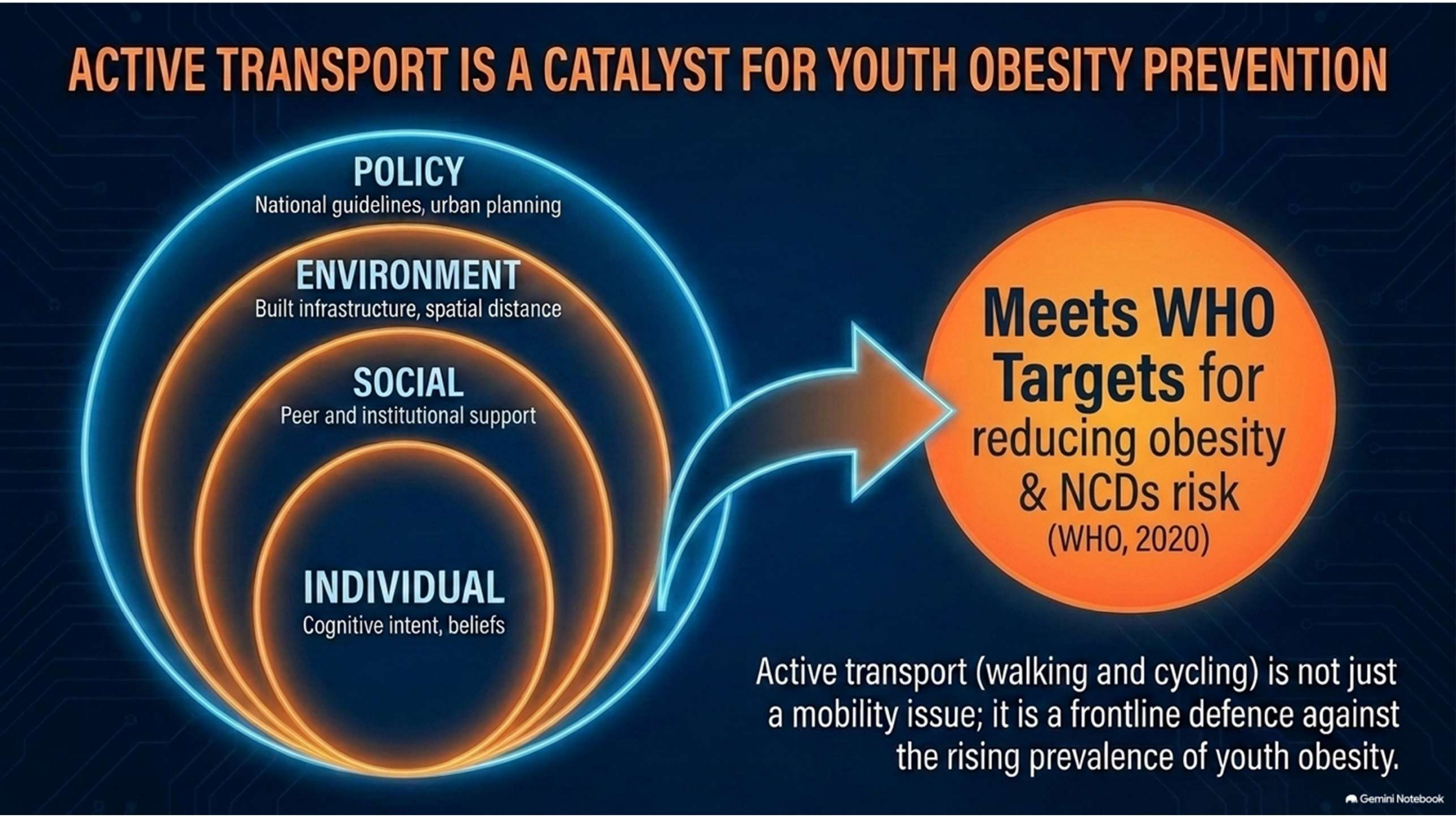
Leveraging Transport-Related Physical Activity to Prevent Youth Obesity

Active Commuting Among Undergraduates Across Sarawak and the Mediating Role of Self Efficacy

