



ORAL HEALTH LITERACY OF CADRES ON MATERNAL ORAL HEALTH BEFORE AND DURING PREGNANCY

LITERASI KESEHATAN MULUT KADER TERHADAP KESEHATAN MULUT IBU SEBELUM DAN SELAMA KEHAMILAN

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ABSTRACT

Background: Dental health problems frequently encountered in pregnant women, which require immediate treatment, include gingivitis gravidarum, periodontitis, epulis gravidarum, and caries. One of the prevention efforts for these disorders is to provide assistance to mothers before and during pregnancy. This assistance can be done by empowering health cadres. It is necessary to have community empowerment cadres in the health sector. **Purpose:** This study aims to determine the influence of oral health literacy of cadres in delivering information on maternal oral health efforts before and during pregnancy. **Method:** This study employed a quasi-experimental research design. The total of samples taken in this research was 70 people. The sampling method used a purposive sampling technique. The research sample was divided into two groups, namely the control group and the treatment group. Both groups were given a pre-test. Following the pre-test, the treatment group received cadre training. Both groups were then asked to complete a post-test at the end. Data were collected using the questionnaire. **Result:** The *p*-value was $0.000 < 0.05$, indicating a significant difference in the mean oral health literacy values between the treatment group and the control group. **Conclusion:** There is a significant difference in the value of oral health literacy and maternal dental health efforts before and during pregnancy.

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ABSTRAK

Latar belakang: Masalah kesehatan gigi yang sering dijumpai pada ibu hamil dan memerlukan penanganan segera antara lain gingivitis gravidarum, periodontitis, epulis gravidarum, dan karies. Salah satu upaya pencegahan terhadap kelainan-kelainan tersebut adalah dengan memberikan pendampingan pada ibu sebelum dan selama kehamilan. Pendampingan tersebut dapat dilakukan dengan memberdayakan kader kesehatan. Perlu adanya pemberdayaan kader masyarakat di bidang kesehatan. **Tujuan:** Penelitian ini bertujuan untuk mengetahui pengaruh literasi kesehatan gigi dan mulut kader dalam penyampaian informasi terhadap upaya kesehatan gigi dan mulut ibu sebelum dan selama kehamilan. **Metode:** Desain penelitian ini adalah analisis eksperimen semu. Total sampel yang diambil dalam penelitian ini adalah 70 orang. Metode pengambilan sampel menggunakan teknik purposive sampling. Sampel penelitian dibagi menjadi 2 kelompok terdiri kelompok kontrol dan kelompok perlakuan. Kedua kelompok diberikan pre-test. Setelah pre-test, kelompok perlakuan mendapatkan pelatihan kader. Kedua kelompok kemudian diminta menyelesaikan post-test di akhir. Data dikumpulkan dengan menggunakan kuesioner. **Hasil:** Diperoleh nilai *p*-value $0,00 < 0,05$, menunjukkan adanya perbedaan rerata nilai oral health literacy yang signifikan antara kelompok perlakuan dengan kelompok kontrol. **Kesimpulan:** Terdapat perbedaan yang signifikan pada nilai oral health literacy (literasi kesehatan gigi dan mulut) dengan upaya terhadap kesehatan gigi dan mulut ibu sebelum dan pada saat kehamilan.

Kata kunci:
Kesehatan gigi, Pemberdayaan,
Literasi kesehatan gigi dan mulut,
Kehamilan, Ibu hamil



INTRODUCTION

The dental and oral health of pregnant women should receive serious attention even before marriage due to its potential impact on pregnancy. One type of concern that is considered important is the oral health of pregnant women. It is important to obtain information about maintaining oral health before and during pregnancy because pregnant women are highly susceptible to infections that can affect their wombs (Mariana et al., 2021). Dental health problems often encountered in pregnant women that must be treated immediately include *gingivitis gravidarum*, *periodontitis*, *epulis gravidarum*, and caries (Agam Ferry et al., 2018).

The Ministry of Health (2020) reported that the prevalence of *gingivitis* in women in Indonesia is 74%. *Gingivitis*, characterized by bleeding gums, is the most common problem, affecting 60 - 70% of pregnant women. Other studies have shown that the prevalence of *gingivitis* in pregnant women varies from 30% to 100% (Wu et al., 2015). Common periodontal disorders found in pregnant women include *gingivitis* and *periodontitis*. In a study conducted at eight health centers in Surabaya, 73% of pregnant women were found to have *gingivitis*, and 36% had *periodontitis* (Wijaksana et al., 2020).

