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Analysis of the sanitation hygiene conditions of DAMIU handlers in Bantan District, Bengkalis Regency

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Abstract

Background: Clean water is one of the vital human needs that must be considered hygiene sanitation. At this time most people use refilled water to meet their daily needs, if sanitation is not guaranteed, it can cause disease. One of the sanitary hygiene that needs to be considered at the Refill Drinking Water Depot (DAMIU) is the sanitation hygiene of the workers. This study aims to determine the sanitary hygiene conditions of DAMIU workers in Bantan District, Bengkalis Regency, where based on the results of the preliminary study there are still many DAMIU workers who ignore their sanitary hygiene.

Method: This research is a descriptive study to describe the sanitation hygiene conditions of DAMIU workers. The data in this study were obtained by direct observation and interviews with 12 DAMIU.

Results: The results showed that all workers were in good health and free from infectious diseases and were not carriers of disease germs, all workers did not use clean and tidy work clothes, 92 percent did not have their health checked regularly (at least once a year), 75 percent did not wash hands with soap and running water every time they serve consumers, 58 percent each does not have a training certificate and have hygienic behavior. It is hoped that the relevant agencies can follow up on this situation so that people can consume healthy water

Conclusion: Based on the results of the study it can be concluded that DAMIU handlers are in good health and free from infectious diseases, however, they still behave unhygienic, especially in using clean and tidy work clothes, do not have regular health checks and do not wash their hands with soap every time they serve consumers.

Keywords: Sanitary hygiene, handlers, refill drinking water depots (DAMIU)

Abstrak

Latar Belakang: Air bersih merupakan salah satu kebutuhan vital manusia yang harus diperhatikan hygiene sanitasinya. Pada saat ini sebagian besar masyarakat menggunakan air isi ulang untuk memenuhi kebutuhan sehari-hari, apabila hygiene sanitasinya tidak terjamin maka akan dapat menyebabkan penyakit. Salah satu hygiene sanitasi yang perlu diperhatikan pada Depot Air Minum Isi Ulang (DAMIU) yaitu hygiene sanitasi pekerjanya. Penelitian ini bertujuan untuk mengetahui kondisi higiene sanitasi pekerja DAMIU di Kecamatan Bantan Kabupaten Bengkalis, dimana berdasarkan hasil studi pendahuluan masih banyak pekerja DAMIU yang tidak memperhatikan higiene sanitasinya.

Metode: Penelitian ini merupakan penelitian deskriptif untuk menggambarkan kondisi hygiene sanitasi pekerja DAMIU, data pada penelitian ini diperoleh dengan cara observasi dan wawancara secara langsung pada 12 DAMIU.

Hasil: Hasil penelitian menunjukkan bahwa seluruh pekerja dalam keadaan sehat dan bebas dari penyakit menular serta tidak menjadi pembawa kuman penyakit, seluruh pekerja tidak

menggunakan pakaian kerja yang bersih dan rapi, 92 persen tidak memeriksakan kesehatan secara rutin (minimal 1 tahun sekali), 75 persen tidak mencuci tangan dengan sabun dengan air mengalir setiap melayani konsumen, masing-masing 58 persen tidak memiliki sertifikat pelatihan dan berperilaku hygiene. Diharapkan dinas terkait dapat menindaklanjuti keadaan ini sehingga masyarakat dapat mengkonsumsi air yang sehat

Kesimpulan: Berdasarkan hasil penelitian dapat disimpulkan bahwa penjamah DAMIU dalam keadaan sehat dan bebas dari penyakit menular, hanya saja masih berperilaku tidak hygiene terutama pada penggunaan pakaian kerja yang bersih dan rapi, tidak memeriksakan kesehatan secara berkala dan tidak cuci tangan dengan sabun setiap melayani konsumen.

Kata kunci: Higiene sanitasi, Penjamah, Depot Air Minum Isi Ulang (DAMIU)

INTRODUCTION

Humans need water for all activities in their lives, of which 70 percent of these needs are used to fulfill agricultural activities, 22 percent for industrial activities, the remaining 8 percent is for domestic markets in households. The need for clean water in households, especially for consumption, must meet health requirements in accordance with Minister of Health Regulation Number 492 of 2010. At this time, PDAMs are unable to supply water to meet community needs due to limited sources of raw water, especially during the dry season. In response to this challenge, currently, there are many Refill Drinking Water Depot (DAMIU) businesses developing. In 2019 the number of DAMIUs in Indonesia totaled 51,971, but only 20,532 (39.51%) met the requirements. This situation shows the increasing need for clean water in the community, especially clean water for consumption (1).

