

Research Report

Strengthening Maternal Social Support and Promoting Child Dental and Oral Health Through “Bu GISELA” Educational Book

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ABSTRACT

Background: Two main influencing factors of dental and oral health in developing countries are attitude and behavior. According to Lawrence Green's theory, a person's behavior is influenced by intention, namely reinforcing factor, predisposing factor, and enabling factor. One of reinforcing factors that has an important role for a mother in adopting and promoting healthy behavior is social support. The study found issues on two social support domains, which were information support and instrumental support. Therefore, “Bu GISELA” or Buku Gigi Sehat Keluarga (Family Dental Health Book) was created to promote dental and oral health by habituating regular tooth-brushing activities. **Purpose:** To promote dental and oral health care and maternal social support in mothers and kindergarteners in Made Urban Village. Bu GISELA was expected to improve informational support in mothers. **Methods:** A total of 20 mothers of kindergarteners in Made Urban Village filled pre-test and post-test questionnaires. The obtained data were then processed using a paired t-test to see the relationship between the two variables. **Results:** A significant increase in knowledge (p -value < 0.05) on post-test compared to pre-test. **Conclusion:** Mothers' dental health knowledge and social support increased significantly after they received “Bu GISELA”.

Keywords: Social support; Dental and oral health; Knowledge; How to brush your teeth.

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INTRODUCTION

Dental and oral health is a fundamental part of general health, and it affects well-being.¹ Poor dental and oral health affects the quality of life.² Two main influencing factors of dental and oral health in developing countries are attitude and behavior. Attitudes and parental behaviors, especially in mothers, in maintaining dental health have a significant influence on children's behavior.

According to the theory of Lawrence Green (1980), as cited by Notoatmodjo (2014),³ A person's behavior is influenced by intention, namely several factors reinforcing factor, predisposing factor, and enabling factor. One of reinforcing factors that has an important role for a mother in adopting and promoting healthy behavior is social support. Social support has four domains, namely, emotional support, instrumental support, informational support, and appraisal support.

An epidemiological study conducted by the PKL team number 1 in Made Urban Village involving 111 respondents, reported a positive relationship between maternal behavior and kindergarteners' dental and oral health as well as a relationship between maternal behavior and higher DEF-T indices. The data were collected using questionnaires distributed to mothers of kindergarteners in Made Urban Village. The study found issues on two social support domains, which were information support and instrumental support.

We prioritized the problems using the Urgency Seriousness and Growth (USG) method and the Nominal Group Technique (NGT) method. Therefore, as a part of an empowerment program, the book “Bu GISELA” was made. The book consisted of illustrated stories about the importance of maintaining dental and oral health by having regular tooth brushing. It was expected that the book would help mothers encourage their children to brush their teeth

correctly and strengthen the social support of the children’s close relatives in order to promote child dental and oral health.

MATERIALS AND METHODS

The empowerment program targeted mothers in order to strengthen their social support and improve children’s dental and oral health in Made Urban Village, Surabaya. The program used “Bu GISELA” illustrated book as the media to disseminate information that social support affects maternal behavior regarding children’s oral health. The targets of this program were mothers, fathers, neighbors, families, and kindergarten teachers in Made Urban Village. The target to be achieved is increasing maternal social support and maternal knowledge about dental health. The expected targets were strengthened by maternal social support and knowledge regarding dental and oral health. The pre-test, evaluation sheets were distributed to mothers before they received the “Bu GISELA” book. The post-test evaluation sheets were distributed to the mothers after they received and read the “Bu GISELA” book. We then compared the evaluation results between pre-test and post-test.

RESULTS

There were 8 questions in the pre-test and post-test. The mean of the pre-test was 6, and the mean of the post-test was 7.35 (Figure 1). The 1.35 increase shows that the participants have learned about the importance of social support towards dental and oral health.

The program was evaluated using pre-test and post-test scores. A paired t-test was then performed to see the relation

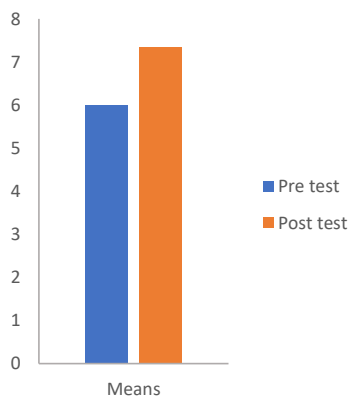


Figure 1. Mothers’ understanding of material.