Pregnancy is closely related to oral health, and if the oral cavity is not kept clean, it can easily lead to diseases. This is caused by the mother's hormonal imbalance and the presence of local irritating factors in the oral cavity, resulting in poor oral hygiene (Septa and Nurasiah, 2021). Based on data from the Sahabat Medika Clinic in Surabaya, there were 106 pregnant women who checked their pregnancies from August - September 2019, while only 9 pregnant women went to the dental clinic. Among these, 8 people experienced dental caries (13.25%), which exceeded the target set for 2020 at 54.6% (Diniar et al., 2021). Efforts to increase oral health during pregnancy can be achieved by recognizing and reducing the associated risk factors (Zamry et al., 2022).

The *Integration of Dental and Oral Health Services with Antenatal Care (ANC)* examinations for pregnant women has been implemented since their initial ANC visit (K1). This comprehensive approach includes counseling through *Communication, Information, and Education (IEC)* on dental and oral health, with a particular focus on proper care during pregnancy. The targeted coverage for pregnant women receiving dental and oral health care at the *Dental Treatment Center (BPG)* of Gunung Anyar Public Health Center based on *PHC Performance Assessment (PKP)* was set at 60% of the total number of first antenatal care visits for pregnant women (K1), which was 46.85%. However, the actual number of pregnant women who received treatment at BPG was 135 people, less than the supposed target of 276 pregnant women (Mahirawatie and Lestari, 2021).

Community Dental Health Efforts (UKGM) are dental health service activities organized by the community under the guidance of the public health center so that the community is willing and able to take an appropriate action in dental and oral health problems. In UKGM, health cadres and community leaders are trained so that they can assist health workers in educating the community about self-care capacity building in the field of community dental and oral health. In addition, UKGM activities contribute to accelerate the *Millennium Development Goals (MDGs)*, specifically in improving the health of pregnant women. Poor oral health during pregnancy can adversely affect the dental and oral health of the baby later on.

Pregnant women must realize the importance of maintaining oral health during pregnancy for themselves and the fetus; hence, they can avoid oral diseases that can affect the pregnancy. In line with this, improving dental and oral health and promotion can reduce the occurrence of oral diseases. One of the risk factors for the birth of premature and *Low Birth Weight (LBW)* babies is the presence of abnormalities in the oral cavity, namely periodontal disorders (Wijaksana et al., 2020).

One of the prevention efforts for the disorders above is to provide assistance to mothers before and during pregnancy. This assistance can be done by empowering health cadres. Based on the results of implementing community empowerment activities in realizing "Healthy Teeth and Mouth Village 2030" in Panjanglejo village, Bantul Yogyakarta, community empowerment using the learning-by-doing method proves highly effective in helping *Dental Health Cadres (KADEGI)* with several essential skills. These skills include: (a) Educating about dental health, (b) Early detection of dental and oral diseases, and (c) Referring individuals to the nearest health center (Aditama et al., 2018). It is hoped that this capability will contribute to raising public awareness of the importance of dental and oral health. Early detection by KADEGI involved collecting data from 1.198 respondents examined, revealing that 64% had cavities, and 49% had dirty teeth or tartar. The data showed that the oral health of the residents of Panjanglejo village was still poor, highlighting the need for special attention from various parties to address this issue.

Community empowerment in the health sector aims to promote the active role and independence of the community in leading healthy lives. In order to achieve the goal of community independence in the field of dental health, it is necessary to have community empowerment cadres in the health sector, here in after referred to as dental health cadres. These cadres are individuals chosen by the community and are trained to mobilize community participation in dental health empowerment, as outlined in the Minister of Health

Regulation (2019). The empowerment of dental health cadres in the Gunung Anyar subdistrict, Surabaya, was carried out in research in 2020. Meanwhile, research activities continued from 2020 to 2023 with the aim of achieving independence for dental health cadres during this period.