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ACTIVE TRANSPORT IS A CATALYST FOR YOUTH OBESITY PREVENTION
POLICY
National guidelines, urban planning
ENVIRONMENT
Built infrastructure, spatial distance
SOCIAL
Peer and institutional support
INDIVIDUAL
Cognitive intent, beliefs
Meets WHO Targets for reducing obesity & NCDs risk (WHO, 2020)
Active transport (walking and cycling) is not just a mobility issue; it is a frontline defence against the rising prevalence of youth obesity.
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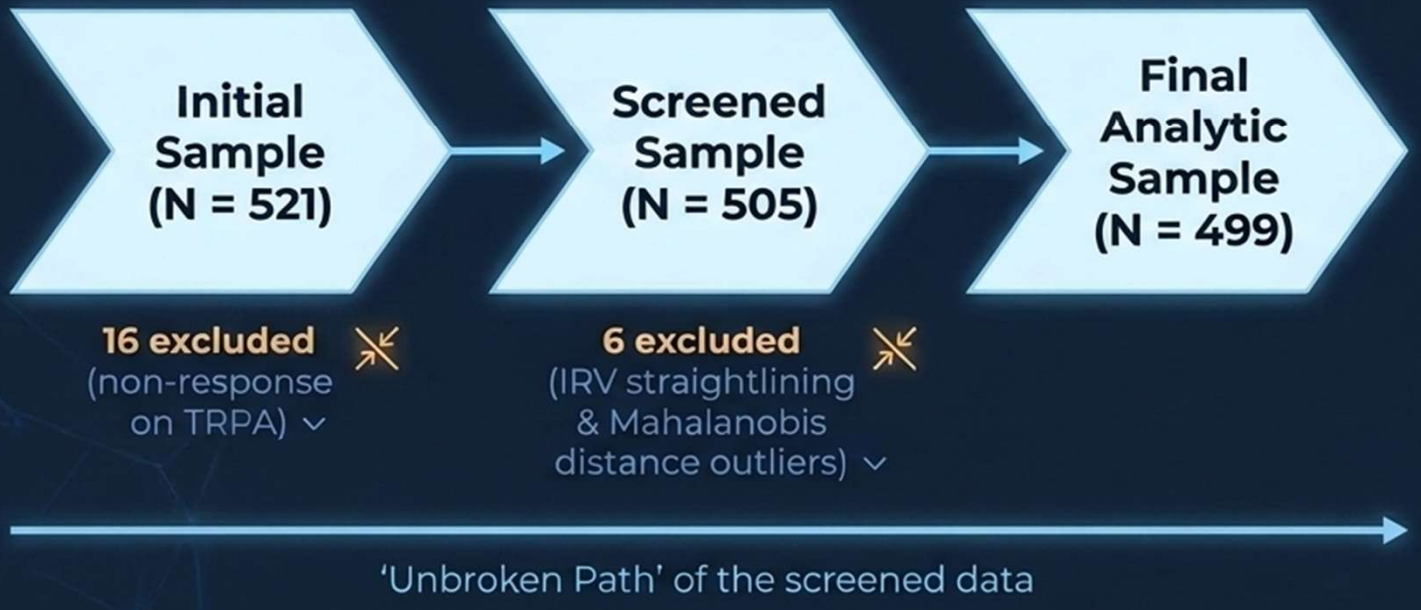
THE HYPOTHESIZED PATHWAY TO CONTINUOUS ACTIVE COMMUTING

1. Assess the prevalence of transport-related physical activity (TRPA).
2. Identify sociodemographic and individual, social, and environmental factors correlation to TRPA.
3. Evaluate the mediating role of self-efficacy in driving continuous TRPA.



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METHODOLOGICAL RIGOUR AND DATA SCREENING ARCHITECTURE



Methodological Specifications

- **Metric:** IPAQ-derived MET-min/week (≥600 threshold for High TRPA)
- **Analytical Engine:** SPSS multivariable logistic regression
- **Structural Engine:** SmartPLS 4 PLS-SEM (10,000 resamples for robust bootstrapping)

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COMMUTING PATTERNS: THE TOTAL DOMINANCE OF WALKING



86.0%

Walking Prevalence

88.5% of total MET-min

Median Energy Expenditure = 396.0 MET-min/week

(N = 499)



