

HUBUNGAN KADAR PB, AS DAN HG DENGAN STATUS GIZI ANAK AUTIS DI KABUPATEN BANYUMAS

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ABSTRAK

Latar Belakang – Autis mengalami peningkatan 500 orang per tahun. Autis disebabkan oleh faktor genetik dan faktor lingkungan. Salah satu faktor lingkungan berupa paparan timbal, arsen, dan merkuri. Paparan tersebut juga dapat mempengaruhi status gizi anak berupa menurunkan penyerapan nutrisi dan menghambat sekresi hormon pertumbuhan.

Tujuan – Mengetahui hubungan kadar timbal, arsen, dan merkuri dengan status gizi anak autis di Kabupaten Banyumas.

Metode Penelitian – yang digunakan adalah studi observasional dengan pendekatan *cross sectional*. Sampel ditetapkan dengan total sampling sebanyak 30 anak autis. Adapun kriteria inklusi sampel adalah rentang usia 1-12 tahun dan kriteria eksklusi adalah tidak setuju atau mengundurkan diri selama proses penelitian. Sampel dilakukan pengukuran tinggi dan berat badan serta diambil sampel rambut. Data hasil penelitian selanjutnya dilakukan uji hipotesis menggunakan *Spearman*.

Hasil – Hasil penelitian tidak menunjukkan hubungan yang signifikan kecuali pada uji kadar timbal dengan status gizi di rentang usia 1-4 tahun. Kadar timbal dengan status gizi 1-4 tahun $p=0,045$, kadar timbal dengan status gizi 5-12 tahun $p=0,095$, kadar arsen dengan status gizi 1-4 tahun $p=0,606$, kadar arsen dengan status gizi 5-12 tahun $p=0,859$, kadar merkuri dengan status gizi 1-4 tahun $p=0,377$, dan kadar merkuri dengan status gizi 5-12 tahun $p=0,620$.

Kesimpulan – Berdasarkan hasil tersebut dapat disimpulkan bahwa tidak terdapat hubungan antara timbal (Pb), arsen (As), dan merkuri (Hg) dengan status gizi anak autis di Kabupaten Banyumas.

Kata Kunci: autis, kadar timbal, kadar arsen, kadar merkuri, status gizi.

CORELATION OF PB, AS, AND HG LEVELS WITH THE NUTRITIONAL STATUS OF AUTISM CHILDREN IN BANYUMAS REGENCY

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Background – Autism increase by 500 people per year. It is caused by genetic and environmental factors. One of the environmental factors is exposure to heavy metals in the form of lead, arsenic, and mercury. Exposure to heavy metals can also affect a child's nutritional status by decreasing nutrient absorption and inhibiting growth hormone secretion.

Objective – To determine the relationship between lead, arsenic, and mercury levels to nutritional status of autistic children in Banyumas Regency.

Research Method – This study used an observational study with a cross sectional approach. The sample was determined with total sampling of 30 autistic children. The sample inclusion criteria were an age range of 1-12 years and the exclusion criteria were disagreeing or disappointing oneself during the research process. The samples were measured for height and weight also hair samples were collected. The hypothesis test was carried out with the Spearman test.

Result – The results of the study did not show a significant relationship except for the lead level test with nutritional status in the age range of 1-4 years. The lead levels with nutritional status of 1-4 years $p = 0.045$, the lead levels with nutritional status of 5-12 years $p = 0.095$, the arsenic levels with nutritional status of 1-4 years $p = 0.606$, the arsenic levels with nutritional status of 5-12 years $p = 0.859$, the mercury levels with nutritional status of 1-4 years $p = 0.377$, and the mercury levels with nutritional status of 5-12 years $p = 0.620$.

Conclusion – There is no relationship between lead (Pb), arsenic (As), and mercury (Hg) levels with the nutritional status of autistic children in Banyumas Regency.

Keywords: autism, lead levels, arsenic levels, mercury levels, nutritional status.