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SURVEILLANCE ANALYSIS OF CLEAN AND HEALTHY LIVING BEHAVIOR (CHLB) IN HOUSEHOLD SETTINGS: A CASE STUDY IN LAM GEU EU VILLAGE, PEUKAN BADA SUBDISTRICT, ACEH BESAR REGENCY

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Abstract

Promoting clean and healthy living within households is essential for community well-being. This study employed a quantitative descriptive approach to conduct Public Health and Behavioral Surveillance (PHBS) in Lam Geu Eu Village. The objective of this study is to gather comprehensive data regarding the adoption of clean and healthy lifestyles among Lam Geu Eu Village residents. The study encompasses the entire population of Lam Geu Eu Village, located in the Peukan Bada Subdistrict of the Aceh Besar District, with a total of 473 Family Cards. Among these, a sample of 220 families was selected. The research occurred over a month, from June 22 to July 24, 2023. Results indicate that many clean and healthy living indicators have reached or nearly reached target goals. Key indicators include clean water use, assisted deliveries, and fruit/vegetable consumption. Areas for improvement include eradicating mosquito larvae, increasing physical activity, and promoting handwashing. This study underscores the importance of clean and healthy behaviors in enhancing community well-being and represents a positive step towards improving overall population health.

Keywords: *Clean and Healthy Living Behavior, Household Health, Public Health*

1. INTRODUCTION

The Clean and Healthy Lifestyle is a manifestation of a health-oriented approach within individual, family, and community cultures, aiming to enhance, preserve, and protect health in physical, mental, spiritual, and social aspects (Kemensos RI, 2020). The Clean and Healthy Lifestyle (PHBS) is a practice that every individual should adopt. Creating a healthy life is actually easy and inexpensive compared to the costs incurred for medical treatment when health problems arise. By implementing clean and healthy living behaviors, numerous benefits can be obtained, such as preventing various diseases, increasing productivity, and fostering family harmony (Harahap et al., 2022).

The Clean and Healthy Lifestyle (PHBS) within households is an endeavor to empower household members to be informed, willing, and capable of practicing clean and healthy living behaviors and actively participating in the Health Movement in the Community (Masyarakat, 2011). The general benefits of PHBS include enhancing community awareness and capacity to adopt clean and healthy living practices. This is crucial to enable communities to prevent, anticipate, or address potential health issues. Moreover, by implementing and practicing PHBS, communities are expected to create a healthy environment, thereby enhancing quality of life. In its implementation, the utility of PHBS

can be applied in various areas, such as schools, workplaces, households, and communities (Kemensos RI, 2020).

The Clean and Healthy Lifestyle (PHBS) within households is aimed at achieving PHBS-Compliant Households. A PHBS-Compliant Household practices 10 PHBS behaviors within the household: 1) Assisted childbirth by healthcare professionals; 2) Exclusive breastfeeding for infants; 3) Monthly weighing of toddlers; 4) Use of clean water; 5) Handwashing with clean water and soap; 6) Proper use of hygienic toilets; 7) Weekly elimination of mosquito breeding sites; 8) Daily consumption of fruits and vegetables; 9) Engaging in physical activities daily; 10) No smoking indoors (Masyarakat, 2011).

Starting from the Basic Health Research in 2007, there were nine PHBS indicators designated as indicators of societal behavior (Bambang Purwanto, 2021). The initial Riskesdas provided information that five provinces had PHBS category values exceeding the national average (11.2%). These provinces were DKI Jakarta (23.2%), Bali (17.2%), Riau (16.9%), DIY (16.0%), and East Kalimantan (14.7%).

The Minister of Health of the Republic of Indonesia has established guidelines for promoting the cultivation of a Clean and Healthy Lifestyle, as outlined in Minister of Health Regulation No. 2269/MENKES/PER/XI/2011. This regulation oversees efforts to enhance clean and healthy living behaviors throughout Indonesia by referencing PHBS management patterns, encompassing assessment, planning, implementation, monitoring, and evaluation phases. These efforts aim to empower individuals to independently maintain, enhance, and safeguard their health, contributing to active participation in improving their health status (Masyarakat, 2011).

