

RESEARCH ARTICLE

OPEN ACCESS

Manuscript received June 11, 2024; revised June 12, 2024; accepted June 13, 2024; date of publication June 30, 2024

Digital Object Identifier (DOI): <https://doi.org/10.35882/ijahst.v4i3.350>

Copyright © 2023 by the authors. This work is an open-access article and licensed under a Creative Commons Attribution-ShareAlike 4.0 International License (CC BY-SA 4.0)

How to cite: Marselin Nainil Afifa, Sri Hidayati, and Sunomo Hadi; Ratih Larasati, "The Effect of Singing Method Counseling on How to Brush Teeth on Debris Index Values in Visually Impaired Children", International Journal of Advanced Health Science and Technology, vol. 4, no. 3, pp. 161-165, June 2024

The Effect of Singing Method Counseling on How to Brush Teeth on Debris Index Values in Visually Impaired Children

Marselin Nainil Afifa¹, Sri Hidayati², and Sunomo Hadi³, Ratih Larasati⁴

^{1,2,3,4} Department of Dental Health, Politeknik Kesehatan Kemenkes Surabaya, Indonesia

Corresponding author: Marselin Nainil Afifa (e-mail: nainilmarselin30@gmail.com).

ABSTRACT Visually impaired children are children with special needs who experience partial or total blindness, visually impaired children themselves have limitations to receive stimulation from their senses. The impact of these obstacles is that they pay less attention to dental health and neglect their dental care, one of which is brushing their teeth. One of the efforts that can be done is to conduct counseling with the singing method on how to brush teeth. The problem in this study is the high value of debris index in blind children at SDLB-A YPAB Surabaya is still in the poor category. This study aims to determine the effect of the singing method on how to brush teeth on the value of the debris index in visually impaired children at SDLB-A YPAB Surabaya. This type of research is Quasy Experiment design with pre post design, with a population of 34 visually impaired children. The data collection instrument used is an observation sheet. The data analysis technique uses the Wilcoxon test. The results showed that there was a significant effect of singing method counseling on how to brush teeth on the value of the debris index in blind children at SDLB-A YPAB Surabaya in 2024.

INDEX TERMS Debris Indexes; Singing Method Counselling; Visually Impaired Childre

I. INTRODUCTION

Visually impaired children are children with special needs who experience partial or total blindness. Visually impaired children are limited and even unable to receive stimulation or information from outside themselves through the sense of sight. This limitation can be stimulated through the utilization of other senses [1]. Based on the results of Riskesdas 2018, it shows that around 45.3% of the largest proportion of dental problems in Indonesia are cavities and toothache, one of the causes of tooth decay is the lack of awareness of brushing teeth [2]. The percentage of daily brushing in Indonesia reached 9.7% and the correct brushing time was only 2.8%. The results of Solanki's research in India, the prevalence of caries in blind children reached around 60% of 354 children while normal or non-visually impaired children had a prevalence of around 31.5% of 350 children. Visually impaired people in Indonesia have oral health as much as (50%) on average in the moderate category. The prevalence of caries in visually impaired

children is higher than in normal children [3]. One of the children with special needs who need special services is visually impaired children. The poor condition of the oral cavity of the visually impaired is due to unsupervised brushing, other factors such as brushing techniques, motor skills and assistance that are still ignored [4]

Visually impaired people usually pay less attention to dental health and ignore dental care, visually impaired children usually show higher scores at debris index, calculus and oral hygiene than normal people [5]. Children with special needs have weaknesses and limitations in self-care, one of which is brushing their teeth. To reduce the number of poor criteria for dental hygiene in visually impaired children, it is necessary to provide preventive action, namely providing oral health education with counseling activities [6]. The results of an initial survey conducted by researchers at SDLB-A YPAB SURAYA showed that the average debris index value was in the poor category, because of the 10

children observed, only 1 child had an average debris index value in the good category.