The need for clean water is not only increasing in developing countries like Indonesia but also in developed countries like the United States. Data obtained from the City of Chicago and Los Angeles each person needs 800 and 600 liters of clean water, in France, to be precise, in the City of Paris, as much as 480 liters, in Japan. to be precise in Tokyo City as much as 530 liters, in Sweden to be precise in Uppsala City as much as 750 liters per capita per day. According to WHO, the needs of each country are different, where based on calculations in developed countries, each person needs 60-120 liters of water per day, while in developing countries

like Indonesia, each person needs 30-60 liters of water per day (2).

Based on data from Basic Health Research (RISKESDAS) in Indonesia in 2018, 46.5 percent of households consumed more than 100 liters/person/day of water, which means that 53.5 percent of households did not have access to clean water optimally. In 2018 data was obtained from the National Socioeconomic Survey (SUSENAS) which showed that as many as 36.28 percent of households, both in urban and rural areas, used DAMIU to meet their needs for clean water consumption (3).

DAMIU is a business entity that manages refilled drinking water (bulk water) consumed by the community. The community prefers to refill drinking water because the price is cheaper than bottled water, therefore the implementation of DAMIU must be in accordance with existing regulations (4). Implementation of the DAMIU is regulated in Permenkes Number 43 of 2014, concerning Hygiene Sanitation of Drinking Water Depots, as well as Decree of the Minister of Industry and Trade of the Republic of Indonesia Number 651/MPP/Kep/10/2004 concerning Technical Requirements for Drinking Water Depots and Trade, wherein the regulations explain how the technical aspects of implementing DAMIU both in terms of processing technology and health, so that proper attention must be paid to sanitary hygiene (5).

DAMIU sanitation hygiene that does not comply with the requirements will become a health risk to the people who use it for their daily needs. One of the sanitary hygiene that needs to be considered is DAMIU sanitary

hygiene for handlers, Regulation of the Minister of Health of the Republic of Indonesia Number 43 of 2014 states that handlers at least meet the healthy aspects and are free from infectious diseases and are not carriers of pathogenic germs, have hygienic and sanitary behavior every time they serve consumers between others, namely washing hands with soap and running water every time serving consumers, wearing clean and tidy work clothes, and not smoking every time serving consumers (6).

Bengkalis is one of the districts in Riau Province that uses DAMIU a lot for their daily needs. Based on the Riau Province Health Profile data for 2020, it was found that only 29 percent of drinking water facilities met the requirements, this district is the worst district in terms of drinking water facilities that meet the requirements (7). Bantan District is one of the sub-districts in the district, based on an initial survey conducted at 4 DAMIUs there, it was found that 3 out of 4 (75%) handlers did not wash their hands before serving consumers, no employees wore work clothes and did not regular health checks, therefore researchers are interested in conducting research related to the sanitation hygiene of DAMIU handlers in the area, with the aim of knowing the extent of sanitary hygiene of DAMIU handlers in the area.

METHOD

This research is a descriptive study, to describe the sanitary conditions of DAMIU handlers. The research was conducted in Bantan District, Bengkalis Regency in 2019. The total population was 12 DAMIU with total sampling as a sampling technique (all populations were sampled). The type of data used is primary data and secondary data. The data collection tool in this study is a sheet checklist or observation with several lists of questions based on the Minister of Health of the Republic of Indonesia Number 43 of 2014. Considering that this type of research is descriptive, it only uses univariate analysis to explain the characteristics of each variable being studied. The analysis produces a display of frequency and percentage distributions for categorical data.

RESULTS

Bantan District is bordered by, to the north by the Malacca Strait, to the south by Bengkalis District, to the west by Bengkalis District and the Malacca Straits, and to the east by the Malacca Straits. This district has 9 villages. The population is 44,567 people. On average, the villagers drink water from rainwater, but now they drink a lot of water from DAMIU. Condition hygiene Sanitation of DAMIU handlers in this District can be seen in the table below.

