

Dentist knowledge about dental health management for disabled child at primary health service in Bandung City

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ABSTRACT

Introduction: Disabled children encounter physical and/or mental hindrance that interferes the normal growth and development. Children with disability have lower oral hygiene level compared to normal children, hence a thorough dental treatment for these children are very important. The Indonesia's Health Minister's Regulation number 89 in 2015 has become one of the references in performing dental treatment for the disabled children. **Method:** This study was a descriptive study by using questionnaire to gather the data. **Results:** This study showed 69.73% of the dentists at primary health service in Bandung City were aware of the government regulation about the primary health service for children with disability. **Discussion:** Preventive and curative efforts are necessary regarding the fact that disabled children have higher level of poor oral hygiene than normal children. The sufficient category showed that the dentists in primary health center need additional information and knowledge to identify the children with disability. **Conclusion:** The dentists' knowledge of the oral health service for children with disability in primary health service based on Indonesia's Health Minister's Regulation number 89 in 2015 was sufficient regarding the percentage of 69.73%.

Keywords: Disabled children, The Indonesia's Health Minister's Regulation number 89 in 2015

INTRODUCTION

The number of individuals with disability in Indonesia have increased. *Survey Kesehatan Nasional* (National Health Survey) stated that in 2003, the percentage of the disabled individuals was 0.69%, which increased in 2006 to 1.38%. Although the percentage has decreased in 2009 to 0.92%, it has increased again quite significantly in 2012 to 2.45%.¹ In accordance to this, the number of disabled children that managed through the early ages have also increased.^{1,2} Disabled children are children with physical, mental, health, or social

disturbances. These disturbances also occurred in children with special needs.^{3,4}

In 1976, Brown and Schodel conducted a study of 32 children with disability. The study reported that the children had poorer oral hygiene compared to normal children. This condition was one of the main risk factors of caries in disabled children.^{5,6} Nowadays, parents have grown aware of the importance of dental health care for disabled children, both preventive and restorative. Dentists should perform a thorough health service in order to fulfill the children's dental health needs.⁷

The first level of dental health service is performed at primary health service¹, thus dentists play a role of gate-keeper as they are the first to give dental health service to society. These dentists are also expected to accentuate the preventive and promotive aspect of the dental health service.⁸ The Indonesia's Health Minister's Regulation number 89 in 2015 about dental and mouth health services elaborates on page 5: the identification and characteristics of dental health, including the treatments for disabled children. The regulation could be the reference for dentists in giving dental health services for disabled children.¹

METHODS

This study was a descriptive study by using a questionnaire which contents and reliability had been ratified. The questionnaires were given to the dentists in Primary health service. The population in this study was dentists assigned at primary health service in Bandung City. The samples were selected through a cluster sampling method.

In this method, the samples were selected randomly from a group of individuals that was formed naturally, for instance: a group of individuals in a certain region.⁹ The study was conducted at primary health service in Bandung City. Bandung City consisted of 6 regions: Bojonagara, Tegallega, Cibeunying, Karees, Gedebage, and Ujungberung. After random selection, 3 regions were chosen: Ujungberung, Bojonagara, and Cibeunying. From the 3 regions, 21 dentists were selected as subjects with the same criteria. All subjects were assigned at primary health service in Bandung City and were willing to fill the questionnaires.

RESULTS

Most of the dentists at primary health service in Bandung City (57.14%) did not aware and have never read the regulation about dental health service (Table 1) Most dentist also did not aware about dental treatment for disable children as based on The Indonesia's Health Minister's Regulation number 89 in 2015 (Table 2). According to Table 3, all dentists answered correctly on the definition of disabled children. In contradiction, only 61.9% and 75.19% correctly answered the question of the definition of physical and mental/ intellectual disability in children.