Special needs children are children who experience physical, mental, intelligence and emotional disorders that require special learning. Children with special needs are also children who are slow or impaired (retarded) who will never succeed in schools for children in general or public schools [7]. There are three classifications of types of children with special needs, namely:

a. Physical Disorder

Is a disorder that occurs in one or more specific organs of the body. As a result, the organs cannot carry out their duties normally.

b. Mental Disorder

Is a child who has deviations in the ability to think critically, logically in responding to the surrounding world.

c. Social Behavior Disorder

Is a child who has difficulty adjusting to the environment, rules, social norms, and others. So it is necessary to seek control measures, both preventive, curative, and repressive [7].

To carry out life activities or communicate with their environment they use non-visual senses that are still functioning, such as the senses of hearing, touch, smell, and taste. However, in terms of intelligence, most blind people are not affected by their disability, except for those who experience double handicapped [8]. The classification of blind people based on their visual power is divided into three, including :

- a. Mildly visually impaired, namely those who have obstacles in vision but can still follow educational programs and are able to do work / activities that use visual function.
- b. Semi-severely visually impaired, i.e. those who partially lose their vision, only by using a magnifying glass can follow ordinary education or be able to read bold text.
- c. Severely visually impaired, i.e. those who cannot see at all [9].

The loss of vision does not have a major impact on the child's motor skills. The child just needs to learn and take a little longer to perform mobility. Over time, children can recognize their environment and move safely and efficiently. Indirectly, the condition of a visually impaired child's disability causes problems in their daily behavior. These behaviors can include excessive eye rubbing, covering or protecting one eye, tilting the head or leaning the head forward, difficulty reading or doing other work that requires the use of the eyes. The limited vision of visually impaired children has an impact on their social skills. They have difficulty in observing and imitating social behavior correctly, social characteristics commonly seen in visually impaired children are personality barriers such as suspiciousness, irritability, and great dependence on people around them [9]

The academic abilities of visually impaired children are generally the same as other normal children. Their visual impairment affects their reading and writing skills, so it can affect the knowledge and skills of visually impaired children. To fulfill their reading and writing needs, learning is needed with appropriate media and methods [9]. Methods can affect the success of a lesson so that it will affect a knowledge for example the method used is not appropriate so that the target feels bored. By singing, children become active so that learning becomes livelier. Children will more easily remember lessons through a fun learning process, so singing is one method that can motivate children in learning. The singing method has a pleasant atmosphere during counseling and can make it easier for children to absorb the messages conveyed [10].

So, this study aims to determine the effect of singing method counseling on how to brush teeth on the value of debris index in visually impaired children at SDLB-A YPAB Surabaya. The academic abilities of visually impaired children are generally the same as other normal children. Their visual impairment affects their reading and writing skills, so it can affect the knowledge and skills of visually impaired children. To fulfill their reading and writing needs, learning is needed with appropriate media and methods [9]. Methods can affect the success of a lesson so that it will affect some knowledge for example the method used is not appropriate so that the target feels bored. By singing, children become active so that learning becomes livelier. Children will more easily remember lessons through a fun learning process, so singing is one method that can motivate children in learning. The singing method has a pleasant atmosphere during counseling and can make it easier for children to absorb the messages conveyed [10].

So, this study aims to determine the effect of singing method counseling on how to brush teeth on the value of debris index in visually impaired children at SDLB-A YPAB Surabaya.

II. METHOD

This study was conducted at SDLB-A YPAB Surabaya which was held in January 2024. This research is analytic research with Quasy Experiment. The population in this study were 34 children in grades 1-6. Primary data collection techniques on the variable debris index value in this study using observation sheets. Data collection procedures were carried out by researchers by measuring the index debris value using an observation sheet where previously the respondent filled out an informed consent form to be willing to become a respondent in this study. Application of disclosing solution on the respondent's teeth to determine the index debris score. Each respondent was given a score of 0 if there was no debris on the teeth, score 1 if there was debris less than 1/3 of the tooth surface or no debris was found but there were stain spots on the teeth, score 2 if there was debris more than 1/3 but less than 2/3 of the surface, score 3 if debris was seen more than 2/3 of the tooth surface.

