

Analysis of Community Knowledge About Pulpitis at the Tatelu Community Health Center Clinic in Dimembe District, North Minahasa Regency

Arsad¹; Utari Zulkaidah²; Paulina Imelda Veronika Ogotan³

^{1,2,3}Bachelor of Applied Dental Therapy Study Program, Faculty of Health Technology and Science ITKeS Muhammadiyah Sidrap Syarif Al-Qadri Rd, Pangkajene, South Sulawesi, 91611 Indonesia

Publication Date: 2025/12/15

Abstract: A national report on the prevalence of pulpitis in Indonesia is not yet available. A study at the Dawan I Klungkung Community Health Center in Bali reported a prevalence of pulpitis of 25.2%. A case report from Moestopo Dental and Oral Hospital from 2014 to 2016 documented 1,822 cases of pulpitis. Of these, 1,676 were reversible pulpitis cases and 146 were irreversible pulpitis cases (Dyah Ayu Murika Sari et al., 2023). In teeth with cavities, if left untreated, the decay can progress deeper and reach the pulp, causing pulp inflammation and pain, which is also known as pulpitis. Pulpitis is an inflammation, also referred to as swelling, which can either heal or worsen (Arsad et al., 2022). The type of research used was quantitative, employing a cross-sectional research design. The sampling technique was purposive sampling, selecting 30 respondents from the population who met certain criteria, namely pulpitis sufferers. Based on the results of statistical tests using the chi-square test, a p-value of 0.02 was obtained, where $p < 0.05$, indicating that the hypothesis in this study can be accepted. There is a correlation between community knowledge about pulpitis at the Tatelu Community Health Center Clinic in Dimembe District, North Minahasa Regency.

Keywords: Knowledge, Pulpitis.

How to Cite: Arsad; Utari Zulkaidah; Paulina Imelda Veronika Ogotan (2025) Analysis of Community Knowledge About Pulpitis at the Tatelu Community Health Center Clinic in Dimembe District, North Minahasa Regency. *International Journal of Innovative Science and Research Technology*, 10(12), 591-595. <https://doi.org/10.38124/ijisrt/25dec395>

I. INTRODUCTION

According to the WHO report on Oral and Dental Health Status in 2022, approximately 3.5 billion people worldwide, or nearly half the global population, suffer from dental and oral diseases. (Ministry of Health of the Republic of Indonesia, 2023)

In Indonesia, several oral and dental health problems include high rates of dental caries, low accessibility to dental care, and a lack of education about the importance of maintaining oral health. The 2018 Basic Health Research (Riskesdas) also showed a caries prevalence of 57.6%, with a National DMF-T index of 7.1 (Khamilatusy Sholekhah et al., 2023).

According to the Ministry of Health (2018), tooth decay, cavities, and toothache are the biggest problems in Indonesia, accounting for 45.3% of the population. Other oral health problems experienced by Indonesians include swollen gums and/or abscesses, which account for 14% of the population (Beno et al., 2022).

A national report on the prevalence of pulpitis in Indonesia is currently unavailable. A study at the Dawan I Klungkung Community Health Center in Klungkung, Bali, reported a pulpitis prevalence of 25.2%. A case report from the Moestopo Dental and Oral Hospital from 2014 to 2016 found 1,822 cases of pulpitis. These cases consisted of 1,676 reversible and 146 irreversible cases (Dyah Ayu Murika Sari et al., 2023).

Oral health is an essential part of general health, yet it is often overlooked, especially in children. Globally, billions of people experience oral health problems, and dental caries is one of the most common conditions. In children, caries can cause pain, infection, eating and sleeping problems, and negatively impact their growth and development (Martina et al., 2025).

Lack of knowledge about oral health can lead to ignorance about the causes and prevention of cavities. This leads to behaviors that are not conducive to dental health, thus increasing the risk of caries. Therefore, good knowledge about oral health is crucial to increase motivation to care for teeth and prevent cavities. (Ramadhan et al., 2023)

According to (Gufaran Ali & Mulay, 2015) In teeth with caries or known as cavities, if not treated, it will get deeper and can reach the pulp and will cause inflammation of the pulp and pain can also be called pulpitis. Where Pulpitis is an inflammation or swelling that can heal again or can get worse. There are two types of pulpitis, namely: 1). reversible pulpitis and, 2). irreversible pulpitis. Where Reversible pulpitis is a condition of inflammation/swelling of the pulp with mild conditions can also be caused by stimulation, if when the stimulation is removed the pain will disappear. While Irreversible pulpitis is inflammation/swelling of the pulp which if left untreated will become severe pulpitis and requires treatment. Pulpitis, a common pulp disease in Indonesia, is a form of pulp inflammation caused by the vascular connective tissue's response to trauma or the continuation of caries. (Arsad et al., 2022).