The following results describe dentists' knowledge on classification of disabled children. 90.48% of subjects answered correctly on the classification of disabled children as developmental disturbance of the motoric nerves such as cerebral

Table 1. Dentists' awareness of the Indonesia's Health Minister's regulation number 89 in primary health service in Bandung City

Category	Frequency	%
Not aware and has never read	12	57.14
Aware but has never read	1	4.76
Aware and has read	8	38.10
Total	21	100

Table 2. Dentists' knowledge about dental treatments for disabled children as based on The Indonesia's Health Minister's Regulation number 89 in 2015

Category	Frequency	%
Aware	8	38,10
Not Aware	13	61,90
Total	21	100

Table 3 Dentists' knowledge on definition of disabled children

No	Definition of disabled children	Correct (%)	Incorrect (%)
1	Disabled children are individuals with physical and/or mental abnormality that disrupt or hinder various normal activities	100	0
2	Disabled children are individuals with mental/intellectual and/or behavior abnormality	61.90	38.10
3	Mentally/intellectually disabled children are individuals with physical abnormality that disrupts physical function such as body movements, sights, hearing, talking ability, and chronic disease (leprosy, TBC, diabetes, hypertension, stroke).	75.19	23.81

Table 4. Dentists' Knowledge on The Classification of Disabled Children

No	Classification of disabled children	Correct (%)	Incorrect (%)
1	Physical disability consisting sensory disturbance, developmental disturbance of the motoric nerve, cerebral vascular accident (VCA)/stroke, and arthritis.	85.71	14.29
2	Mental disability consisting deafness and hearing impairment, also blindness and visual impairment.	71.43	28.57
3	Sensory disturbance includes developmental and growth disturbance, also psychiatric disturbance.	71.43	28.57
4	Developmental disturbance of the motoric nerves includes cerebral palsy and epilepsy.	90.48	9.52

Table 5. Dentists' knowledge on dental treatment and promotive effort for disabled children

No	Dental Treatment for Disabled Children	Correct (%)	Incorrect (%)
1	To perform a fair dental treatment for disabled children, an integrated collaboration between dentist, inter or multidiscipline team, parents/caretakers, teachers, and disabled individuals is needed.	100	0
2	Counseling is one of the promotive efforts by giving the parents dental health education	100	0

Tabel 6. Dentists' knowledge on the Oral Health Service of Children with Disability in Primary Service based on The Indonesia's Health Minister's Regulation number 89 in 2015

Respondent number	Score	Percentage (%)	Category
1	10	71.43	Sufficient
2	9	64.29	Sufficient
3	10	71.43	Sufficient
4	9	64.29	Sufficient
5	10	71.43	Sufficient
6	12	85.71	Sufficient
7	9	64.29	Sufficient
8	11	78.57	Fair
9	7	50	Poor
10	9	64.29	Sufficient
11	11	78.57	Fair
12	10	71.43	Sufficient
13	9	64.29	Sufficient
14	7	50	Poor
15	10	71.43	Sufficient
16	8	57.14	Sufficient
17	9	64.29	Sufficient
18	10	71.43	Sufficient
19	11	78.57	Fair
20	11	78.57	Fair
21	13	92.86	Fair
	Mean Result	69.73	Sufficient

palsy and epilepsy (Table 4). All subjects answered correctly on both questions about the needed teamwork between various elements in performing a fair dental health service for disabled children and counseling as one of the promotive ways in performing dental health service (Table 5).

The knowledge of the dentists in primary health service in Bandung City on oral health service for children with disability in primary service based on of The Indonesia's Health Minister's Regulation number 89 in 2015. The level of the dentists' knowledge are categorized into 3 levels, fair, sufficient, and poor (Table 6).

Six respondents (28.57% from the total) belong to fair category. This means that the dentists comprehend the characteristic and treatment for the disabled children. The majority of respondents (76.19% from the total) show dsufficient category in treating the disabled children based on of The Indonesia's Health Minister's Regulation number 89 in 2015. This concludes that the dentists in primary service need additional information and knowledge on identifying children with disability. However, the sufficient category describes that the dentists know how to treat the disabled children but still lacking the knowledge to identify them.

DISCUSSION

Additional training for the dentists on treating the disabled children is strongly recommended. Furthermore, the sufficient level of knowledge in identifying children with disability is necessary as well. Based on the research, it can be concluded that the knowledge of dentists in Bandung City is sufficient according to the percentage shown from the table (69.73%).