Basic Health Research conducted in 2007, 2013, and 2018 showed that the proportion of households practicing PHBS over the last decade increased by around 28%. A detailed breakdown of the five-year PHBS proportion reveals an increase from 11.2% (2007) to 23.6% (2013), and further to 39.1% (2018). This significant rise led to the issuance of Minister of Health Decree No. 1457/Menkes/SK/X/2003 regarding the Mandatory Standard Minimum Service (KW SPM) authority in the health sector. The decree aimed to achieve a healthy household rate of 65% by 2010. The release of this standard is expected to contribute to the enhancement of PHBS practices at the household level.

The Health Department of Aceh Besar District began implementing clean and healthy living behavior indicators in households in 2010. The achievement results for 2015 showed that out of 741,362 monitored households, 31.40% had adopted clean and healthy living behaviors. Of these achievements, the lowest contribution and a prevalent issue was indoor smoking, with only 46.67%, exclusive breastfeeding at 77.70%, fruit and vegetable consumption at 83.35%, and physical activity at 87.35%. The depiction of households with clean and healthy living behaviors in Aceh Besar District in 2016 was 33.07%, indicating an increase from the previous year, although the increase was not significant (Fauziah, 2020).

This research is conducted in Lam Geu Eu Village. Lam Geu Eu Village is one of the 26 hamlets within Peukan Bada Subdistrict of Aceh Besar District, located to the north bordering Lam Lumpu Village, south bordering Rima Jeuneu Village, west bordering Glee Gurah Mountain, and east bordering Keuneurum and Paya Tieng Villages. Lam Geu Eu Village comprises five sub-hamlets: 1) Lam Geu Eu; 2) Lam Paseh; 3) Keumiro; 4) Lam Blang; 5) Lam Ujong. Moreover, the objectives of this research is to gather comprehensive data regarding the adoption of clean and healthy lifestyles among Lam Geu Eu Village

residents. The study encompasses the entire population of Lam Geu Eu Village, located in the Peukan Bada Subdistrict of the Aceh Besar District.

2. RESEARCH METHOD

The research design for PHBS surveillance in Lam Geu Eu Village involves a quantitative descriptive study. This study aims to collect data on the clean and healthy living behaviors of Lam Geu Eu Village residents. The population includes all residents of Lam Geu Eu Village, Peukan Bada Subdistrict, Aceh Besar District, totaling 473 Family Cards (KK), with a sample size of 220 KK. The research was conducted within the village over one month, from June 22, 2023, to July 24, 2023.

The anticipated outcome of this surveillance is to gather information about the cleanliness and health level within the community of Lam Geu Eu Village. This encompasses insights into PHBS behavior, factors that hinder such behavior, and recommendations for enhancement. Survey tools include structured interviews and questionnaires, with respondent data confidentiality ensured for research purposes.

To ensure sample representativeness, the number of respondents was determined statistically, considering significance level, margin of error, and population size. Eligible respondents were residents aged above 18 years in Lam Geu Eu Village who volunteered to partake in the survey. PHBS surveillance encompasses planning, data collection, processing, analysis, and report creation, with respondent selection conducted randomly using the village's resident list as a reference. The collected data will be analyzed using descriptive methods to provide an overall picture of PHBS behavior in Lam Geu Eu Village.

3. RESULT AND DISCUSSION

3.1. Univariate Analysis

Table 1. Frequency Distribution of Samples Based on Gender, Age, Occupation, Education, and Income

GENDER

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	188	85.5	85.5	85.5
	Female	32	14.5	14.5	100.0
	Total	**220**	**100.0**	**100.0**	

Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	23-30 TAHUN	13	5.9	5.9	5.9
	31-40 TAHUN	66	30.0	30.0	35.9
	41-50 TAHUN	75	34.1	34.1	70.0
	51-60 TAHUN	37	16.8	16.8	86.8
	61-70 TAHUN	17	7.7	7.7	94.5
	71-80 TAHUN	10	4.5	4.5	99.1
	81-90 TAHUN	2	.9	.9	100.0
	Total	**220**	**100.0**	**100.0**	