The prevalence of pulpitis in the Tatelu Community Health Center Polyclinic, Dimembe District, North Minahasa Regency, indicates that pulpitis is a common condition. Therefore, researchers wanted to determine whether the community was aware of pulpitis.

Based on the description above, the researcher is interested in conducting a study entitled "Analysis of Public Knowledge about Pulpitis at the Tatelu Community Health Center Clinic, Dimembe District, North Minahasa Regency" to achieve better dental health.

II. METHODS

This research is quantitative and uses a cross-sectional design. Cross-sectional survey designs aim to describe the attitudes, behaviors, and characteristics of a population through samples drawn from that population. In this design, data is collected simultaneously or at a single point in time, using observational methods to study specific risks and effects (Nurfadillah, 2023). This study analyzed public knowledge about pulpitis at the Tatelu Community Health Center Clinic, Dimembe District, North Minahasa Regency.

The data collection instruments in this study used questionnaires and observations. A score of >5 was categorized as good and a score of <5 was categorized as poor. This study used a chi-square test with a significance value of $\alpha = 0.05$. Therefore, the research hypothesis is accepted if the p-value $< \alpha = 0.05$, indicating a relationship between the independent and dependent variables. If $p > \alpha = 0.05$, indicating a relationship between the independent and dependent variables, the H_a (research hypothesis) is rejected.

This research was conducted at the Tatelu Community Health Center Polyclinic, Dimembe District, North Minahasa Regency. The research sample was selected using a purposive sampling technique, selecting 30 respondents from a population that met certain criteria, namely pulpitis patients. (Firmansyah & Dede, 2022).

III. RESULTS AND DISCUSSION

Table 1 Respondent Characteristics Based on Age

Age	Number (n)	Percentage (%)
6-11 years	5	16,7
12-17 years	1	3,3
18-59 years	9	30
>60	15	50
Total	30	100%

Table 1 shows the characteristics of respondents based on age among patients with pulpitis. The results showed that 5 children (16.7%), 1 adolescent (3.3%), 9 adults (30%), 10 elderly (33.3%), and 5 elderly (16.7%).

Table 2 Characteristics of Respondents Based on Gender

Gender	Number (n)	Percentage (%)
Laki-Laki	9	30%
Perempuan	21	70%
Total	30	100%

Table 2 shows the characteristics of respondents based on gender in patients with pulpitis. The results showed that 9 were male (30%), and 21 were female (70%).

Table 3 Distribution of Respondents Based on Knowledge

Knowledge	Number (n)	Percentage (%)
Good	2	6,7%
Fair	28	93,3%
Total	30	100%

Table 3 shows the characteristics of respondents based on their knowledge of patients with pulpitis. The results showed that 2 (6.7%) were in the good category, and 28 (93.3%) were in the fair category.

Table 4 Distribution of Respondents Based on Dental Health Status of Pulpitis Patients at the Tatelu Community Health Center

Dental Health	Dental Health (n)	Percentage (%)
Caries	30	100
No Caries	0	0
Total	30	100

Table 4 shows that all respondents registered as pulpitis patients had dental caries (30%, 100%).

Table 5 Analysis of Public Knowledge about Pulpitis at the Tatelu Community Health Center Polyclinic, Dimembe District, North Minahasa Regency

Knowledge	Pulpitis	%	p-value
Good	2	6,7	0.02
Poor	28	93,3	
Total	30	100	

Based on table 5 above, it can be seen the analysis of public knowledge about pulpitis disease at the Tatelu Community Health Center Polyclinic, Dimembe District, North Minahasa Regency. Respondents who experienced pulpitis with good knowledge category were 6.7% and patients who experienced pulpitis with poor knowledge category were 93.3%. From table 5, it is also known that there is a relationship between knowledge and pulpitis disease. The results of the chi-square test obtained a p-value of 0.02 ($p < 0.05$), which means there is a relationship between the level of knowledge about pulpitis disease in patients at the Tatelu Community Health Center. So it can be concluded that knowledge has a significant relationship with the increase in pulpitis disease in respondents.

