THE DIFFERENCE BETWEEN NEONATAL MORTALITY CAUSES AND RISKS IN URBAN AND RURAL AREAS OF SLEMAN DISTRICT BASED ON VERBAL AUTOPSY

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ABSTRACT

Background: Neonatal mortality is a serious global public health concern, with around 2,4 million infants dying each year in their first month of life. This unacceptably high rate must be reduced if success toward achieving better child survival is reached. Therefore, determining the causes and risk of neonatal death is crucial and essential. A lot of studies have examined the risk factors and causes of neonatal mortality. However, those were limited in that they were not disaggregated along with urban-rural residences. Hence, much remains to be understood about the different factors contributing to neonatal mortality in urban and rural areas.
Objective: To determine the causes and risks of neonatal mortality in urban and rural areas of Sleman District based on verbal autopsy.
Method: The study is cross-sectional which used verbal autopsy data obtained from the Sleman Health and Demographic Surveillance System (HDSS). Data was described using frequency tabulations. The Fisher's exact and Mann-Whitney U were used to determine differences between nominal and ordinal variables, respectively. Comparisons were performed using cross-tabulations and prevalence ratio (PR) with 95% confidence intervals (95% CI) were calculated. The Haldane-Anscombe correction was then applied where there were zero cell counts.
Result: In this study, there were 11 subjects who died during the neonatal period. Of them, nine was residing in urban areas and two in rural settings. The prevalence of pregnancy complications (PR 2,1; 95% CI 0,146—30,27), delivery difficulties (PR 1,5; 95% CI 0,096—23,43), and multifetal gestations (PR 3,3; 95% CI 0,247—44,08) were higher in urban settings. However, cesarean section utilization was lower (PR 0,9; 95% CI 0,048—16,84). Urban women have a higher prevalence of employment (PR 2,7; 95% CI 0,196—37,15) and low parity (PR 1,5; 95% CI 0,458—4,914). This might be responsible for higher prematurity (PR 1,7; 95% CI 0,532—5,430) and low-birth-weight strata (PR 1,9; 95% CI 0,607—5,942).
Conclusion: The proportion of neonatal mortality in urban and rural areas of the Sleman HDSS population was 0,009 and 0,011. None of the neonatal mortality causes and risks was found to be statistically different in both regions.
Keywords: Neonatal mortality, urban, rural, verbal autopsy

PERBEDAAN SEBAB DAN RISIKO KEMATIAN NEONATAL DI DAERAH URBAN DAN RURAL KABUPATEN SLEMAN BERDASARKAN AUTOPSI VERBAL

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INTISARI

Latar Belakang: Kematian neonatal merupakan masalah kesehatan masyarakat yang serius, dengan sekitar 2,4 juta bayi meninggal tiap. Angka yang tinggi ini harus dikurangi jika kelangsungan hdiup anak yang lebih baik ingin dicapai. Oleh karena itu, menentukan sebab dan risiko kematian neonatal sangat penting. Banyak penelitian telah dilakukan untuk mengkaji risiko dan penyebab kematian neonatal. Namun, hasilnya terbatas karena tidak dipilah berdasarkan tempat tinggal perkotaan dan pedesaan. Oleh karena itu, masih banyak yang harus dipahami tentang berbagai faktor yang berkontribusi terhadap kematian neonatal di daerah urban dan rural.
Tujuan: Untuk menentukan sebab dan risiko kematian neonatal di daerah urban dan rural Kabupaten Sleman berdasarkan autopsi verbal.
Metode: Penelitian ini berdesain potong-lintang dengan menggunakan data verbal autopsi yang didapatkan dari Health and Demographic Surveillance System (HDSS) Sleman. Data dideskripsikan menggunakan tabulasi frekuensi. Uji Fisher eksak dan Mann-Whitney U digunakan untuk menentukan perbedaan antara variabel nominal dan ordinal. Perbandingan dilakukan menggunakan tabulasi silang dan rasio prevalensi (PR) dengan interval kepercayaan 95% (95% CI) dihitung. Koreksi Haldane-Anscombe diterapkan apabila jumlah sel nol.
Hasil: Pada penelitian ini terdapat 11 subjek yang meninggal pada masa neonatal. sebelas subjek tersebut terdiri dari sembilan di area perkotaan dan enam di area pedesaan. Proporsi komplikasi kehamilan (PR 2,1; 95% CI 0,146—30,27), komplikasi persalinan (PR 1,5; 95% CI 0,096—23,43), dan kehamilan kembar gestations (PR 3,3; 95% CI 0,247—44,08) lebih tinggi di daerah urban. Meskipun demikian, persalinan dengan sectio cesar lebih rendah (PR 0,9; 95% CI 0,048—16,84). Wanita yang tinggal di daerah urban memiliki prevalensi lebih tinggi untuk memiliki pekerjaan (PR 2,7; 95% CI 0,196—37,15), dan paritas yang rendah parity (PR 1,5; 95% CI 0,458—4,914). Hal ini dapat bertanggung jawab atas tingginya prematuritas prematurity (PR 1,7; 95% CI 0,532—5,430) dan strata berat lahir rendah (PR 1,9; 95% CI 0,607—5,942).
Kesimpulan: Proporsi kematian neonatal di daerah urban dan rural dari populasi HDSS Sleman adalah 0,009 dan 0,011. Tidak ada perbedaan yang bermakna antara sebab dan risiko kematian di kedua daerah tersebut.
Kata kunci: Kematian neonatal, urban, rural, autopsi verbal