JOB

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	**Farmer**	12	5.5	5.5	5.5
	Self-Employed	161	73.2	73.2	78.6
	Civil Servants	21	9.5	9.5	88.2
	Housekeeping	26	11.8	11.8	100.0
		220	**100.0**	**100.0**	

EDUCATION BACKGROUND

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SD	30	13.6	13.6	13.6
	SMP	40	18.2	18.2	31.8
	SMA	124	56.4	56.4	88.2

Based on the univariate analysis table above, it can be concluded that the highest category in the application of clean and healthy living behavior is the category of gender, especially men with a frequency of 188 respondents and a percentage of 85.5%, followed by the employment category, especially self-employed, totaling 161 people with a percentage of 73.2%, then the category of income level of 1-2 million totaling 130 respondents with a percentage of 59.1%, followed by the category of education level where respondents who graduated from high school were more, namely 124 people with a percentage of 56.4%, and finally the category based on age totaling 75 respondents with a percentage of 34.1%.

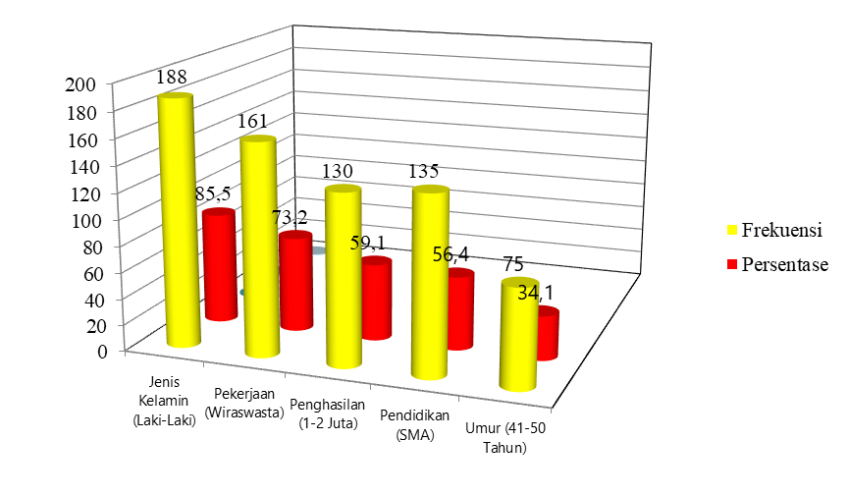

Figure 1. Graph of Univariate Analysis of Clean and Healthy Living Behavior in Lam Geu Eu Village, Peukan Bada District, Aceh Besar Regency

After conducting surveillance of the clean and healthy living behavior program in Lam Geu Eu Village, Peukan Bada Subdistrict, Aceh Besar District, 10 indicators of PHBS have been observed, namely delivery assisted by health workers, exclusive breastfeeding, weighing infants and toddlers, washing hands with soap, using clean water, using clean latrines, eradicating mosquito larvae, consuming fruits and vegetables, physical activity, and the policy of not smoking in the house. Below is a description of the research results:

Table 2. Exclusive Breastfeeding

	Frequency		Percent	Valid Percent	Cumulative Percent
Valid	TIDAK	58	26.4	26.4	26.4
	YA	162	73.6	73.6	100.0
	Total	**220**	**100.0**	**100.0**	

Based on the details of the data above, the community, especially mothers in Lam Geu Eu village who provide exclusive breastfeeding to babies up to 2 years, amounted to 162 respondents with a percentage of 73.6% and those who did not provide exclusive breastfeeding regularly or imperfectly amounted to 58 respondents with a percentage of 26.4%.

Exclusive breastfeeding is the practice of giving breast milk to babies without additional food or drink from birth to 6 months of age. Breast milk, as a natural liquid with nutrients suitable for infants, plays a crucial role in supporting optimal growth and development. Breastfeeding remains recommended until the baby reaches 2 years of age. The main benefits of breastfeeding are the appropriate nutritional content to support the baby's physical growth and mental development, and the contribution to immunity that helps protect the

baby from various infections, such as diarrhea, cough, sore throat, and respiratory problems (Geovandra, 2021).