Researchers used 2 days a week to be given treatment in the form of counseling using the singing method on how to brush teeth, this was done for 3 weeks. The first and second weeks on Thursday and Friday, researchers provided counseling with the singing method on how to brush teeth repeatedly for 15 minutes each meeting. The third week on Thursday, researchers provided counseling with the singing method on how to brush teeth and on Friday researchers took post data to children of SDLB-A YPAB Surabaya. The analysis technique used in this study is the Wilcoxon test to be used to analyze non-parametric statistical tests used to look at two groups of paired data (before and after being given counseling singing methods) in visually impaired children at SDLB-A YPAB SURABAYA.

III. RESULTS

A. CHARACTERISTICS OF RESPONDENTS

Based on the data presented in TABLE 1, it can be concluded that most respondents in this study were male (65%), while only a small proportion were female (35%). In terms of age, most respondents were aged 10-13 years (59%). TABLE 2 shows that the debris index value before being given the singing method counseling on how to brush teeth, the results show that the average child has a debris index value in the bad category 12 out of 34 respondents (35%).

TABLE 3 shows that there is a decrease in the debris index value of respondents after receiving counseling, with 22 out of 34 respondents (65%) in the good category. Indicates that counseling using the singing method can reduce the debris index value in visually impaired children

TABLE 1

Characteristics of Respondent

Characteristics	Frequency	Percentage (%)
Sex		
Male	22	65
Female	12	35
Age		
6-9 years old	14	41
10-13 years old	20	59
Total	34	100

TABLE 2

Frequency Distribution of Debris Index Values Before Singing Method Counseling on How to Brush Teeth

Debris Index Value Category	Frequency	Percentage (%)
Good	1	3
Moderate	21	62
Poor	12	35
Total	34	100

TABLE 3

Frequency Distribution of Debris Index Values After Singing Method Counseling on How to Brush Teeth

Debris Index Value Category	Frequency	Percentage (%)
Good	22	65

Moderate	10	30
Poor	2	5
Total	34	100

TABLE 4

Result of Wilcoxon Test Before and After Singing Method Counseling on How to Brush Teeth

Variable	Categories			p Value
	Good	Moderate	Poor	
Before Counseling	1	21	12	0.000
After Counseling	22	10	2	

Based on TABLE 4, the p value is 0.000, thus it is known that there is a difference in the value of the debris index before and after counseling using the singing method on how to brush teeth. So that H1 is accepted and H0 is rejected, it can be concluded that there is an effect after being given counseling using the singing method on how to brush teeth on the value of the debris index in visually impaired children at SDLB-A YPAB Surabaya

IV. DISCUSSION

The academic abilities of visually impaired children are generally the same as other normal children. Their blindness affects their reading and writing skills, so it can affect the knowledge and skills of visually impaired children. To fulfill their reading and writing needs, learning is needed with appropriate media and methods [9]. The method used in each counseling must be adjusted to the needs of the means so that the message can be given effectively and well received by the target [11]. If the method used by health workers when counseling children with special needs is difficult to understand what has been taught, this can lead to bad habits that have a negative impact on oral hygiene [12].

According to the results of the study, it is known that the debris index score in visually impaired children at SDLB-A YPAB Surabaya is in the poor category. The results of similar research are also known from research conducted by Arianto et al. that an examination of the index debris score was carried out before counseling with video media, the average index debris score was poor.

The decrease in the debris index score in visually impaired children is influenced by counseling using the singing method on how to brush teeth. A decrease in the debris index score can be done by providing counseling with the singing method on how to brush teeth. The loss of vision does not have a major influence on the child's motor state. Children only need to learn and take a little longer to do mobility. Over time children can recognize their environment and move safely and efficiently.

A learning strategy is a series of activities including the use of methods or media and the use of various resources in learning to achieve predetermined goals. Counseling by using

the singing method on how to brush teeth is needed in the delivery of learning. There are several factors that influence the high debris index value before being given counseling on how to brush teeth in visually impaired children at SDLB-A YPAB Surabaya, one of which is the inappropriate counseling method. The use of methods that are not appropriate with the characteristics of visually impaired children can make it difficult for visually impaired children to accept the learning or information conveyed.

