

Analisis Temporal Keandalan Self-Supply sebagai Sumber Air Minum di Kota Bekasi (Lokasi Studi: Kelurahan Jatiluhur, Kelurahan Sumur Batu, dan Kelurahan Jatirangga) = Temporal Analysis of Self-Supply Reliability As a Source of Drinking Water In Bekasi City (Study Location: Jatiluhur Village, Sumur Batu Village, And Jatirangga Village)

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Abstrak

Kota Bekasi hanya melayani masyarakat yang menggunakan PDAM sebesar 26.8%, sehingga sebagian besar masyarakat masih menggunakan sumber air berasal dari air tanah. Air tanah tersebut digunakan sebagai sumber air minum melalui sistem self-supply. Saat ini keandalan self-supply masih menjadi isu di masyarakat walaupun sumber air ini merupakan salah satu sumber yang sangat terjangkau. Pemantauan yang dilakukan secara kontinu selama delapan bulan kepada responden dilakukan guna mengetahui perilaku sumber air minum mereka, termasuk rasa, warna, bau, ketersediaan, dan keamanannya melalui persepsi rumah tangga. Tujuan dari penelitian ini adalah untuk mengetahui penilaian keandalan sumber air minum self-supply, mengetahui perbandingan penilaian keandalan antara self-supply dan non self-supply, serta mengetahui faktor yang mempengaruhi dari keandalan self-supply. Metode penelitian yang digunakan adalah survei melalui telepon kepada responden dan analisis STATA 16 dengan uji Chi-Square, uji korelasi Phi, dan analisis Regresi Logistik. Berdasarkan pengolahan data yang dilakukan, maka penilaian keandalan sumber air minum menghasilkan nilai untuk skala rumah tangga sebesar rata-rata keandalan sumur bor adalah 92% dan 74% sumur gali. Sedangkan berdasarkan skala kota, diseluruh bulan selama pemantauan menghasilkan nilai keandalan 15 poin sehingga baik sumur bor dan sumur gali bernilai andal diseluruh bulan, meskipun sumur gali mendapatkan penilaian lebih rendah. Perbandingan analisis penilaian keandalan antara self-supply dan non self-supply menghasilkan $P = 0,028$ ($P < 0,05$) berdasarkan uji Chi-Square sehingga terdapat perbedaan signifikan variabel penilaian keandalan antara self-supply dengan non self-supply yang bernilai signifikan. Persentase hasil penilaian sumber air minum self-supply sebesar 83 % andal sedangkan non self-supply sebesar 92%. Variabel yang memiliki hasil signifikan terhadap penilaian keandalan adalah jenis sumur, kejadian hujan 24 jam sebelum wawancara, dan kejadian banjir. Sumur bor memiliki peluang 4,11 kali dibandingkan sumur gali terhadap keandalan sumber air minum. Tidak terjadi hujan 24 jam sebelum wawancara berpeluang 3,11 kali lebih tinggi dibandingkan terjadinya hujan 24 jam sebelum wawancara terhadap keandalan sumber air minum. Kejadian tidak banjir 8,85 kali lebih tinggi dibandingkan kejadian banjir terhadap keandalan sumber air minum. Sehingga secara keseluruhan menilai bahwa sumber air sumur bor jauh lebih andal, namun jika dibandingkan dengan sumber non self-supply responden masih menilai lebih andal sumber non self-supply, oleh karena itu diperlukan rekomendasi lanjutan.

.....Bekasi City only serves people using PDAM by 26.8%. This means that most people living there still take groundwater sources. Groundwater is chosen as a source of drinking water through a self-supply system. Currently, the reliability of self-supply remains an issue in the community despite being an incredibly affordable water source. Continuous monitoring of the respondents for eight months was carried

out to determine the behavior of their drinking water sources through household perceptions, including the taste, color, smell, availability, and safety. This study aimed to determine the reliability assessment of self-supply drinking water sources, the comparison of reliability assessments between self-supply and non-self-supply, and the factors that influence the reliability of self-supply. The research methods applied were telephone survey to respondents and STATA 16 program for analyzing with Chi-Square test, Phi correlation test, and Logistic Regression analysis. Based on the data processing, the reliability assessment of drinking water sources resulted in average reliability values of 92% for boreholes and 74% for dug wells on the household scale. Meanwhile, on the city scale, a reliability value of 15 points was obtained from the entire monitoring. This indicated that both boreholes and dug wells were reliable throughout the months, although dug wells received lower assessment. Comparison of the reliability assessment analysis between self-supply and non-self-supply led to $P = 0.028$ ($P < 0.05$), with the Chi-Square test. Therefore, there was a major difference in the reliability assessment of self-supply and non self-supply variables. The percentages of the reliability assessment for self-supply and non-self-supply drinking water sources were 83% and 92% respectively. Variables with significant results in the reliability assessment included the type of well, the occurrence of rain 24 hours before the interview, and the incidence of flooding. For the reliability of drinking water sources, boreholes had a chance of 4.11 times higher than dug wells; no rain 24 hours before the interview had a chance of 3.11 times higher than the occurrence of rain 24 hours before the interview; and non-flood events had a chance of 8.85 times higher than flood events. Hence, borehole water sources were much more reliable. However, if compared to non-self-supply sources, respondents still consider non-self-supply sources more reliable. Therefore, further recommendations are needed.