➤ Discussion

Based on the research conducted, this study analyzed public knowledge about pulpitis at the Tatelu Community Health Center polyclinic in Dimembe District, North Minahasa Regency, with 30 respondents.

After analysis, this study showed a p-value of 0.02, which is smaller than the α value (0.05), indicating a relationship between knowledge levels and pulpitis among patients at the Tatelu Community Health Center. This is also supported by data showing that most respondents with a sufficient level of knowledge indicated a higher incidence of pulpitis with caries, compared to respondents with a good level of knowledge, which indicated a lower incidence of pulpitis with no caries.

Knowledge is derived from the word "tahu." In the Big Indonesian Dictionary, the word "tahu" has several meanings, including understanding after seeing (witnessing, experiencing, etc.), recognizing, and comprehending. Knowledge is everything known based on human experience, and knowledge increases through experience. According to Bloom, knowledge is the result of knowing, and this occurs after a person senses a particular object. Knowledge is a very important domain in shaping a person's actions (overt behavior). (Dwinanda, 2024)

Untreated pulpitis can have serious health and psychological impacts, such as pain and discomfort that can disrupt daily activities. Therefore, it is crucial for people

with cavities to see a dentist immediately before the condition worsens. The most effective treatment for maintaining dental and oral health is prevention. By providing education, motivation, and awareness to individuals, groups, and communities about the importance of maintaining dental and oral health, we can prevent more serious dental and oral problems. (Sanusi & Suwandewi, 2020)

According to (Arsad et al., 2022) in the Analysis of the Occurrence of Pulpitis in the Teeth of Patients Visiting the Tomoni Timur Health Center Area, East Luwu Regency, based on characteristics based on age, the highest was in the Elderly Age, amounting to 13 people with a percentage of 43.3%, Adult Age amounting to 11 people with a percentage of 36.7%, Adolescent Age 4 people with a percentage of 13.3%, and the least in the elderly age amounting to 2 people with a percentage of 6.7%. The incidence of pulpitis reviewed from several aspects shows that the percentage of patients who do not have good habits in caring for their teeth is higher, namely 60% compared to patients who care for their teeth well as much as 40%, which means that the occurrence of pulpitis is mostly caused by bad lifestyle habits.

IV. CONCLUSIONS AND SUGGESTIONS

Based on the research results and discussion on the Analysis of Public Knowledge about Pulpitis at the Tatelu Community Health Center Polyclinic, Dimembe District, North Minahasa Regency, it can be concluded that there is a correlation between public knowledge about pulpitis at the Tatelu Community Health Center Polyclinic, Dimembe District, North Minahasa Regency. Respondents with pulpitis categorized as having good knowledge amounted to 6.7%, while those with pulpitis categorized as having poor knowledge amounted to 93.3%, with a p-value of 0.02. The results of this study indicate a correlation between public knowledge about pulpitis and the information provided by the researchers. It is hoped that the information provided by the researchers will be useful for improving dental and oral health at the Tatelu Community Health Center Polyclinic, Dimembe District, North Minahasa Regency. From the results of this study, there is a relationship between public knowledge about pulpitis disease so that it is hoped that this

study can be a reference source for all students in an effort to improve the level of dental and oral health, especially in the Applied Dental Therapy Bachelor Study Program and Dental Health Diploma Three at the ITKES Muhammadiyah Sidrap library and can be developed more widely in further research. The results of this study demonstrate a correlation between public knowledge about pulpitis and its impact on public knowledge. It is hoped that this research will be beneficial for researchers in gaining insight into analyzing public knowledge about pulpitis.