12.2%

Cycling Prevalence

11.5% of total MET-min

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Based on Slide C

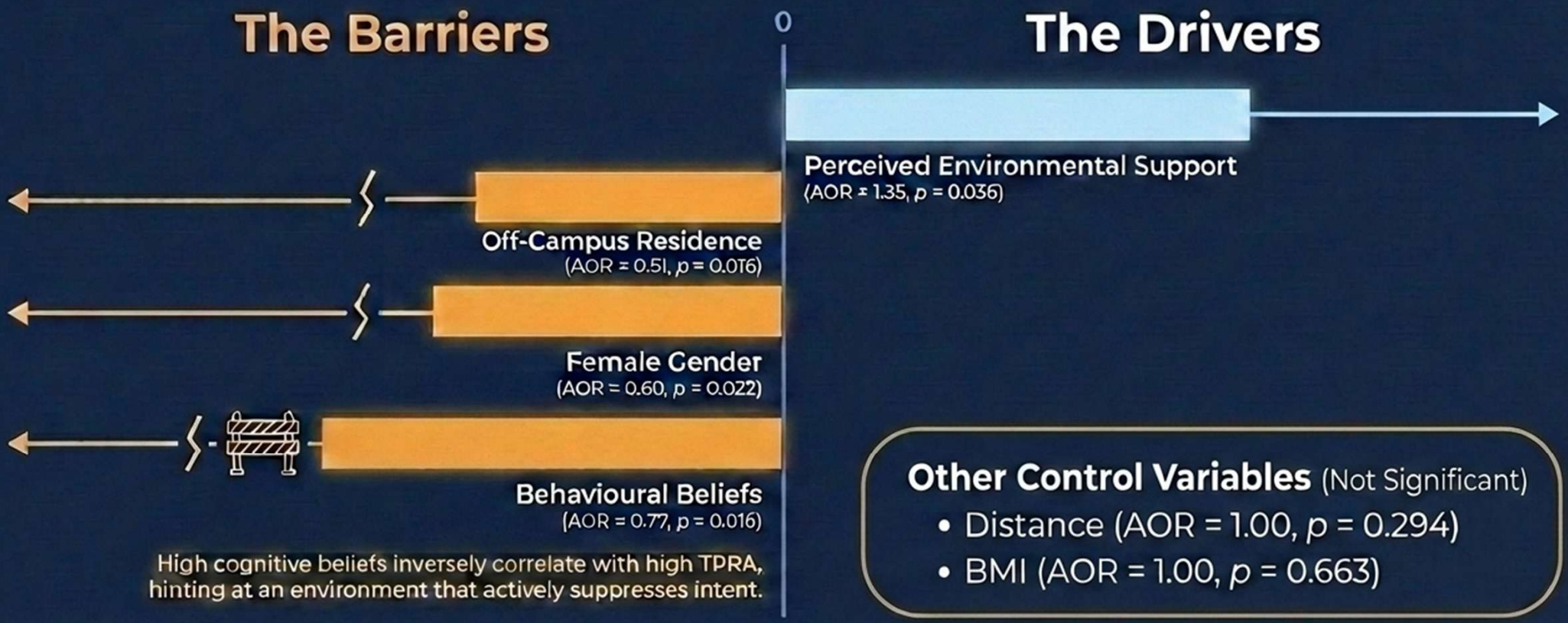
THE SPATIAL PENALTY: ON-CAMPUS VS OFF-CAMPUS ACTIVITY





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MULTIVARIABLE CORRELATES: DRIVERS AND FRICTION POINTS

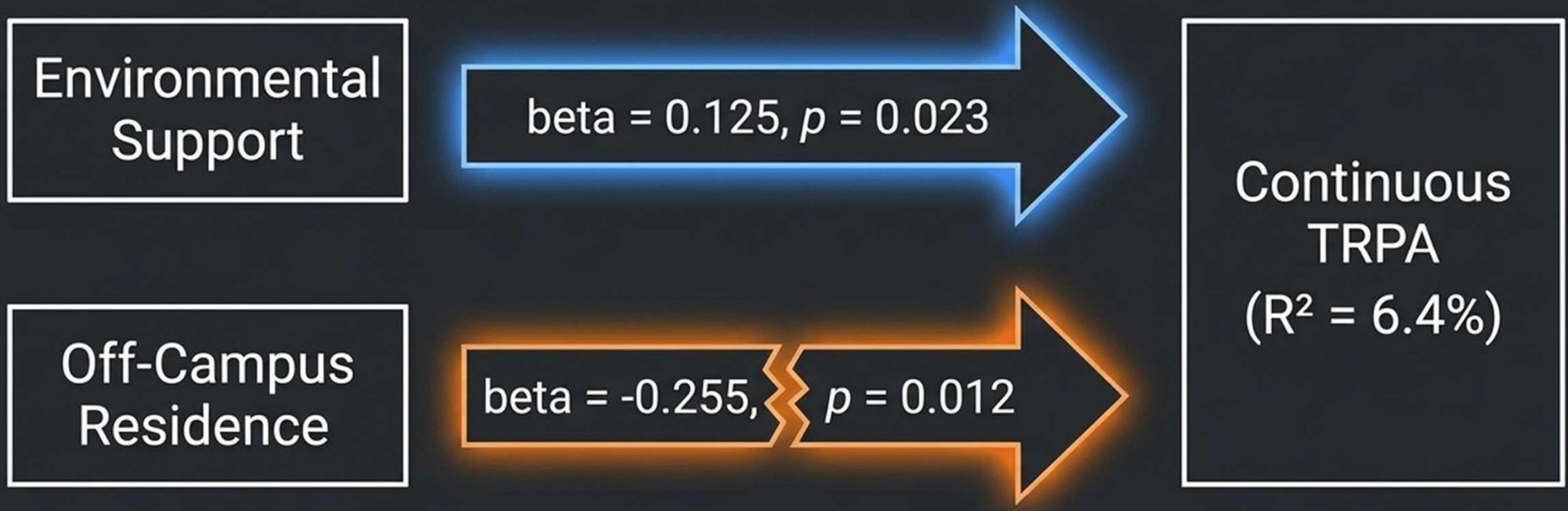