Table 3. Birth Assisted by a Health Worker

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	TIDAK	10	4.5	4.5	4.5
	YA	210	95.5	95.5	100.0
	Total	220	100.0	100.0	

Based on the data above, it can be seen that the community is aware of the importance of childbirth assisted by health workers, where the number of respondents consisted of 210 with a percentage of 95.5%, and people who did not involve health workers during childbirth amounted to 10 respondents with a percentage of 4.5%.

Handling childbirth by health workers is an important step in reducing maternal and infant mortality. However, there is still a significant number of deliveries that do not receive assistance from health workers, especially in a number of provinces and districts in Indonesia (Hermawan, 2017).

Table 4. Periodic Weighing of Infants and Toddlers

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	TIDAK	43	19.5	19.5	19.5
	YA	177	80.5	80.5	100.0
	Total	220	100.0	100.0	

Based on the data in the table above, it shows that the community, especially mothers in Lam Geu Eu village, Peukan Bada sub-district, Aceh Besar district, who care about the weight of their babies and toddlers, totaled 177 respondents with a percentage of 80.5%, followed by mothers who do not routinely bring babies and toddlers to weigh themselves to the posyandu, totaling 43 respondents with a percentage of 19.5%.

One of the focuses of the posyandu in helping to reduce health problems is nutrition and the health of mothers and toddlers. In addition to bringing the baby to weigh the weight and height can be monitored, the mothers also get counseling, and there is also the provision of additional food. In addition, infants and toddlers who come to the posyandu can obtain five complete basic immunizations which are important for disease prevention. With various activities, it is expected that the growth and development of infants and toddlers can be monitored and the nutritional status of infants and toddlers can be improved (Estuti, 2014).

Table 5. Clean Water Usage

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	TIDAK	35	15.9	15.9	15.9
	YA	185	84.1	84.1	100.0
	Total	**220**	**100.0**	**100.0**	

Based on the data in the table above, it shows that the people of Lam Geu Eu, Peukan Bada Subdistrict, Aceh Besar District, almost 85% use clean water, where the number of respondents is 185 with a percentage of 84.1%, then followed by people who have not used clean water, totaling 35 respondents with a percentage of 15.9%.

One of the main needs in daily life is clean water. We depend on water for various activities such as drinking, bathing, cooking and washing. The level of water quality and health in a village is influenced by the availability of existing facilities and infrastructure. This means that facilities and infrastructure have a central role in improving community welfare and health, as well as indicating the comfort level of a household based on the completeness of water sanitation facilities (Hargono et al., 2022). The achievement of the fulfillment of clean water is the limit of preventing diseases that originate from the non-fulfillment of basic sanitation such as diarrhea (Kurniawati et al., 2020).

Then based on the details of the table 6 below, it can be seen that most of the sanitation in Lam Geu Eu village, Peukan Bada sub-district, Aceh Besar district has used healthy latrines with a total of 216 respondents (98.2%) and those who have not used healthy latrines amounted to only 4 respondents with a percentage of 1.8%.

A family latrine or fecal disposal site is a structure specifically designed to remove human waste. In households that do not have latrines, they use yards, rivers, ponds, or other locations to defecate (Hayana et al., 2020). The presence of a latrine is one of the indicators of healthy housing conditions, along with adequate ventilation, bedrooms, kitchens, garbage disposal, clean water supply, and sewage systems. Latrines come in various forms such as gooseneck models, pour-flush, and others. Fecal management plays an important role because feces are a factor in the transmission of diseases such as dysentery, typhoid, intestinal worms, and cholera (Bita, 2019).

Table 6. Use of Healthy Latrines

		Frequency	Percent	Valid Percent	Cumulative Percent
	TIDAK	4	1.8	1.8	1.8
Valid	YA	216	98.2	98.2	100.0
	Total	220	100.0	100.0	

Table 7. Handwashing with Soap

		Frequency	Percent	Valid Percent	Cumulative Percent
	TIDAK	20	9.1	9.1	9.1
Valid	YA	200	90.9	90.9	100.0
	Total	220	100.0	100.0	

Based on the table 7 above, it shows that the people of Lam Geu Eu village, Peukan Bada sub-district, Aceh Besar district, have mostly practiced hand washing with soap with a total of 200 respondents (90.9%) and those who do not practice hand washing with soap are 20 respondents with a percentage of 9.1%.