Table 2. The Results of Paired t-test

	N	Mean	Sig. 2-tailed (p-value <0.05)
Pre-test and Post-test	20	-1.350	0.000

between the two variables. The results of data analysis are presented in Table 2. The result of the paired t-test was -1.350 — minus means that there have been improvements after the program. The significance value was 0.000 (p-value < 0.05). This means that there was a significant increase.

DISCUSSION

The use of illustrated book as a medium for health promotion is not new. Illustrated book are defined as books that contain pictures and stories whose purpose is not to entertain, but to convey certain information and communicate with readers.⁴ In the health sector, picture books have several functions, for example, increasing awareness of an illness, providing information related to disease and treatment procedures, helping to give consideration in determining treatment plans, as well as increasing knowledge about general and specific health.^{5,6} Several studies have also shown the effectiveness of illustrated books for changing health behavior.⁷⁻⁹

The illustrated book was first distributed to 20 mothers of the first-year kindergarteners in Yapida Kindergarten. Prior to distributing the illustrated book, the researcher explained the aim and objective of the research and distributed pre-tests to mothers of kindergarteners. Once finished, the book was then distributed, and the researchers explained how to use the book. Once the mothers read the books, we distributed post-test evaluation sheets to them.

The SWOT analysis: (1) Strength: The book was presumably interesting as there were some pop-ups illustrations to help mothers explaining how to brush teeth correctly to their children. The book was easy to use, and we used plain language for easier understanding. Also, the expense of book production was small. (2) Weakness: The paper quality was not the best, and it took a long time to create pop-up illustrations. (3) Opportunity: There was not much affordable, easy to use, and appealing material for the book. (4) Threat: There are more affordable and newer pop-ups, insufficient funds from the Public Health Center or kindergarten to reproduce this book,

Research shows that using illustrations or cartoons in health education books is more effective than using text alone. This illustrated image can make the reader more focused on the information available, making it possible to recall information.¹⁰

CONCLUSION

Mothers’ knowledge about how to brush teeth correctly, maintain oral health, and the importance of social support for dental and oral health have increased significantly after they read the “Bu GISELA” book. The Public Health Center is expected to continue the empowerment program, the next program is expected to improve, and the next PKL team is expected to provide more information about dental and oral health to the “Bu GISELA” book.

REFERENCES

1. Jackson SL, Vann WF, Kotch JB, Pahel BT, Lee JY. Impact of poor oral health on children's school attendance and performance. *Am J Public Health*. 2011 Oct 1;101(10):1900–6.
2. Thomson WM, Broder HL. Oral–Health–Related Quality of Life in Children and Adolescents. Vol. 65, *Pediatric Clinics of North America*. W.B. Saunders; 2018. p. 1073–84.
3. Soekidjo N. Pengantar ilmu perilaku kesehatan dan pendidikan kesehatan gigi. Jakarta: EGC; 2010. 1–2, 6, 7, 24 p.
4. Dani A. Worry Wart. Razarhawk; 2014.
5. Ankerman D, Seliutina Y. My MS Story Reduced to a Comic, 2014 [Internet]. 2014. Available from: <http://www.healthline.com/health/multiple-sclerosis/diagnosis-story>
6. Brosh A. Hyperbole and a Half: Depression Part 2 [Internet]. 2014. Available from: <http://hyperboleandahalf.blogspot.com/2013/05/depression-part-two.html>
7. Chilman B, Ian R. Medikidz Explain Multiple Sclerosis: What's Up with Ryan's Mom? London: Medikidz; 2014.
8. Clay. Depressed Comix [Internet]. Available from: <https://www.depressioncomix.com/posts/characters/depressed-character-04>
9. Dad's not all there anymore: Lewy Body Dementia comic | Graphic Medicine [Internet]. Available from: <https://www.graphicmedicine.org/dads-not-all-there-anymore-lewy-body-dementia-comic/>
10. Houts PS, Doak CC, Doak LG, Loscalzo MJ. The role of pictures in improving health communication: A review of research on attention, comprehension, recall, and adherence. Vol. 61, *Patient Education and Counseling*. Elsevier Ireland Ltd; 2006. p. 173–90.