Other Control Variables (Not Significant)

- Distance (AOR = 1.00, p = 0.294)
- BMI (AOR = 1.00, p = 0.663)

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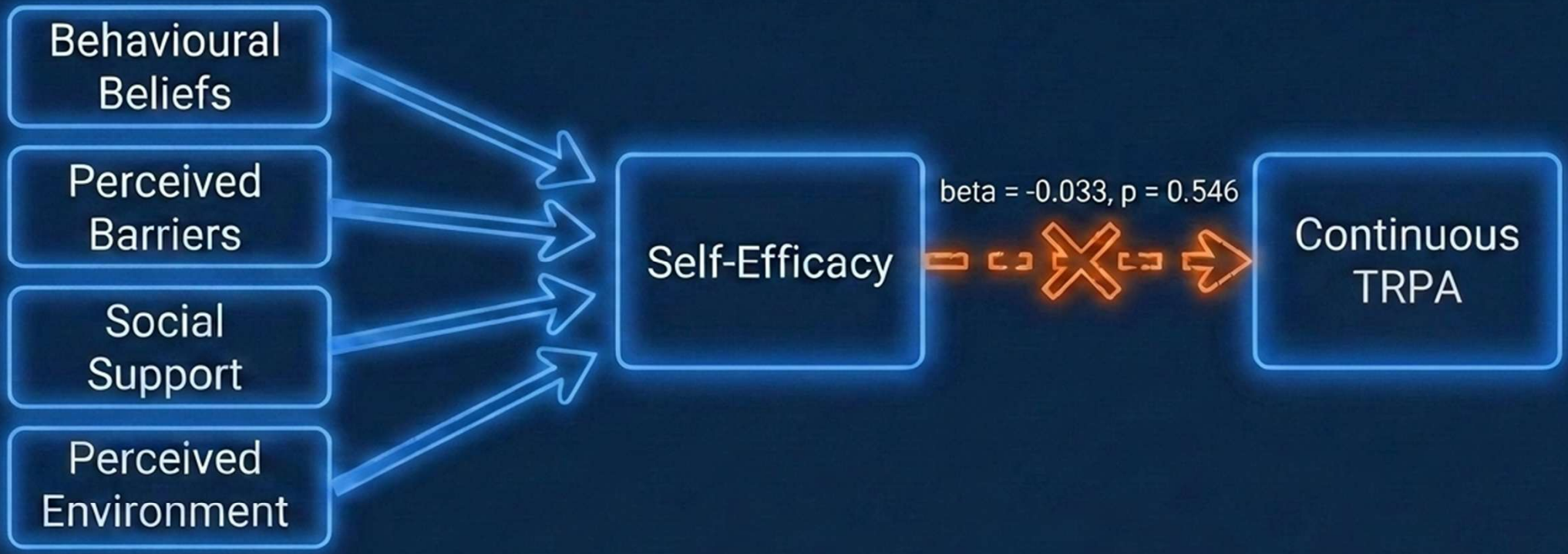
DIRECT STRUCTURAL EFFECTS ON CONTINUOUS PHYSICAL ACTIVITY



Non-significant statistical noise has been removed to reveal the core structural drivers of physical activity.