REFERENCES

- [1]. Adam, Zavera, D'Arc, J., Ratuela, Ellen, & Jeineke. (2022). Tingkat Pengetahuan Tentang Kebersihan Gigi Dan Mulut Siswa Sekolah Dasar. *Indonesian Journal of Public Health and Community Medicine*, 3(1), 6.
- [2]. Adnyasari, N. L. P. S. M., Syahriel, D., & Haryani, I. G. A. D. (2023). Plaque Control in Periodontal Disease. *Interdental Jurnal Kedokteran Gigi (IJKG)*, 19(1), 55–61. <https://doi.org/10.46862/interdental.v19i1.6093>
- [3]. Ameriagitri, Zelline, A., Adhani, R., & Nahzi, M. Y. I. (2020). DENTIN JURNAL KEDOKTERAN GIGI. Hubungan Antara PH Saliva Dengan Indeks DMF-T Anak Yang Mengonsumsi Air PDAM Dan Air Sumur Gali, IV(1), 6–10.
- [4]. Arsad, A. A., Yasin, S. A., & Husaini, J. (2022). Analisis Terjadinya Pulpitis Pada Gigi Pasien Yang Berkunjung di Wilayah Puskesmas Tomoni Timur Kabupaten Luwu Timur. *Media Kesehatan Gigi : Politeknik Kesehatan Makassar*, 21(2), 50. <https://doi.org/10.32382/mkg.v21i2.3111>
- [5]. Ayu, I. M., Sangadji, N. W., Putri, A. S., Indarg, A. P., Azuraa, S., Panjaitan, M. E. H., Syahrani, A. P., Purba, A. L., Hasanah, F., & Favianito, M. R. (2023). Edukasi tentang Pengaruh Kebiasaan Mengonsumsi Makanan dan Minuman Manis secara Berlebih bagi Kesehatan. *Jurnal Abdimas Kesehatan (JAK)*, 5(3), 454. <https://doi.org/10.36565/jak.v5i3.421>
- [6]. Beno, J., Silen, A. ., & Yanti, M. (2022). HUBUNGAN TINGKAT PENGETAHUAN TENTANG KESEHATAN GIGI DENGAN PERILAKU PERAWATAN GIGI PADA ANAK KELAS V DI SEKOLAH DASAR NEGERI 1 GIANYAR. *Braz Dent J.*, 33(1), 1–12.
- [7]. Dairse. (2020). Alat Dan Waktu Untuk Menggosok Gigi. *Teknik Menggosok Gigi Teknik*, Kolisch 1996, 49–56.
- [8]. Dwinanda, G. (2024). KONSEP PENGETAHUAN ; REVISI TAKSONOMI BLOOM. *Enfermia Ciencia Publikasi Ilmiah Hasil Kegiatan Penelitian Dalam Bidang Kesehatan*, 2(2001), 476–490.
- [9]. Dyah Ayu Murika Sari, N., Indun Fil Hana Wati, H., & Dyah Ayu Murika Sari Fakultas Kedokteran Gigi, N. (2023). Penatalaksanaan Pulpitis Reversibel Pada Gigi Molar Desidui (Laporan Kasus). July.
- [10]. Era, D. I., Covid, P., Kelangsungan, D., Septiani, D., Sughesti, D., Susanti, D., Polmauly, M. T., & Novitasari, S. (2022). PENTINGNYA MENJAGA KESEHATAN GIGI DAN MULUT. 3(1), 56–66.
- [11]. Fania Adrin, M. A. (2023). Faktor Resiko Penyakit Gigi dan Mulut. *Universitas Islam Sultan Agung Semarang*, January. <https://doi.org/367280769>
- [12]. Febrida, R. (2023). Pengetahuan Penggunaan Sikat Gigi Dan Pasta Gigi Dalam Rangka Menjaga Kesehatan Gigi Mulut Pada Masyarakat Desa Bojong. *Dharma Saintika: Jurnal Pengabdian Kepada Masyarakat*, 1(2), 1–9. <https://doi.org/10.24198/saintika.v1i2.44862>
- [13]. Firmansyah, D., & Dede. (2022). Teknik Pengambilan Sampel Umum dalam Metodologi. *Jurnal Ilmiah Pendidikan Holistik (JIPH)*, 1(2), 85–114. <https://doi.org/10.55927>
- [14]. Kemenkes RI. (2023). Survei Kesehatan Indonesia 2023 (SKI). *Kemenkes*, 235.
- [15]. Igi, M. (2023). Pandangan Islam Terhadap Anjuran. Eka Arum Septianingrum, Salwa Salsabilla Azzahra, Fareda Yasin, Naning Kisworo Utami, 1, 222–227.
- [16]. Gintu, A. R., Kristian, E. B. E., & Martono, Y. (2020). Karakterisasi Pasta Gigi Berbahan Abrasif Hidroksiapatit (HAP). *Jurnal Kimia Riset*, 5(2), 120. <https://doi.org/10.20473/jkr.v5i2.22503>
- [17]. Hamid, E. M., Thioritz, K. E., Gigi, K., Makassar, P. K., & K, E. P. K. (2023). Penggunaan Obat Kumur Larutan Lidah Buaya (Aloe vera) pada Penyembuhan Luka Pasca Scaling. *Media Kesehatan Gigi*, 22(1), 19–24. <https://ojs3.poltekkes-mks.ac.id/index.php/medgigi/index>
- [18]. Iba, Z., & Wardhana, A. (2023). Landasan Teori, Kerangka Pemikiran, Penelitian Terdahulu, & Hipotesis (Issue July).
- [19]. Kartinawanti, A. T., & Khoiruzza, A. (2021). Penyakit Pulpa Dan Perawatan Saluran Akar Satu Kali Kunjungan : Literature Review. 4(2).
- [20]. Kemenkes RI. (2023). Survei Kesehatan Indonesia 2023 (SKI). *Kemenkes*, 235.
- [21]. Khamilatusy Sholekhah, N., Syibil Azzahriyah, A., Puji Lestari, I., Ulin Na, A., Sukma Wardani, A., & Dyah Permata Sari, N. (2023). Upaya Peningkatan Pengetahuan Kesehatan Gigi Dan Mulut Masyarakat Di Kelurahan Pongangan Gunungpati Kota Semarang. *Dentmas Journal*, 1(2), 66–71.
- [22]. Martina, Y. S., Laily, R., Gigi, J. K., & Surabaya, P. K. (2025). Efektivitas Media ROPITA (Round Spin Table) Terhadap Peningkatan Pengetahuan Kesehatan Gigi Siswa Sekolah Dasar. *Media Kesehatan Gigi : Politeknik Kesehatan Makassar*, 24(1), 25–30.
- [23]. Nurfadillah, A. (2023). berupa angka-angka untuk. PROGRAM BIMBINGAN KARIER BERDASARKAN PROFIL PEMILIHAN KARIER SISWA Universitas Pendidikan Indonesia 1 Repository.Upi.Edu 1 Perpustakaan.Upi.Edu, 26–42.
- [24]. Putri, V. S., Suri, M., Tinggi, S., Kesehatan, I., & Jambi, B. (2022). Pentingnya Kesehatan Gigi dan Mulut pada Anak Usia Sekolah di RT 10 Kelurahan Murni Kota Jambi. 4(1), 39–46.

