

INTISARI

Latar Belakang: IQ menjadi suatu faktor penting terhadap perkembangan kecerdasan anak. Hasil skor IQ dapat dipengaruhi oleh berbagai faktor internal dan eksternal. Skor IQ pada anak-anak di daerah endemik GAKI diduga terpengaruh oleh keadaan gangguan fungsi tiroid. Kadar TSH dapat memberikan gambaran fungsi tiroid. Kenaikan kadar TSH menunjukkan adanya insufisiensi saturasi reseptor T3 di otak dan berpotensi menyebabkan gangguan perkembangan kecerdasan.

Tujuan: Mengetahui adanya hubungan antara kadar TSH dengan skor *intelligence quotient* pada anak-anak sekolah dasar di daerah endemik GAKI Samigaluh, Kulonprogo, Yogyakarta.

Metode: Rancangan penelitian potong lintang dengan jumlah subjek 58 anak dari dua SD di Kecamatan Samigaluh, Kulonprogo dari bulan Mei 2016 sampai April 2018. Kecamatan Samigaluh dipilih karena termasuk daerah endemik GAKI. Penilaian dilakukan terhadap kadar TSH serum (dengan ELISA) dan tingkat kecerdasan (dengan CFIT). Analisis data dilakukan dengan menggunakan korelasi Pearson

Hasil: Sebanyak 74,1% anak dengan TSH normal memiliki rata-rata skor IQ sebesar 89,35 dan 24,9% anak dengan hipertirotropinemia memiliki rata-rata skor IQ sebesar 101,00. Tidak didapatkan hubungan bermakna antara kadar TSH dengan skor IQ ($p=0.05$).

Kesimpulan: Kadar TSH tidak berhubungan dengan skor IQ anak-anak sekolah dasar di Samigaluh Kulonprogo.

Kata Kunci: Tiroid, *intelligence quotient*, GAKI, Kecerdasan.

ABSTRACT

Background: IQ is important toward the intelligence development amongst children. The result of IQ score can be determined by internal and external factors. IQ score amongst children in endemic areas of iodine deficiency disorder is suspected influenced by thyroid function disorder. TSH concentration portrays the thyroid function. The elevated TSH concentration shows that there is an insufficiency of T3 receptor saturation in the brain and potentially causes developmental disorders of intelligence.

Aim: It aims to determine the relation between TSH concentration and intelligence quotient score amongst elementary school students at endemic areas of iodine deficiency disorders Samigaluh, Kulonprogo, Yogyakarta.

Methods: This research was conducted under analytic correlative design with the cross-sectional approach. This research took place at two Elementary Schools in Samigaluh subdistrict started on May 2016 to April 2018. Samigaluh was chosen due to its status as endemic areas of iodine deficiency disorders. There were 58 total samples. Data analysis was done by using Pearson correlation.

Result: There were 74,1% children with normal TSH who have average IQ score 89,35 and 24,9% children with hipertirotropinemia who have IQ score 101,00. There is no correlation between TSH concentration and IQ score ($p=0.05$)

Conclusion: There is no relation between TSH concentration and intelligence quotient Score amongst elementary school students in Samigaluh Kulonprogo.

Keywords: Thyroids, intelligence quotient, and iodine deficiency disorders.