Table 1. Sanitary Hygiene Conditions for DAMIU Handlers, Bantan District, Bengkalis Regency

No	Description	Results			
		MS	%	TMS	%
1	Healthy and free from infectious diseases	12	100	0	0
2	Do not become carriers of germs	12	100	0	0
3	Behave in hygiene and sanitation every time serve consumers	5	42	7	58
4	Always wash your hands with soap and running water everytime you serve customers	3	25	9	75
5	Use clean and neat work clothes	0	0	12	100
6	Conduct regular health checks at least 1 (once) a year	1	8	11	92

No	Description	Results			
		MS	%	TMS	%
7	The operator/responsible person/owner has a certificate of having attended the drinking water depot sanitation hygiene course	5	42	7	58

Source: primary data

Is:

MS: Qualify

TMS: Did not fulfill the conditions

Based on table 1, it was found that 100 percent of handlers were free from infectious diseases and did not carry disease germs, 58 percent of handlers did not behave in sanitary hygiene every time they served consumers, 75 percent of handlers did not wash their hands with running soap and water every time they served consumers, 100 percent of handlers do not wear work clothes, 92 percent of handlers do not have regular health checks, and 58 percent of handlers do not have a certificate of having taken a drinking water depot sanitation course.

DISCUSSION

100 percent fulfill the requirements, namely the condition that the handlers are free from infectious diseases and do not carry disease germs, where the handlers are not suffering from diarrhea, ulcers, skin diseases, coughs, and colds during the interview. This research is in line with research conducted by R. I. Saba, S. S. Maddusa, and J. M. Umboh in 2019, where 100 percent of DAMIU handlers who were in the Working Area of the Aer Tembahga Health Center were found to be in good health and free from infectious diseases (8). The results of this study are also in line with the results of F. Mairizki's research in 2019, it was found that 100 percent of the

handlers were healthy and free of infectious diseases (especially diarrheal diseases) and were not carriers of germs (9). Conditions like this will benefit consumers because consumers do not have to worry about disease transmission from handlers.

Based on the results of research on the sanitary hygiene behavior of handlers when serving consumers, it was found that most of the handlers smoked and talked during the production process. Situations like this are certainly not good to do because cigarette ash can contaminate drinking water, then when talking during production it is feared that the water could enter the water, the handler is the person who has direct contact with the equipment, and the production process until the water reaches the consumer. This research is in line with research conducted by M. Syahril, M. Nyorong, and N. Aini which stated that at the level of producers, sellers, and consumers, drinking water contamination can occur. Handlers who don't spit carelessly, don't chat, don't eat and drink, don't smoke, and don't scratch while working will reduce the potential for germ contamination. The mouth is a breeding ground for bacteria, so handlers should wear a mask when working, as well as nails and hands which often cause cross-contamination. Handlers who do not pay attention to sanitary hygiene can spread disease (10).

The results also showed that most handlers did not wash their hands with soap under running water. The results of this study are in line with research conducted by M. Umah and R Andriyani in 2018 where handlers did not make it a habit to wash their hands with soapy water in running water, and hand hygiene that was not maintained caused contamination of refill drinking water. The activity of washing hands with soap on running water will remove microbes, for this reason, it is better if a hand-washing facility is prepared so that handlers can get used to washing hands before work (11). In this study, most DAMIUs did not have hand washing facilities, so handlers did not carry out these activities. Some DAMIU owners feel that it is not important to make a place to

wash their hands, if they want to wash their hands they can use a hose. DAMIU business owners should prepare all the requirements so that they comply with the standards and have an awareness of the importance of sanitation hygiene in their business, there is a hand washing area and direction and supervision from the business owner, so the committee members will have the CTPS habit. This is in line with research conducted by A. Meldawati et al in 2017, where it was found that low sanitation hygiene at drinking water depots in Tanpan District was due to the entrepreneur's awareness of the importance of sanitation hygiene in carrying out production for DAMIU handlers is still low, Entrepreneurs consider that hygiene sanitation has not become something that can increase profits. This situation is also the same as the results of R. Faujiah and A. Retno's research where CTPS activities were not carried out properly due to a lack of knowledge and awareness of the owner or handler.