- [25]. Rafika, U. (2022). Variabel Dalam Penelitian Pendidikan. Jurnal Teknodik, 35–40. https://eprints.umm.ac.id/id/eprint/3052/6/BAB_IV.pdf
- [26]. Rahmad Karnadi. (2020). BAB II Tinjauan Pustaka.pdf (Issue 1969, pp. 9–66). <https://doi.org/11092/3>
- [27]. Ramadhan, A. A., Arifin, R., Hatta, I., Hamdani, R., & Dewi, N. (2023). Hubungan Pengetahuan Kesehatan Gigi Dan Mulut Dengan Kehilangan Gigi Di Wilayah Kerja Puskesmas Semangat Dalam. Dentin, 7(3), 149–156. <https://doi.org/10.20527/dentin.v7i3.10746>
- [28]. Sanusi, S., & Suwandewi, A. (2020). FAKTOR YANG TERKAIT DENGAN JENIS PULPITIS PADA ANAK USIA SEKOLAH. Journal of Nursing Invention, 1(2), 41–47.
- [29]. Suparyanto, R. (2020). Gambaran Tingkat Pengetahuan Tentang Kesehatan Gigi Dan Mulut Serta Keterampilan Menyikat Gigi Pada Siswa SD N 2 Aan Kabupaten Klungkung Tahun 2022. Suparyanto Dan Rosad, 5(3), 248–253.
- [30]. Ungusari, E. (2021). pengaruh pemberian Coenzym Q10 terhadap jumlah sel neutrofil pada pulpitis. Pengaruh Pemberian Coenzym Q10 Terhadap Jumlah Sel Neutrofil Pada Pulpitis., 151, 10–17. <https://doi.org/17661/7>