

## ABSTRAK

### ANALISIS KADAR METABOLIT KORTISOL PADA FESES KAMBING (*Capra aegagrus hircus*) JANTAN DAN BETINA DALAM PROGRAM ANIMAL-ASSISTED THERAPY DI YAYASAN AINUL YAKIN SPECIAL CHILDREN GUNUNGKIDUL YOGYAKARTA

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Animal-Assisted Therapy (AAT) adalah terapi berbasis interaksi manusia dengan hewan untuk meningkatkan kesehatan psikososial, kognitif, dan emosional manusia. Kesejahteraan hewan terapi merupakan aspek penting yang harus dievaluasi secara objektif, salah satunya dengan pengukuran hormon kortisol sebagai indikator stres fisiologis. Penelitian ini bertujuan untuk mengetahui perbedaan kadar kortisol feses kambing ternak berdasarkan jenis kelamin dan interaksi sebelum dan sesudah interaksi dengan Anak Berkebutuhan Khusus (ABK) di Yayasan Ainul Yakin Special Children Gunungkidul Yogyakarta. Pengambilan sampel feses dilakukan sebelum dan sesudah sesi interaksi AAT. Sampel feses kemudian dikeringbekukan (*freeze drying*), diekstraksi dengan metanol 80% dan dianalisis menggunakan metode kompetitif ELISA. Selanjutnya kadar kortisol dinyatakan dalam ng/gr feses kering. Data dianalisis menggunakan uji Wilcoxon Signed-Rank Test untuk mengetahui perbedaan kadar kortisol pada feses sebelum dan sesudah interaksi pada individu yang sama, serta uji Mann-Whitney U untuk membandingkan delta kortisol pada feses antara kambing jantan dan betina. Pada hasil penelitian terdapat adanya perbedaan signifikan antara kadar kortisol sebelum dan sesudah interaksi ( $p = 0,001$ ). Tidak ditemukan perbedaan yang signifikan pada jenis kelamin ( $p = 0,678$ ). Terdapat fluktuasi kadar kortisol yang disebabkan oleh *gut passage time* (GPT) dan variasi fisiologis individu. Disimpulkan bahwa *Animal-assisted Therapy* meningkatkan kadar metabolit kortisol baik jantan maupun betina.

**Kata Kunci:** Animal-Assisted Therapy, kambing ternak, kortisol, stres, jenis kelamin, ELISA

## **ABSTRACT**

### **ANALYSIS OF FECAL CORTISOL METABOLITE LEVELS IN MALE AND FEMALE GOATS (*Capra aegagrus hircus*) IN AN ANIMAL-ASSISTED THERAPY PROGRAMS AT AINUL YAKIN SPECIAL CHILDREN FOUNDATION GUNUNGKIDUL YOGYAKARTA**

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Animal-Assisted Therapy (AAT) is a therapy based on human-animal interaction aimed at improving psychosocial, cognitive, and emotional well-being. The welfare of therapy animals is an important aspect that must be objectively evaluated, one of which is through measuring cortisol hormone levels as an indicator of physiological stress. This study aimed to determine differences in fecal cortisol levels of goats based on sex and interaction time before and after sessions with children with special needs at Yayasan Ainul Yakin Special Children Gunungkidul Yogyakarta. Fecal samples were collected before and after AAT interaction sessions. Fecal samples were freeze-dried, extracted using 80% methanol, and analyzed using the competitive ELISA method. Cortisol levels in fecal samples were expressed in ng/g of dry feces. Data were analyzed using the Wilcoxon Signed-Rank Test to evaluate differences in cortisol levels in fecal samples before and after interaction in the same individuals, and the Mann-Whitney U test to compare cortisol in fecals samples delta between male and female goats. Results showed a significant difference between cortisol levels before and after interaction ( $p = 0,001$ ). No significant difference was found based on sex ( $p = 0,678$ ). Fluctuations in cortisol levels were influenced by gut passage time (GPT) and individual physiological variation. In conclusion, Animal-Assisted Therapy increases cortisol metabolite levels in both males and females.

**Keywords:** Animal-Assisted Therapy, goat, cortisol, stress, sex, ELISA