

Hubungan kondisi sarana air bersih, pembuangan limbah dan karakteristik individu dengan kejadian diare balita di kota Solok, Sumatra Barat

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Abstrak

Diare merupakan salah satu penyakit berbasis lingkungan yang masih menjadi penyebab utama kematian, terutama bagi bayi dan anak balita. Tahun 1999 angka insidens nasional mencapai 26,13 per 1000 penduduk dengan laju kematian kasar (CFR) 0,006%, sementara di Kota Solok, Sumatera Barat, insidens dan CFR-nya 22,4 per 1000 penduduk dan 0,012%. Seperti teridentifikasi sebelumnya bahwa diare berhubungan dengan sanitasi dasar yang tidak memadai, status sosio-ekonomi penduduk dan perilaku yang tidak sehat, suatu studi epidemiologi kesehatan lingkungan dilakukan untuk meneliti apakah diare berhubungan dengan kondisi air bersih, sarana pembuangan limbah dan karakteristik balita dan ibu balita.

Suatu studi kasus-kontrol tidak berpadanan dilakukan di Kota Solok, Sumatera Barat dengan 120 orang kasus dan 120 orang kontrol. Kasus adalah bayi dan anak balita dengan gejala diare yang datang berobat ke Puskesmas atau dokter/bidan praktek sedangkan kontrol adalah balita yang bertempat tinggal terdekat/tetangga dengan kasus dan tidak sedang menderita diare selama 2 minggu terakhir. Kondisi sarana air bersih dan pembuangan limbah diamati langsung, sedangkan data karakteristik individu dikumpulkan dengan melakukan wawancara pada Ibu balita dari kasus dan kontrol dengan menggunakan kuesioner. Pengambilan sampel untuk pemeriksaan kualitas bakteriologis air bersih dilakukan berdasarkan tingkat resiko pencemaran sesuai hasil pemeriksaan inspeksi sanitasi. Selanjutnya hasil yang didapat dianalisa dengan uji kai kuadrat dan regresi logistik.

Hasil analisis Bivariat dengan uji Chi-square memperlihatkan dari kondisi sarana air bersih ada 7 variabel yang berhubungan bermakna dengan kejadian diare pada balita yaitu : Jenis Sarana Air Bersih ($p = 0,00$; $OR = 3,25$; $95\% CI = 1,79 - 5,90$), Kepemilikan SAB ($p = 0,00$; $OR = 3,69$; $95\% CI = 2,07 - 6,58$), Tingkat Resiko Pencemaran SAB ($p = 0,00$; $OR = 3,81$; $95\% CI = 1,91 - 7,62$), Kualitas Bakteriologis SAB ($p = 0,00$; $OR = 6,03$; $95\% CI = 3,35 - 10,84$), Keberadaan Jamban ($p = 0,00$; $OR = 3,91$; $95\% CI = 2,03 - 7,54$), Kepemilikan Jamban ($p = 0,00$; $OR = 2,93$; $95\% CI = 1,61 - 5,33$), Jenis Jamban ($p = 0,00$; $OR = 4,88$; $95\% CI = 2,22 - 10,71$). Juga ada 2 variabel Sarana Pembuangan air Limbah (SPAL) yang berhubungan bermakna dengan kejadian diare pada balita yaitu : Keberadaan SPAL ($p = 0,00$; $OR = 4,35$; $95\% CI = 2,26 - 8,37$) dan Kondisi SPAL ($p = 0,00$; $OR = 4,97$; $95\% CI = 2,81 - 8,78$), Dari karakteristik individu yang diamati ada 5 variabel yang berhubungan bermakna dengan kejadian diare pada balita yaitu: Pendidikan Ibu ($p = 0,00$; $OR = 4,33$; $95\% CI = 2,31 - 8,11$), Status pekerjaan Ibu ($p = 0,01$; $OR = 2,57$; $95\% CI = 1,33 - 4,97$), Pengetahuan Ibu tentang diare ($p = 0,00$; $OR = 4,48$; $95\% CI = 2,42 - 8,31$), Sikap Ibu dalam usaha pencegahan diare ($p = 0,00$; $OR = 4,48$; $95\% CI = 2,39 - 8,39$), Usia bayi dan anak Balita ($p = 0,00$; $OR = 5,50$; $95\% CI = 2,52 - 12,02$), dan ASI Eksklusif ($p = 0,00$; $OR = 4,12$ $95\% CI = 2,28-7,46$). Adapun variabel Umur Ibu dan Jenis kelamin Balita tidak berhubungan dengan kejadian diare.