Notoatmodjo (2012) stated that empowerment was discussed within the framework of developing people's ability to help themselves (self-efficacy) and increasing health literacy/awareness. The independence of dental health cadres can be seen through their ability to identify problems, plan and implement solutions independently, relying on their own potential without external assistance. Based on the background above, the purpose of this present study is to determine the influence of oral health literacy of cadres in disseminating information regarding maternal oral health efforts before and during pregnancy.

population taken in this research included all integrated healthcare center cadres in Gunung Anyar subdistrict, Surabaya, totaling 70 cadres. The sampling method used in this research was purposive sampling. The research sample was divided into two groups, namely the control group and the treatment group. Both groups were given a pre-test. For the treatment group, cadre training was administered after the pre-test. Subsequently, both groups were asked to complete a post-test at the end. Data were collected using questionnaire forms and checklists created by the researchers, which had been tested for validity and reliability before being used. Data analysis in this study used a comparative *T* test to determine differences in cadre independence as part of an effort to enhance maternal dental and oral health before and during pregnancy.

MATERIAL AND METHOD

This research employed a quasi-experimental design and was carried out in Gunung Anyar Village, Gunung Anyar District, Surabaya City, East Java Province. It was scheduled from April to September 2023. The

RESULT

Table 1 shows data on the respondent's characteristics. The highest age in the treatment group was 50 - 59 years (51%), while the control group was 14 people (40%). The highest level of education in both the treatment and control groups was senior high school, with percentages of 43% and 49%, respectively.

Table 1. Characteristics of respondents

Characteristics of respondents	Treatment group		Control group		Total N
	N	%	N	%	
Age (years)					
30 - 39	2	6	7	20	9
40 - 49	9	26	13	37	22
50 - 59	18	51	14	40	32
60 - 69	6	17	1	3	7
Education level					
Elementary school	2	6	2	6	4
Junior high school	7	20	7	20	14
Senior high school	15	43	17	49	35
Diploma	6	17	5	14	8
Bachelor	5	14	4	11	9

Table 2. Differences in oral health literacy and dental health efforts between the treatment and control groups

Variable	Treatment group		Control group		p-value
	Mean	SD	Mean	SD	
Oral health literacy	90	6.52	69	7.23	0.000
Dental health efforts	90	9.23	76	5.79	0.000

Table 3. The influence of oral health literacy of cadres on maternal dental health efforts before and during pregnancy

Variable	Mean	Coefficient of regression (β)	p-value	F
Oral health literacy	90	0.38	0.024	5.584

Differences in oral health literacy and dental health efforts between the treatment and control groups are presented in Table 2. According to the *Independent samples T* test for the oral health literacy variable, a *p-value* of $0.00 < 0.05$ was obtained, indicating a significant difference in the mean oral health literacy values between the treatment and control groups. Similarly, for the dental health effort variable, the *p-value* of $0.00 < 0.05$ signified a significant difference in the mean dental health efforts between the treatment and control groups.

A simple linear regression test, the health literacy variable obtained a *p-value* of $0.024 < 0.05$, as shown in Table 3. This result indicates a significant influence of the health literacy value on maternal dental health efforts before and during pregnancy. The regression coefficient of 0.38 shows that oral health literacy influences dental health efforts by 38%. Most of the health cadres in Gunung Anyar subdistrict, Surabaya were between 50 - 59 years old. This is attributed to the fact that most women in Gunung Anyar subdistrict, Surabaya aged 26 - 45 years, are engaged in work; hence, they do not have enough time to be involved as integrated healthcare center cadres.

DISCUSSION

The decline in cognitive function associated with old age can be slowed down by continuous learning. Even though a person is old, if they engage in the learning process day by day and cultivate the habit of accessing information, especially through reading, they can maintain a high level of health literacy. According to Toar (2020), the decline in cognitive ability due to the aging process and a long period of time since the last education can affect the ability to read and understand information.

Education can influence a person's preferences, behavior, and lifestyle, ultimately affecting their health (Araujo *et al.*, 2023; Cherian *et al.*, 2019). Additionally, education not only improves a person's ability to gather and interpret health information but also influences their knowledge and attitudes (Lakshmi *et al.*, 2020; Zamry *et al.*, 2022). Furthermore, education plays a role in shaping a person's ability to continually add to or update their health knowledge through a continuous learning process (Wahyuningsih, 2019).

There is an influence between work and the level of health literacy. This implies that high health literacy is found among working individuals. The research results indicate a correlation between age, education, employment, income, language, access to health services, access to information and health literacy (Akbariza and Handayani, 2023).