Implementing Handwashing with Soap (HWWS) is a simple, practical, economical, and effective method to prevent various diseases. Some diseases that can cause death can be minimized through proper hand washing habits. Examples include diarrhea and ARI, which are often the leading causes of death, especially in children. In addition, diseases such as hepatitis, typhus and avian flu can also be avoided through consistent HWWS practices (Al-Khawaldeh et al., 2015).

While the data in the table 8 below shows that the people of Lam Geu Eu village, Peukan Bada sub-district, Aceh Besar district are concerned about mosquito larvae nests around their residence, the data from the survey results show that there are 206 respondents with a percentage of 93.6% who have eradicated mosquito larvae, while those who do not carry out mosquito larvae eradication activities are 14 respondents with a percentage of 6.4%.

Routinely conduct Periodic Flick Checks (PJB) in the area where you live. LGT is the act of checking and eliminating mosquito breeding sites inside the house, such as bathtubs, toilets, flower pots, refrigerator surfaces, as well as outside the house, such as waterways, and so on. This process should be carried out on a weekly schedule. In addition, also perform Mosquito Nest Eradication (PSN) by applying the 3 M principles of Draining, Burying, Closing (Nurhajati, 2015).

Table 8. Mosquito Larvae Exterminator

		Frequency	**Percent**	**Valid Percent**	**Cumulative Percent**
	TIDAK	14	6.4	6.4	6.4
Valid	YA	206	93.6	93.6	100.0
	Total	**220**	**100.0**	**100.0**	

Table 9. Consuming Vegetables and Fruit

		Frequency	Percent	Valid Percent	Cumulative Percent
	TIDAK	10	4.5	4.5	4.5
Valid	YA	210	95.5	95.5	100.0
	Total	220	100.0	100.0	

Based on the data in table 9 above, it can be seen that community activity on the indicator of consuming vegetables and fruit amounted to 210 respondents with a percentage of 95.5, followed by people who did not consume vegetables and fruit as many as 10 respondents with a percentage score of 4.5%.

Eating vegetables and fruits as recommended can increase the concentration of micronutrients in the body. However, if the intake is lacking, the risk of developing non-communicable diseases (NCDs) may increase. Inadequate consumption of vegetables and fruits (less than 5 times a day) may increase the risk of developing cardiovascular diseases. Several studies have shown that a diet rich in vegetables and fruits is directly linked to a lower risk of NCDs such as cancer, coronary heart disease and other chronic diseases. Eating adequate amounts of fruits and vegetables in adolescence has a positive impact on long-term health (Woisiri et al., 2022).

Table 10. Physical Activity

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	TIDAK	14	6.4	6.4	6.4
	YA	206	93.6	93.6	100.0
	Total	220	100.0	100.0	

The data above shows that physical activity activities carried out by most of the Lam Geu Eu village community amounted to 206 respondents (93.6%) followed by people who did less physical activity amounted to 14 respondents with a percentage of 6.4%.

Physical activity involves the movement of limbs that results in the use of energy, which has an important role in maintaining physical and mental health and improving the quality of life to stay healthy and fit throughout the day. Types of physical activity can include both daily actions and sports. Everyday actions include walking, gardening, lawn care, laundry, car maintenance, mopping floors, going up and down stairs, and carrying groceries. Meanwhile, exercise also has a variety of options, such as push-ups, light jogging, playing soccer, yoga, fitness, and lifting weights or heavy items. Doing regular physical activity for at least 30 minutes every day has a positive effect on the health of the heart, lungs and other organs (Geovandra, 2021).

Table 11. Not Smoking in the House

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	TIDAK	89	40.5	40.5	40.5
	YA	131	59.5	59.5	100.0
	Total	220	100.0	100.0	

The data above indicates that the community members who do not engage in indoor smoking activities amount to 131 respondents (59.5%), while those who partake in indoor smoking activities are 89 respondents, constituting 40.5%.