Interventions to reduce the debris index score in blind children by counseling using the singing method showed a decrease in the debris index score before and after counseling.

The singing method can provide a pleasant atmosphere when counseling has an effect and can make it easier for children to absorb the messages conveyed [13]. Through singing children become active so that learning becomes more alive. Children will more easily remember lessons through a fun learning process, so singing is one method that can motivate children in learning [10]. This is in line with the opinion expressed by Festiawan, that one of the factors that influence the success of learning is due to learning methods and strategies [14].

This is in line with Indrawati's research where there was a decrease in the debris index value after being given counseling by the singing method. The counseling method can be used as a tool, a motivational strategy for students to get information easily [6]. Meanwhile, according to Rohaeni's research that the advantages of the singing method are fun, develop thinking skills, help build self-confidence, develop a sense of humor, help motor skills and increase closeness in the group [15].

A statement from Timoneno that the pleasant atmosphere created by singing can make it easier for children to absorb information conveyed by the teacher [16]. Hinga & Adu mentioned that singing can create an encouraging atmosphere, especially if it is done together between teachers and students, it is concluded that this singing counseling method can help convey information to visually impaired children effectively [17].

Linking the data from the research results with the S-O-R theory and HL Blum theory showed that the stimulus in the form of providing counseling with a singing method on how to brush teeth for organisms, namely blind children in SDLB-A YPAB Surabaya which can change the health status, namely the debris index. This can be seen from the results of data analysis, namely a decrease in the value of the debris index after being given counseling on how to sing about how to brush teeth which was previously in the medium category to the good category. Health status (debris value) is also influenced by several factors, including the environment of the blind child himself, the behavior of the blind child, offspring and health services [18].

V. CONCLUSION

Based on the results of the research and the previous discussion, it can be concluded that the singing method counseling on how to brush teeth can reduce the debris index

score in visually impaired children. *which* is in accordance with the purpose of the study is to find out the influence of the singing method on how to brush teeth on the value of the debris index in visually impaired children in SDLB-A YPAB Surabaya

Thus it can be said that counseling with the singing method on how to brush teeth has an effect on reducing the debris index score in visually impaired children at SDLB-A YPAB Surabaya. Counseling with the singing method on how to brush teeth can be done regularly once a week, and include learning about health in sports subjects at school.

Recommendations for research development are to develop counseling using singing methods in children with other disabilities using different variations and a larger sample size.

REFERENCES

- [1] D. Atika, M. Arsely, R. Caniago, W. Julisti, and N. Asvio, "Socialization Of Children With Special Needs (Blind Tunanetra) In The Village Community In The Talo Kecil Sub-District Sosialisasi Anak Berkebutuhan Khusus (Anak Tunanetra) Dilingkungan Masyarakat Dusun Bakal Dalam Kecamatan Talo Kecil," *Aplikasi Riset Kepada Masyarakat*, vol. 4, no. 2, pp. 79–83, 2023.
- [2] Kemenkes RI, "Hasil Riset Kesehatan Dasar Tahun 2018," *Kementrian Kesehatan RI*, vol. 53, no. 9, pp. 1689–1699, 2018.
- [3] S. Deynilisa, W. D. Angreini S, S. Nurul A, and B. Nurardiati, "The Influence of Braille Flashcards as a Counseling Media on Various Depths of Dental Caries on the Knowledge of Children with Blind Disabilities Groups," *Formosa Journal of Science and Technology*, vol. 2, no. 3, pp. 791–800, 2023, doi: 10.55927/fjst.v2i3.3060.
- [4] N. Devi, "Efektifitas Media Leaflet Braile dan Phantom Gigi Terhadap Kemampuan Menggosok Gigi Anak Tunanetra," *Jurnal Riset Kesehatan*, pp. 1–23, 2019.
- [5] E. Zahara and Andriani, "Hubungan Perilaku Tuna Netra Dengan Status Kebersihan Gigi Dan Mulut Pada Komunitas Pertuni Di Kota Banda Aceh," *Jurnal Bahana Kesehatan Masyarakat (Bahana of Journal Public Health)*, vol. 3, no. 1, pp. 30–34, 2019, doi: 10.35910/jbkm.v3i1.190.
- [6] L. Indrawati, R. Larasati, and E. Purwaningsih, "Pengaruh Penggunaan Metode Ceramah dan Role Play Terhadap Pengetahuan Kesehatan Gigi Siswa Sekolah Dasar," *Jurnal Ilmiah Keperawatan Gigi (JIKG)*, vol. 2, no. 2, pp. 276–282, 2021.
- [7] J. R. Atmaja, *Pendidikan dan Bimbingan Anak Berkebutuhan Khusus*, Kedua. Bandung: PT REMAJA ROSDAKARYA, 2019.
- [8] I. F. Kristiana and C. G. Widayanti, *Buku Ajar Psikologi Anak Berkebutuhan Khusus 1*. Semarang: UNDIP Press Semarang, 2016.
- [9] A. A. Ayuningtyas, M. I. Maulania, F. N. Fauziah, and Oktavia P. Ramdhani, "Mengenal Lebih Dekat Anak Tunanetra: Karakteristik, Dampak, Perkembangan, Metode Pembelajaran," pp. 1–6, 2023.
- [10] Sulfitra, Mantasiah, S. noviyanti Latuonsina, and A. Fiddienika, "Penerapan Metode Bernyanyi Dalam Meningkatkan Kosakata Bahasa Arab Siswa Kelas VII