Based on the *Paired samples T* test, a significant increase was observed in the treatment group. This was attributed to the intervention received by the treatment group in the form of training, as evidenced by the results of the pre-tests and post-tests. Meanwhile, in the control group there was an increase, but it was not statistically significant. The training provided to the treatment group encompassed health literacy, interpersonal communication, dental and oral health efforts for pregnant women, and a guidebook for dental health cadre independence as well as carrying out dental and oral health education practices for pregnant women during integrated healthcare center activities (Baskaradoss, 2018; Cherian *et al.*, 2019).

A matrix with four dimensions of health literacy is applied to three health domains (cognitive communication, understanding of health and disease, decision-making skills, and the ability to communicate). Based on the field results, after attending the training, the level of cognitive/communication literacy in the treatment group experienced a significant increase, while there was no increase observed in the control group. This improvement in cognitive communication abilities is attributed to mental processes that enable health cadres to communicate and interact with each other successfully. These abilities involve situations, attention, memory, problem solving, and language. In accordance with Utami *et al.* (2020), a person's ability to carry out knowledge-based literacy (understanding and using information) is crucial for making health-related decisions in various situations. Cognitive skills are greatly influenced by a person's age and stage in life, as cognitive abilities tend to develop as a person ages (Zamry *et al.*, 2022).

Based on the field results, after attending the training, the literacy level regarding the understanding of health and disease in the treatment group experienced a significant increase, while there was no increase observed in the control group. This improvement can be attributed to the increased ability of dental health cadres to understand the dental health information they receive. Consequently, dental health cadres are able to convey information on preventing and enhancing the level of dental and oral health to mothers before and during pregnancy. Pregnant women will be informed about preventive actions to take against dental and oral health problems, as well as understand the steps to follow if they encounter such issues. This aligns with Utami *et al.*, indicating that health literacy can reduce health disparities, including prevention and promotion, and is able to bridge the gap between illness and health. This means activities such as obtaining, processing, understanding, and making decisions. If someone is unwell and engages in these activities, they will know what steps to take to improve their condition.

Based on the results in the field, after attending the training, the literacy level of decision-making skills in the treatment group experienced a significant increase. Nevertheless, there was no increase in the control group. This increase was due to the cadres receiving training on health literacy and communication material, as well as carrying out simulations in disseminating information on dental and oral health efforts to pregnant women. These activities had a positive impact on improving the dental health of pregnant women. It is in line with Utami *et al.* (2020) that asserted health literacy is the level at which individuals have the capacity to obtain, process, and understand basic health information and services necessary for making effective and appropriate health decisions. Apart from that, the ability to read health information also explains the existence of health disparities linked to socio-economic factors, such as education or income.

Based on the results in the field, after attending the training, the communication literacy level in the treatment group experienced a significant increase. In the control group, there was no increase. This increase was due to the fact that after cadres received training on dental and oral health measures and were trained on demonstrating tooth brushing to mothers before and during pregnancy, the majority of dental health cadres were able to practice delivering material on dental and oral health measures to mothers before and during pregnancy. This research proves that health literacy is not only solely dependent on a high level of education; individuals with lower educational backgrounds can also achieve adequate health literacy through continuous learning processes, regardless of age (continuous learning). Even in old age, individuals who engage in daily learning processes and cultivate the habit of accessing information, especially through reading or visiting health facilities and interacting directly with health workers, inevitably develop adequate health literacy (Kavit *et al.*, 2022).

After participating in the training, the treatment group experienced a significant increase. Whereas in the control group, there was an increase but not significant. This increase was due to the fact that the cadres in the treatment group had received materials on maternal dental health efforts before and during pregnancy in the 2020 study, thus this study was a repetition.

Increasing the knowledge of cadres about dental and oral health efforts can change a mother's behavior before and during pregnancy. Providing dental and oral health materials can increase the knowledge of cadres, which is done by providing dental and oral health training. The provided material includes instruction on conducting an educational program about oral and dental health, along with demonstrations of the proper and correct way to brush teeth.

According to Eluama *et al.* (2022), training for cadres can increase the knowledge of integrated healthcare center cadres about dental health. From the results of this training activity, there has been an increase in cadre knowledge in the field of dental health, so it is hoped that cadres can effectively disseminate this knowledge and skills to mothers before and during pregnancy, aligning with their role as health cadres who are expected to be motivators and key persons in the community.