The results showed that all handlers did not use clean clothes. Awareness of handlers is still lacking in clothing, based on observations there are handlers who do not wear tops, only wear shorts, and do not use shoes when working. This situation will certainly harm consumers. This research is in line with the research conducted by R. Faujiah and R. Andriani where it was found that handlers wear shorts and do not wear tops. It is better if handlers wear clean, uniformed, closed clothes, and these clothes are specifically worn while on duty, besides they must use ID. This research is also in line with research conducted by M. Syahril, M. Nyorong, and N. Aini, it was found that most of the handlers did not meet the requirements as much as 56.45 percent. Handlers should wear clean clothes and wear shoes when working, if the clothes are not clean, the dirt from the clothes can contaminate treated water, machinery, and other equipment, besides that it can also affect the aesthetics of consumers. Hosts can maintain their safety by using shoes, the use of these shoes can also prevent athlete's feet.

The results showed that the majority of employees did not carry out regular health checks

CONCLUSION

Based on the results of the study, it can be concluded that DAMIU handlers are in good health and free from infectious diseases, it's just that sanitation hygiene behavior in DAMIU handlers in Bantan District, Bengkalis Regency is still low, especially in the use of clean clothes, periodic health checks, CPTS, sanitary hygiene behavior every time they serve consumers and the lack of courses on handlers.

REFERENCES

1. Alfian AR, Firdani F, Sari PN. EDUKASI HIGIENE SANITASI PENJAMAH DEPOT AIR MINUM ISI ULANG DI KOTA PARIAMAN. 2022;5(1):58-64.
2. Meldawati A, Sidomulyo P, Inap R, et al. KAJIAN KELAYAKAN KUALITAS AIR MINUM ISI ULANG BERASAL DARI AIR TANAH DI KECAMATAN TAMPAN. Published online 2017:98-105.
3. Ummah M, Adriyani R. Hygiene and Sanitation of Drinking Water Depot and Microbiology Quality of Drinking Water in Ngasem Primary Healthcare Area, Kediri, East Java. *J Kesehat Lingkung.* 2019;11(4):286. doi:10.20473/jkl.v11i4.2019.286-292
4. Faujiah R, Andriani R. Hygiene and Sanitation of Refill Drinking Water Depo at Kertosari Banyuwangi District. *Prev J Kesehat Masy.* 2020;11(2):63-74. doi:10.22487/preventif.v11i2.60
5. Mawarni EDA, Moesriati A. Kajian Kualitas Produksi Depot Air Minum Isi Ulang Kecamatan Genteng Kota Surabaya dengan Metode Failure Mode and Effect Analysis (FMEA). *J Tek ITS.* 2021;10(2). doi:10.12962/j23373539.v10i2.64156
6. RI P. Peraturan Menteri Kesehatan Republik Indonesia Nomor 43 tahun 2014. *Lincolin Arsyad.* 2014;3(2):1-46. <http://journal.stainkudus.ac.id/index.php/equilibrium/article/view/1268/1127>

7. Dinkes R. Profil Kesehatan Provinsi Riau. *J Chem Inf Model*. 2021;(9):1-287.
8. Saba RI, Maddusa SS, Umboh JM. HIGIENE SANITASI DAN KANDUNGAN BAKTERI PADA DEPOT AIR MINUM ISI ULANG (DAMIU) DI WILAYAH KERJA PUSKESMAS AERTEMBAGA KOTA PENDAHULUAN Air sangat berperan penting Hampir dalam semua kegiatan lainnya . Penggunaan air minum yang paling utama adalah sebagai. 2019;8(3):69-74.
9. Mairizki F. Analisis Higiene Sanitasi Depot Air Minum Isi Ulang (Damiau) Di Sekitar Universitas Islam Riau. *J Endur*. 2017;2(3):389.
doi:10.22216/jen.v2i3.2428
10. Syahril M, Nyorong M, Aini N. Pelaksanaan Higiene Dan Sanitasi Pada Depot Air Minum Isi Ulang. *J Kesmas Prima Indonesia*. 2022;2(1):46-53.
doi:10.34012/jkpi.v2i1.895
11. Wulandari S, Siwiendrayanti A, Wahyuningsih AS. Higiene Dan Sanitasi Serta Kualitas Bakteriologis Damiau Di Sekitar Universitas Negeri Semarang. *Unnes J Public Health*. 2015;4(3):8-15.