

**PENGARUH PROGRAM AKTIVITAS FISIK *BRAIN JOGGING*
TERHADAP KEFASIHAN MATEMATIS DENGAN FUNGSI EKSEKUTIF
SEBAGAI VARIABEL MEDIASI**

DISERTASI

Diajukan untuk Memenuhi Sebagian Syarat
Memperoleh Gelar Doktor (Dr.) Pada Program Studi Pendidikan Olahraga



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**PROGRAM STUDI PENDIDIKAN OLAHRAGA
SEKOLAH PASCASARJANA
UNIVERSITAS PENDIDIKAN INDONESIA
2023**

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memperoleh gelar Doktor (Dr.) pada Program Studi Pendidikan Olahraga

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ABSTRAK

PENGARUH PROGRAM AKTIVITAS FISIK *BRAIN JOGGING* TERHADAP KEFASIHAN MATEMATIS DENGAN FUNGSI EKSEKUTIF SEBAGAI VARIABEL MEDIASI

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Penelitian ini dilakukan untuk mengetahui pengaruh program aktivitas fisik *brain jogging* untuk meningkatkan fungsi eksekutif dan kefasihan matematis pada anak-anak, serta untuk mengetahui apakah fungsi eksekutif memediasi hubungan antara program aktivitas fisik *brain jogging* dengan kefasihan matematis. Metode yang digunakan dalam penelitian ini adalah metode eksperimen dengan menggunakan *design random pretest and posttest group*. Adapun teknik pengambilan sampel yang digunakan dalam penelitian ini menggunakan *purposive sampling*. Sampel dalam penelitian ini adalah siswa Kelas III dan IV yang berjumlah 46 anak dengan rata-rata usia 9 – 10 tahun. Tiga Instrumen digunakan untuk mengukur fungsi eksekutif di antaranya *Go or No Go Test* untuk mengukur *inhibition*, *Corsi Block Test* untuk mengukur *working memory*, *Wisconsin Card Sorting Test* untuk mengukur *cognitive flexibility*, sedangkan untuk mengukur kefasihan matematis pada anak menggunakan *Woodcock-Munoz Battery III*. Hasil penelitian menunjukkan bahwa program aktivitas fisik efektif meningkatkan fungsi eksekutif ($p < 0.05$) dan kefasihan matematis ($p < 0.05$) pada anak-anak., hal ini menunjukkan bahwa program aktivitas fisik *brain jogging* dapat meningkatkan fungsi eksekutif dan kefasihan matematis pada anak-anak. Selain itu, berdasarkan hasil uji mediasi menggunakan *bootstrapping*, dengan melihat pengaruh tidak langsung/*indirect effect* ($B=7.342$, $t = 2.03$) dan interval kepercayaan (CI) 95% berkisar antara 1.466 sampai 15.54, karena nol tidak termasuk dalam rentang interval kepercayaan 95%, maka dapat ditarik kesimpulan bahwa fungsi eksekutif berhasil memediasi hubungan antara program aktivitas fisik *brain jogging* dengan kefasihan matematis. Berdasarkan hasil tersebut diharapkan dapat memberikan gambaran bahwa aktifitas fisik tidak hanya bermanfaat untuk kesehatan namun juga dapat meningkatkan kemampuan kognitif dan mendukung prestasi akademis siswa.

Kata Kunci: *Brain jogging*, Fungsi Eksekutif, Kefasihan matematis

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