Dental and oral health efforts are any activities and/or series of activities carried out in an integrated, coordinated, and sustainable manner to maintain and improve the dental and oral health status of the community. These activities include improving health, preventing diseases, treating diseases, and restoring health, conducted by the government and/or the community. Dental health services for pregnant women constitute health services aimed at unborn fetuses and pregnant mothers. Services targeted at the unborn fetus aim to optimize fetal growth and development while preventing congenital abnormalities, particularly dentofacial issues. On the other hand, dental and oral health services for pregnant women are provided to maintain and improve dental and oral health, thereby contributing to the overall health optimization for good fetal growth and development (Ministry of Health, 2020).

Based on the *Independent samples T* test for health literacy, a significant difference was observed between the treatment and the control groups. It can be seen from the post-test results of the two groups, the mean of the treatment group experienced a significant increase, while the mean in the control group increased but not significantly. This is because the treatment group was given interventions in the form of interpersonal communication training, health literacy, and dental and oral health efforts. Additionally, they practiced conveying information (counseling) about maternal dental and oral health before and during pregnancy at integrated healthcare center activities. In contrast, the control group did not receive such training. These findings align with the research by Amalia and Makkulawu (2023), increasing the capacity of integrated healthcare center cadres is very important to provide knowledge about the duties and roles of integrated healthcare center cadres. Consequently, it is hoped that future integrated healthcare center services will be better because integrated healthcare center cadres are an extension of public health centers in monitoring the health of pregnant women.

Before the training was carried out, the dental health cadres in the treatment group received a health literacy training manual which contained materials on cadre empowerment, *Interpersonal Communication*

(KAP), and the application of health literacy. The purpose of this handbook was to facilitate the implementation of training and serve as a reference for dental health cadres in understanding the health information received. It aimed to enable them to convey this information to the public, especially to mothers before and during pregnancy.

In the treatment group, dental health cadres underwent interpersonal communication training (including knowledge, attitude, and practice). This training was conducted in a pleasant and familiar environment with the aim at changing the behavior of cadres in a better direction and leading to increased awareness of mothers before and during pregnancy about the importance of dental and oral health. The ultimate goal is to prevent the occurrence of LBW. Through the KAP health cadres, it is hoped that they will develop an understanding of interpersonal communication, including one-to-one interactions with individuals in health facilities or in the community, small group interactions, counseling, group discussions, and so on. This is in accordance with Sekarningrum and Yunita (2023), who highlight that the ability of integrated healthcare center cadres in KAP can lead to positive behavior changes within the community in a better direction. Thus, it is hoped that integrated healthcare center cadres have effective communication skills in their interactions with the community they serve. According to the Republic of Indonesia Ministry of Health (2019), effective communication utilizes a range of human skills with the ultimate aim of inducing behavior change.

Likewise, providing material about health literacy to dental health cadres aims to improve the ability of health cadres to use their cognitive functions (reading, assessing, and understanding) and social skills (seeking information, interacting, and communicating) as a basis for making appropriate decisions about health conditions and reflection of this knowledge in preventing disease and improving the dental health status of pregnant women. In accordance with Mohini *et al.* (2021), health literacy is a health promotion concept, which is considered as one of the goals of the public health system.

Health literacy is related to a person's capability or competence to access information, then understand and analyze the information obtained to make the right decisions in their life, whether in the context of health care, disease prevention, or health promotion with the aim of maintaining or improving their health status. Health literacy is defined as the human ability to manage knowledge and information for life skills, on the *Indonesia Dictionary* (KBBI) website, accessed in 2022. It is characterized as "the ability to read, understand, and act on health information", signifying the capacity to read, understand, and act according to the health information received.

After carrying out statistical tests, a significant difference was observed in the dental health effort variable between the treatment and control groups. This was because the comprehensibility of the training provided to dental health cadres. When dental health efforts are provided intensively and in a planned manner, they have the potential to increase the knowledge of cadres, ultimately leading to a change in their behavior. The level of people's knowledge plays a crucial role in influencing the ease with which behavioral changes occur. One effective strategy for changing behavior is to provide information to increase knowledge so that it can raise awareness. This increased awareness, in turn, influences individuals to align their behavior with the newly acquired knowledge.

According to Notoatmodjo (2012), the most of a person's knowledge is obtained through the senses of hearing and sight. This means that the increase in knowledge of integrated healthcare center cadres is due to the knowledge of integrated healthcare center cadres regarding knowledge material in the cadre's handbook, specifically related to maternal dental and oral health efforts before and during pregnancy, through both their sense of sight and hearing. The time taken from sensory perception to knowledge production is greatly influenced by the intensity of the cadre's attention and perception of dental and oral health materials. When actions are based on knowledge, the resulting behavior tends to be enduring. Conversely, if the behavior is not based on knowledge and awareness, it is less likely to be sustained (Chawłowska *et al.*, 2022).