The research done by Dieguez-Perez¹⁰ showed that physically disabled children are prone to have poor oral hygiene which further leads to dental caries. Mentally disabled children have higher tendency to have gingival inflammation and deep gingival pocket.¹⁰ Mochizuki¹¹ research that was executed in year of 2007 suggested a routine plaque control for children with disability. Preventive and curative efforts are necessary regarding the fact that disabled children have higher level of poor oral hygiene than the normal children.¹¹

The good knowledge of the dentists on identifying, characterizing, and treating disabled children is an absolute importance. It has been shown from the research result that the dentists still need additional training to improve the knowledge. The percentage of 38.10% of the dentists in primary service in Bandung City incorrectly defined the children with disability and 28.57% of them incorrectly answered the question about physical and mental disability of children.

The high score of the category of fair knowledge shown from the table describes that the dentists know and understand well the characteristic and treatment for the disabled children. However, the sufficient category shows that the dentists in primary health center need additional information and knowledge to identify the children with disability. The disabled children oral health treatment has been written in Ministry of Health Republic of Indonesia Regulation No. 89 year 2015 in accordance to oral health efforts. The efforts are in preventive, promotive, and curative ways.

CONCLUSION

Based on the research, it can be concluded that the dentists' knowledge on the oral health service of children with disability in primary health service based on Ministry of Health Republic of Indonesia Regulation No. 89 year 2015 is sufficient regarding the percentage of 69.73%. This category describes the knowledge of the dentists in treating the disabled children is considered fair but is still weak, seeing from the fact that the dentists do not have sufficient knowledge to identify the disabled children.

REFERENCES

1. Ministry of Health Republic of Indonesia. Peraturan Menteri Kesehatan Republik Indonesia No. 89 Tahun 2015 tentang upaya kesehatan gigi dan mulut. Jakarta: Ministry of Health Republic of Indonesia; 2015. p. 12-3, 171-9.
2. Titien I. Peran dokter gigi dalam tumbuh kembang anak berkebutuhan khusus. *Majalah Kedokteran Gigi* 2012;19(2):176-80.
3. Mcdonald RF, Avery DR. *Dentistry for the child and adolescent*. St. Louis: Mosby; 1994. p. 592-3.

4. Mitsea AG, Karidis AG, Donta-Bakoyianni C, Spyropoulos ND. Oral health status in Greek children and teenagers, with disabilities. *J Clin Pediatr Dent* 2001;26(1):111-8.
5. Al-Maweri SA, Zimmer S. Oral health survey of 6-14-year-old children with disabilities attending special schools Yemen. *J Clin Pediatr Dentist* 2015;39:272-6.
6. Indahwati V, Mantik MFJ, Gunawan PN. Perbandingan status kebersihan gigi dan mulut pada anak berkebutuhan khusus SLB-B dan SLB-C Kota Tomohon. *J e-GIGI (eG)* 2015;3:361-6.
7. Finn SB. *Clinical pedodontics*. 4th ed. Philadelphia: W.B. Saunders Co.; 2003. p. 562-3.
8. Dewanto I. *Penetapan dokter gigi layanan primer di Indonesia*. Yogyakarta: Fakultas Ilmu Kesehatan dan Kedokteran Universitas Muhammadiyah Yogyakarta 2014;21:109-16.
9. Sastroasmoro S, Sofyan I. *Dasar-dasar metodologi penelitian klinis*. 4th ed. Jakarta: Sagung Seto; 2011. p. 98.
10. Dieguez-Perez M, de Nova-Garcia MJ, Mourelle-Martinez MR, Bartolome-Villar B. Oral health in children with physical (cerebral palsy) and intellectual (down syndrome) disabilities: systematic review i. *J Clin Exp Dent* 2016;8(3):e337-e343.
11. Mochizuki K, Tsujino K, Ohtawa Y, Yakushiji M, Nomura K, Ichinohe T, et al. Dental care for physically or mentally challenged at public dental clinics. *Bull Tokyo Dent Coll* 2007;48(3):135-42.