- SMPIT Mutiara Makasar,” *Journal of Arabic Education & Arabic Studies*, vol. 2, no. 1, pp. 17–37, 2023.
- [11] V. T. Hulu et al., *Promosi Kesehatan Masyarakat*. 2020.
- [12] S. N. Tauchid, Pudentiana, and S. L. Subandini, “Buku Ajar Pendidikan Kesehatan Gigi,” *Buku Kedokteran Gigi*, EGC, Jakarta, vol. 13, pp. 25–31, 2017.
- [13] D. Septiarini, Isnanto, and S. F. Ulfah, “Pengaruh Penyuluhan Menggunakan Metode Bernyanyi Terhadap Pengetahuan Tentang Cara Memelihara Kebersihan Gigi dan Mulut di TK Hilma Surabaya,” *Jurnal Ilmiah Keperawatan Gigi*, vol. 2, no. 2, pp. 386–394, 2021.
- [14] R. Festiawan, “Belajar dan Pendekatan Pembelajaran,” *Universitas Jenderal Soedirman*, pp. 1–17, 2020.
- [15] S. Rohaeni, “Pengembangan Sistem Pembelajaran Dalam Implementasi Kurikulum 2013 Menggunakan Model Addie Pada Anak Usia Dini,” *Jurnal Instruksional*, vol. 1, no. 2, p. 122, 2020, doi: 10.24853/instruksional.1.2.122-130.
- [16] A. J. J. Timoneno, A. E. L. Takaeb, and Helga J. N. Ndun, “Efektivitas Penggunaan Metode Bernyanyi Terhadap Peningkatan Pengetahuan Siswa A/I Sekolah Dasar Kelas IV Tentang Cara Menyikat Gigi Yang Baik Dan Benar,” *CHMK Health Journal*, vol. 3, no. 3, pp. 248–253, 2019.
- [17] I. A. T. Hinga and A. A. Adu, “Edukasi Kebiasaan Cuci Tangan Dengan Penerapan Metode Bernyanyi Sebagai Upaya Pencegahan Penyakit Menular Pada Murid Sd Negeri Tuadale Kabupaten Kupang,” *Jurnal Pengabdian Kepada Masyarakat*, vol. 5, no. 1, p. 31, 2021, doi: 10.30787/gemassika.v5i1.565.
- [18] Z. A. Bachtar and A. A. Novita, “Hubungan Pengetahuan dengan Sikap Pemeliharaan Kesehatan Gigi pada Siswa SMP Negeri di Kecamatan Medan Denai,” *Jurnal Kedokteran Gigi*, pp. 154–159, 2023.