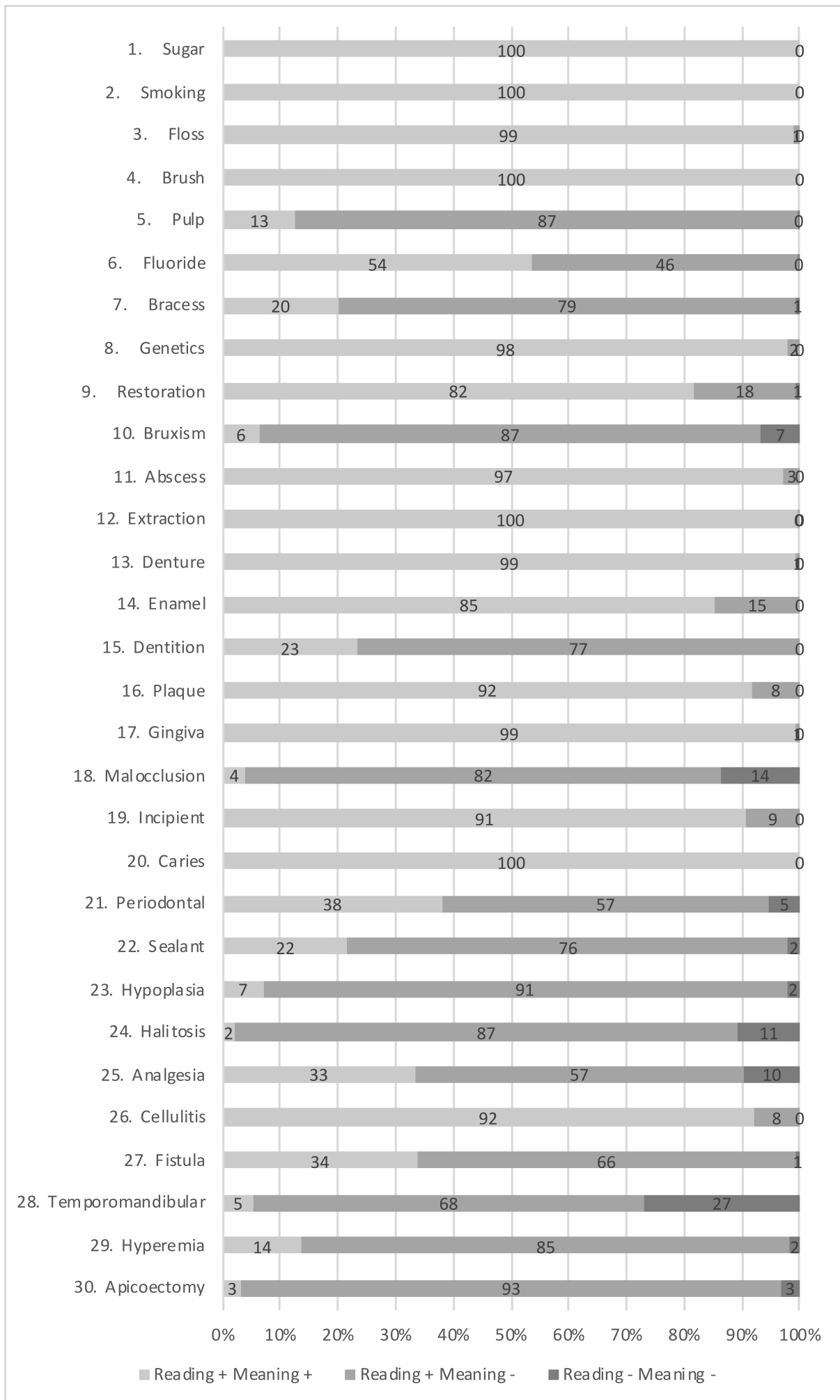
Figure 1. The distribution of reading and knowing the meaning of the words used in the TREALD-30 scale is given