Based on a simple linear regression test, it was found that health literacy significantly impacts maternal dental health efforts before and during pregnancy. This is due to changes in the level of oral health literacy and significant dental and oral health efforts. The health literacy component consists of cognitive communication, understanding of health and disease, decision-making skills, and the ability to communicate. There is a change in the level of health literacy for dental health cadres to understand this information, then it is applied to integrated healthcare center activities with the aim of improving the mother's dental and oral health before and during pregnancy. This is in accordance with the opinion expressed by Utami *et al.* (2020), who said that health literacy is a cognitive capacity and social skills influencing an individual's motivation and ability to access, understand, and use information by promoting and maintaining health. Health literacy in this model has four main abilities, namely: a) Ability to access information: this refers to the capacity of dental health cadres' health literacy to find and obtain information about dental and oral health in mothers before and during pregnancy. Obtaining and accessing dental and oral health information depends on an understanding of the information, time, and alignment with the health situation of pregnant women; b) Ability to understand

information (level of understanding information): the health literacy ability of dental health cadres refers to the ability to understand the dental and oral health information obtained. Understanding information relies on expectations, perceived benefits, personalized results, and the interpretation of dental and oral health information; c) Appraise (assess) the cadre's oral health literacy skills: this involves the ability to interpret, filter, and evaluate information about dental and oral health obtained. The processing and evaluation of information depends on the complexity and understanding of the information; and d) Apply dental health cadres' oral health literacy skills: this refers to an individual's ability to communicate and use information to make decisions for improving their health. Effective communication depends on one's understanding of the received information.

Health literacy is influenced by factors such as age, language, gender, education, and occupation. All dental health cadres in this study are female and most are aged 50 - 59 years, and have high school education. Most of the dental health cadres in this study were elderly (50 - 59 years old), this was because the younger cadres being occupied with work. According to Toar (2020), the decline in cognitive abilities associated with aging process and a long period of time since the last education can impact the capacity to read and understand information. This situation may affect the ability of dental health cadres to read and understand dental and oral health information. Providing training through adult learning methods (discussions, demonstrations, and games) and using simple language and creating conducive conditions, enables the cadres to effectively receive and understand health knowledge.

In accordance with Wahyuningsih (2019), there is an impact of education on the level of health literacy. *High School Education (SMA)* can influence the ability to study various disciplines and collect and interpret information provided during training. Furthermore, education also builds skills and abilities. According to Gani *et al.* (2022), education is one of the factors related to a person's comprehension of material and knowledge, significantly influencing the process of understanding the provided material. The higher a person's education, the easier it becomes to receive information, while conversely, an individual with a low level of education may impede the acceptance of newly introduced information and values.

Knowledge in maintaining dental and oral health for pregnant women is a form of achievement for efforts to change behavior in a better direction, including maintaining dental and oral hygiene. Pregnant women must realize the importance of maintaining oral health during pregnancy for themselves and the fetus, so they can avoid oral diseases that can affect the pregnancy. In line with this, improving dental and oral health and promoting awareness can mitigate the occurrence of oral diseases. One of the risk factors for the premature birth of LBW babies is the presence of abnormalities

in the oral cavity, namely periodontal disorders. Oral health literacy as a predictor of the emergence of dental health behavior is considered to be an innovative effort to look for other determinants that may determine the emergence of dental and oral health behavior of mothers in making efforts to prevent dental caries in their future children (Wijaksana *et al.*, 2020).

CONCLUSION

This research can conclude that in the treatment group, there was a significant increase in oral health literacy and maternal dental health efforts before and during pregnancy. Oral health promotion, such as lecturing or counseling methods, can increase oral health literacy in pregnant women. Several factors that contributed to the improvement in oral health literacy and maternal dental health efforts before and during childbirth for dental health cadres in the treatment group include the cadre independence guidebook and training methods. There was a significant difference in the values of oral health literacy and maternal dental health efforts before and during pregnancy between the treatment and the control groups. Some components that can enhance oral health literacy for dental health cadres are cognitive-communication, understanding of health and disease, decision-making skills, and the ability to communicate. There is an influence of oral health literacy of dental health cadres on maternal dental health efforts before and during pregnancy.

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