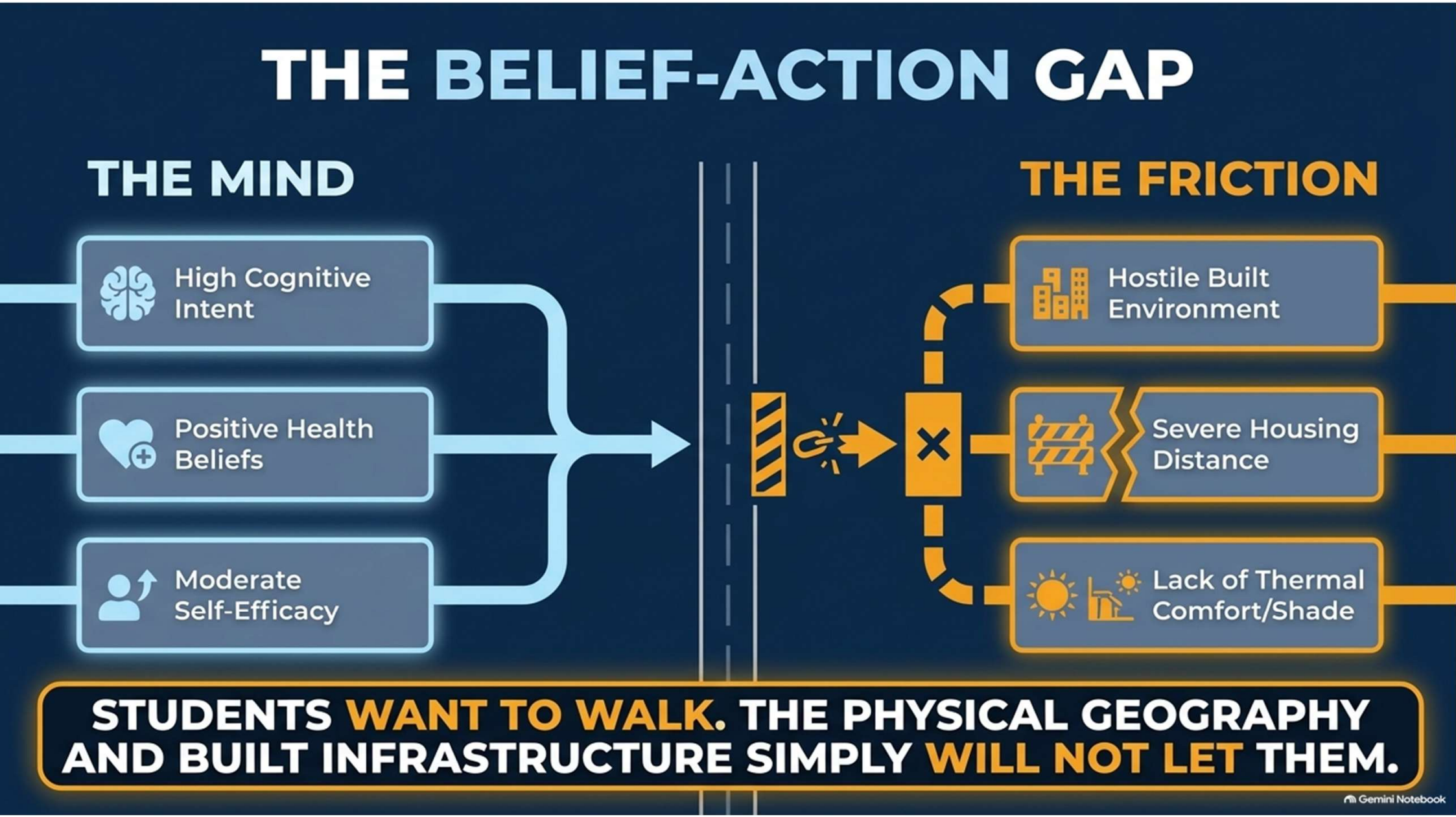
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INDIRECT MEDIATION PATHWAYS: SELF-EFFICACY AND PHYSICAL ACTIVITY



All indirect mediation pathways are non-significant. High self-efficacy does NOT directly predict physical activity in an unsupportive environment.

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THE BELIEF-ACTION GAP
THE MIND
High Cognitive Intent
Positive Health Beliefs
Moderate Self-Efficacy
THE FRICTION
Hostile Built Environment
Severe Housing Distance
Lack of Thermal Comfort/Shade
STUDENTS WANT TO WALK. THE PHYSICAL GEOGRAPHY AND BUILT INFRASTRUCTURE SIMPLY WILL NOT LET THEM.
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THANK YOU

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