

## INTISARI

### **PENGARUH KONSUMSI SUSU FORMULA YANG DISUPLEMENTASI GABUNGAN STRAIN BIFIDOBACTERIA (*B. LONGUM* BB536, *B. BREVE* M-16V, DAN *B. LONGUM* SUBSP. *INFANTIS* M-63) TERHADAP PERILAKU ANAK SEHAT DIUKUR DENGAN KUESIONER PERILAKU ANAK (1-3 TAHUN)**

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**Latar belakang:** Perkembangan mikrobiota usus pada anak usia 1-3 tahun masih belum maksimal sehingga pada usia tersebut anak menjadi sangat rentan. Bayi pada proses penyapihan mulai diberikan berbagai macam jenis makanan yang dapat berpengaruh pada keseimbangan mikrobiota usus dan berpengaruh kepada menurunnya jumlah Bifidobacteria di dalam usus. Ketidakseimbangan mikrobiota usus dapat menjadi alasan terjadinya kelainan pada perilaku seperti *Autism Spectrum Disorder* (ASD), *Attention Deficit Hyperactivity Disorder* (ADHD) dan respons yang kurang baik terhadap lingkungan. Pemberian susu formula yang disuplementasi gabungan *strain* Bifidobacteria (*B. longum* BB536, *B. breve* M-16V, dan *B. longum* subsp. *infantis* M-63) diharapkan berpengaruh pada perilaku anak.

**Tujuan:** Mengetahui pengaruh suplementasi gabungan Bifidobacteria (*B. longum* BB536, *B. breve* M-16V, dan *B. longum* subsp. *infantis* M-63) terhadap perilaku anak sehat usia 1-3 tahun yang dinilai dengan kuisisioner perilaku anak.

**Metodologi:** Penelitian ini menggunakan metode uji acak terkendali dengan metode buta berganda yang dikontrol plasebo. Uji klinis dilakukan kepada 91 anak sehat berusia 1-3 tahun selama 104 hari. Perubahan perilaku dinilai perubahan rerata skor *baseline* dan *endline* menggunakan kuisisioner perilaku anak (*Toddler Behaviour Assessment Questionnaire* oleh HH. Goldsmith). Variabel yang dinilai pada penelitian ini adalah level aktivitas, kesenangan, ketakutan sosial, kecenderungan marah, interest/ke tekunan, dan kontrol inhibisi. Data yang diperoleh akan disajikan dalam bentuk kontinu (numerik).

**Kesimpulan:** Konsumsi susu formula yang disuplementasi gabungan *strain* Bifidobacteria (*B. longum* BB536, *B. breve* M-16V, dan *B. longum* subsp. *infantis* M-63) tidak berpengaruh terhadap perilaku anak sehat usia 1-3 tahun.

**Kata kunci:** susu formula, suplementasi, Bifidobacteria, perilaku, anak

## ABSTRACT

### **THE EFFECT OF FORMULA MILK SUPPLEMENTED WITH A COMBINATION OF BIFIDOBACTERIA STRAINS (*B. LONGUM* BB536, *B. BREVE* M-16V, AND *B. LONGUM* SUBSP. *INFANTIS* M-63) ON THE BEHAVIOR OF HEALTHY CHILDREN, MEASURED BY A CHILD BEHAVIOR QUESTIONNAIRE (1-3 YEARS)**

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**Background:** The development of gut microbiota in children aged 1-3 years is still not optimal and making them highly vulnerable during this period. At the weaning period, infants begin to consume various types of food, which can affect the balance of gut microbiota and affect the balance of gut microbiota and lead to decrease of Bifidobacteria in the intestines. An imbalance in gut microbiota may contribute to behavioral disorders such as Autism Spectrum Disorder (ASD), Attention Deficit Hyperactivity Disorder (ADHD), and poor responses to environmental stimuli. Feeding formula milk supplemented with a combination of Bifidobacteria strains (*B. longum* BB536, *B. breve* M-16V, and *B. longum* subsp. *infantis* M-63) is expected to have an impact on children's behavior

**Objective:** To assess the effect of supplementation with a combination of Bifidobacteria (*B. longum* BB536, *B. breve* M-16V, and *B. longum* subsp. *infantis* M-63) on the behavior of healthy children aged 1-3 years as measured by a child behavior questionnaire.

**Method:** This study used a randomized controlled trial with a double-blind, placebo-controlled design. The clinical trial was conducted on 91 healthy children aged 1-3 years over a period of 104 days. Behavior changes were assessed as changes in the average baseline and endline scores using the Toddler Behavior Assessment Questionnaire developed by HH. Goldsmith. The variables assessed in this study included activity level, pleasure, social fearfulness, anger proneness, interest/persistence, and inhibitory control. The data obtained were presented in a continuous (numerical) form.

**Conclusion:** Consumption of formula milk supplemented with a combination of Bifidobacteria strains (*B. longum* BB536, *B. breve* M-16V, and *B. longum* subsp. *infantis* M-63) had no effect on the behavior of healthy children aged 1-3 years.

**Key words:** formula milk, supplementation, Bifidobacteria, behavior, children