Not smoking indoors refers to the practice of maintaining an environment free from cigarette smoke exposure within the house. This involves avoiding smoking in enclosed spaces such as living rooms, bedrooms, and family areas to safeguard the health and comfort of household occupants, particularly children and other family members. Household exposure to cigarette smoke carries serious health consequences, especially for non-smoking family members, particularly children. Cigarette smoke contains harmful chemicals such as nicotine, carbon monoxide, and small particles that can easily be inhaled and absorbed into the body. Its impacts encompass an increased risk of respiratory infections, respiratory problems like asthma, eye and throat irritation, as well as the risk of heart disease and cancer. Long-term exposure can result in detrimental chronic effects and compromise indoor air quality. Therefore, taking action to avoid smoking indoors becomes crucial in preserving the overall health and well-being of family members (American Lung Association, 2020).

Based on the descriptions in each table above, it can be concluded that several indicators have met the clean and healthy living behavior program targets in Lam Geu Eu Village, Peukan Bada Subdistrict, Aceh Besar District. The highest indicator data is for the use of proper sanitation facilities, with 216 respondents (98.2%), followed by indicators of assisted childbirth by healthcare personnel and consuming vegetables and fruits, each with 210 respondents, constituting 95.5%. This is followed by the mosquito larvae eradication and physical activity indicators, with a total of 206 respondents, accounting for 93.6%. Subsequently, the indicator for handwashing with soap comprises 200 respondents (90.9%), clean water indicator with 185 respondents, constituting 84.1%, followed by the regular weighing of infants and toddlers with 177 respondents, making up 80.5%, and exclusive breastfeeding indicator with 162 respondents and a percentage of 73.6%. Finally, the indicator for not smoking indoors is represented by 131 respondents, with a percentage of 59.5%.

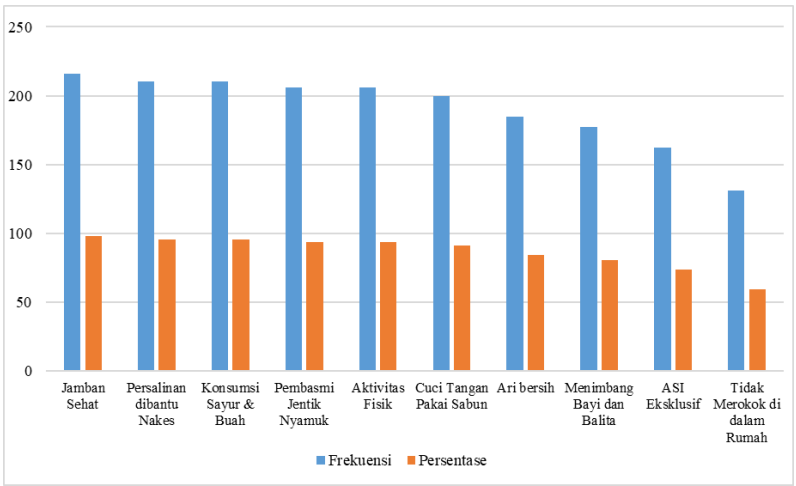

Figure 3. Graph of Clean and Healthy Living Behavior Indicators in Lam Geu Eu Village, Peukan Bada Sub-district, Aceh Besar District

3. CONCLUSION

Surveillance analysis of clean and healthy living behaviors in Lam Geu Eu Village, Peukan Bada Sub-district, Aceh Besar District, has shown that most indicators of clean and healthy living behaviors have reached or are close to program targets. The indicators with the highest percentages are the use of clean water, delivery assisted by health personnel, and consumption of vegetables and fruits. However, there is room for improvement in several indicators such as mosquito larvae eradication, physical activity, and handwashing with soap. The awareness of the importance of clean and healthy living behaviors in the community is a positive step in improving the welfare and health of the population.

However, more intensive efforts need to be made in educating and promoting clean and healthy living behaviors to the community, especially in areas that still need improvement such as mosquito larvae eradication, physical activity, and handwashing with soap. Counseling, campaigns, and other educational activities can be an effective way to increase public awareness and knowledge about the benefits of clean and healthy living behaviors. In addition, collaboration between local governments, health institutions, and local communities can also contribute to encouraging better implementation of PHBS in the community. With these measures, it is hoped that the health level and quality of life of residents in Lam Geu Eu Village can continue to improve sustainably.

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