Hasil analisis multivariat (uji regresi logistik) diketahui bahwa Kepemilikan SAB, Usia Balita, Status Pekerjaan Ibu, Jenis SAB, Kualitas Bakteriologis SAB, Sikap Ibu dalam upaya pencegahan diare, Pengetahuan Ibu tentang diare dan ASI Eksklusif merupakan faktor-faktor risiko dominan yang berhubungan dengan kejadian diare pada balita di Kota Solok. Tidak ditemukan adanya interaksi antara variabel.

Association of Clean Water Conditions, Wastewater Disposals, and Individual Characteristics with Diarrhea of Babies and Children under Five Year Old at City of Solok, West Sumatra, 2003 Diarrhea is an environmentally based disease and still a major cause of death, particularly of babies and children under five years old. In 1999 the national incidence was 26.13 per 1000 population with CFR 0.006%, whereas at City of Solok, West Sumatra Province, the 2002 incidence and CFR were 22.24 per 1000 population and 0,012%, respectively. As identified previously that diarrhea is associated with inadequate basic environmental sanitation, socio-economic status, and unhealthy behavior, an environmental health epidemiology study has been conducted to investigate whether diarrhea is associated with clean water conditions, wastewater disposals, and individual characteristics of babies, children under five years old, and their mothers.

An unmatched case-control study has been carried out at City of Solok, West Sumatra involving 120 cases and 120 controls. Cases were babies and children under five years old that suffering diarrhea in the last two weeks as treated by doctors or midwives at Puskesmas or private general practices, while controls were the nearest neighbors of the cases with no diarrhea. Clean water conditions and wastewater disposals were observed directly, while individual characteristics data were collected by interviewing mothers of the cases and the controls. Meanwhile, bacteriological quality of clean waters of low and medium risks, as identified by sanitation inspection, was also determined. Further, chi-square and logistic regression were employed to test the association of diarrhea with clean water conditions, wastewater disposals, and individual characteristics.

Chi-square tests show that of the clean: water condition seven variables are associated significantly with diarrhea, i.e. type ($p = 0.00$; OR = 3.25 ; 95% CI = 1.79 - 5.90), ownership ($p = 0.00$; OR = 3.69 ; 95% CI = 2.07 - 6.58), pollution risk level ($p = 0.00$; OR = 3.81; 95% CI = 1.91 - 7.62), bacteriological quality ($p = 0.00$; OR = 6.03 ; 95% CI = 3.35 - 10.84), latrine availability ($p = 0.00$; OR = 3.91 ; 95% CI = 2.03 - 7.54), latrine ownership ($p = 0.00$; OR = 2.93 ; 95% CI = 1.61 -- 5.33), latrine type ($p = 0.00$; OR = 4.88 ; 95% CI = 2.22 --- 10.71). Yet, only two wastewater disposal variables are significantly associated with diarrhea, i.e. disposal availability ($p = 0.00$; OR = 4.35 ; 95% CI = 2.26 - 8.37) and condition ($p = 0.00$; OR = 4.97 ; 95% CI = 2.81 - 8.78). However, five individual characteristic variables are significant, i.e. mother education ($p = 0.00$; OR = 4.33 ; 95% CI = 2.31 - 8.11), status mother occupation ($p = 0.01$., OR = 2.57 ; 95% CI = 1.33 - 4.97), mother knowledge about diarrhea ($p = 0.00$; OR = 4.48 ; 95% CI = 2.42 - 8.31), mother attitude toward diarrhea prevention ($p = 0.00$; OR = 4.48 ; 95% CI = 2.39 - 839), age of babies and children ($p = 0.00$; OR = 5.50 ; 95% CI = 2.52 - 12.02), and exclusive breastfeeding ($p = 0.00$; OR = 4.12 ; 95% CI=2.28 - 7.46). On the other hand, age of mother and babies and children' sexes are not associated significantly with diarrhea.

Further, logistic regression tests indicate that clean water facility ownership, age of babies and children, mother occupation, latrine type, bacteriological quality, mother attitude toward diarrhea prevention, mother

knowledge about diarrhea, and exclusives breastfeeding are the dominant risk factors of the diarrhea. These variables are statistically not interacted each other.</i>