

RINGKASAN

Susan Dwijayanti, Program Magister Ilmu Lingkungan Pascasarjana Universitas Jenderal Soedirman. Pengaruh Jarak Tempat Buang Air Besar Sembarangan Terhadap Kualitas Air Sumur dan Kejadian Diare di Desa Karanganyar Gandrungmangu Cilacap. Pembimbing Prof. Dr. Agatha Sih Piranti, M.Sc dan Roy Andreas, S.Si., M.Si., Ph.D.

Buang Air Besar Sembarangan dapat menyebabkan pencemaran air. Air yang telah tercemar dengan feses dapat menimbulkan berbagai macam penyakit pencernaan seperti kolera, tifus, disentri, cacangan dan diare. Berdasarkan data Sanitasi Total Berbasis Masyarakat (STBM) Kementerian Kesehatan pada tahun 2021 jumlah masyarakat yang masih Buang Air Besar Sembarangan sebanyak 21.039.291 KK (29,43%), Provinsi Jawa Tengah sebanyak 2.895.776 KK (27,64%), Kabupaten Cilacap sebanyak 104.957 KK (21,21%), Kecamatan Gandrungmangu 3.425 KK (13,14%) (Kemenkes RI, 2021) dan Desa Karanganyar 224 KK. Tujuan penelitian yaitu 1) Mengkaji pengaruh jarak tempat Buang Air Besar Sembarangan terhadap jumlah bakteri *E. coli* di air sumur gali Desa Karanganyar Gandrungmangu, Cilacap 2) Mengkaji hubungan jumlah bakteri *E. coli* dengan tingkat kesehatan masyarakat khususnya diare di Desa Karanganyar Gandrungmangu, Cilacap, 3) Memetakan persebaran jumlah bakteri *E. coli* di sumur gali dan tingkat kesehatan masyarakat khususnya diare Desa Karanganyar, Gandrungmangu, Cilacap.

Penelitian kuantitatif dengan desain penelitian observasional analitik dengan pendekatan *cross sectional*. Hasil penelitian ada pengaruh Buang Air Besar Sembarangan terhadap jumlah bakteri *Escherichia coli*. Hasil penelitian menunjukkan setelah jarak sumur gali dengan lokasi BABS >15 meter jumlah bakteri *Escherichia coli* 0 MPN/100 mL. Terdapat hubungan jumlah bakteri *E. coli* dengan tingkat kesehatan masyarakat khususnya diare di Desa Karanganyar Kecamatan Gandrungmangu Kabupaten Cilacap. Persebaran jumlah bakteri *E. coli* di sumur gali dan tingkat kesehatan masyarakat di Desa Karanganyar Kecamatan Gandrungmangu Kabupaten Cilacap tersebar disetiap wilayah penelitian dan RW 02 seluruhnya tidak memenuhi syarat karena mengandung bakteri *E. coli*, dan berisiko rendah mengalami gangguan kesehatan masyarakat. Upaya yang dapat dilakukan untuk meningkatkan tingkat kesehatan masyarakat yang disebabkan karena kontaminasi bakteri *E. coli* pada air yang bersumber dari kotoran manusia yaitu edukasi pada masyarakat untuk tidak melakukan Buang Air Besar Sembarangan, memperhatikan kondisi fisik konstruksi sumur gali, serta mengoptimalkan program Sanitasi Total Berbasis Masyarakat (STBM) terutama pilar satu yaitu Stop Buang Air Besar Sembarangan.

Kata kunci: BABS; *Escherichia coli*; QMRA

SUMMARY

Susan Dwijayanti, Master Program in Environmental Science, Postgraduate, Jenderal Sudirman University. The Influence of the Distance of Indiscriminate Defecation on the Quality of Well Water and the Incidence of Diarrhea in Karanganyar Gandrungmangu Village, Cilacap. Advisor Prof. Dr. Agatha Sih Piranti, M.Sc and Roy Andreas, S.Si., M.Sc., Ph.D.

Open defecation can cause water pollution. Water that has been contaminated with feces can cause various digestive diseases such as cholera, typhus, dysentery, intestinal worms and diarrhea. Based on data from the Ministry of Health's Community-Based Total Sanitation (STBM) in 2021, the number of people who still defecate openly is 21,039,291 families (29.43%), Central Java Province as many as 2,895,776 families (27.64%), Kabupaten Cilacap as many as 104,957 families (21.21%), Gandrungmangu District 3,425 families (13.14%) and Karanganyar Village 224 families. The research objectives are 1). To examine the effect of open defecation distances on the number of *E. coli* bacteria in dug well water in Karanganyar Gandrungmangu Village, Cilacap 2) To examine the relationship between the number of *E. coli* bacteria and the level of public health, especially diarrhea in Karanganyar Gandrungmangu Village, Cilacap, 3). Map the distribution of the number of *E. coli* bacteria in dug wells and the level of public health, especially diarrhea in Karanganyar Village, Gandrungmang, Cilacap.

Quantitative research with analytic observational research design with a *cross sectional* approach. The results showed that there was an effect of open defecation on the number of *Escherichia coli* bacteria. The results showed that after the distance between the dug wells and the open defecation location was >15 meters, the number of *Escherichia coli* bacteria was 0 MPN/100 mL. There is a relationship between the number of *E. coli* bacteria and the level of public health, especially diarrhea in Karanganyar Village, Gandrungmangu District, Cilacap Regency. The distribution of the number of *E. coli* bacteria in dug wells and the level of public health in Karanganyar Village, Gandrungmangu District, Cilacap Regency are scattered in each research area and RW 02 as a whole does not meet the requirements because it contains *E. coli* bacteria, and has a low risk of experiencing public health problems. Efforts that can be made to improve the level of public health caused by contamination of *E. coli* bacteria in the air originating from human waste are educating the public not to defecate, paying attention to the physical condition of dug well construction, and optimizing the Community-Based Total Sanitation (STBM) especially one pillar, namely Stop Open Defecation.

Keywords: BABS; *Escherichia coli*; QMRA

