




Connected, but Constrained: Functional Difficulty and Digital Connectivity in Later Life

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Objectives

 <p>Describe</p> <p>Identify access patterns: home-only, hybrid, and outside-only among adults 50+.</p>	 <p>Analyze</p> <p>Examine the association between functional difficulty and digital access contexts.</p>	 <p>Evaluate</p> <p>Determine how limitations influence long-term digital participation.</p>
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Background and Conceptual Framing




<p>Binary..?</p> <p>Research often treats access as "Have" vs "Have Not." This ignores where and how access occurs.</p>	<p>Spatial Context</p> <p>Location shapes the quality and privacy of engagement, especially for sensitive mental health needs.</p>
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Location Matters
 Privacy & Stability





Telehealth and mental health monitoring require secure, private home environments.

Public access (libraries/cafes) poses significant barriers to clinical disclosure and crisis readiness.

Spatial Digital Capital

 <p>Home-Only</p> <p>Highest privacy; vulnerable to connectivity disruption.</p>	 <p>Hybrid</p> <p>Highest digital capital; access across multiple venues.</p>	 <p>Outside-Only</p> <p>High risk for digital exclusion and lack of privacy.</p>
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Data Source & Study Population

-  Current Population Survey (CPS) in the United States
-  32,837 respondents
-  U.S. adults aged 50+
-  Survey supplement weights (cisuppw)

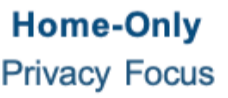


Measures

Functional Difficulty

 <p>Sensory (Vision/Hearing)</p>	 <p>Physical (Mobility)</p>	 <p>Cognitive (Memory/Focus)</p>
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Operationalized as a binary indicator: "Has Difficulty" vs "No Difficulty".

Outcome: Internet Access Contexts

 <p>Home-Only Privacy Focus</p>	 <p>Hybrid Contextual Resilience</p>	 <p>Outside-Only Digital Exclusion Risk</p>
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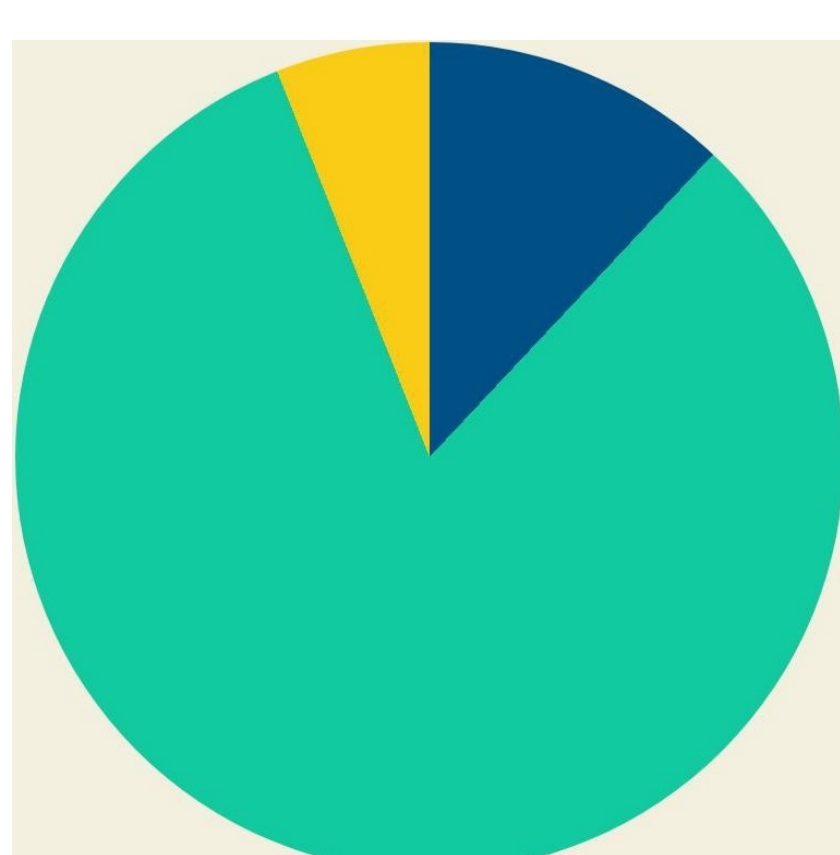
Multinomial Logistic Regression

Base Outcome: Outside-Only Access

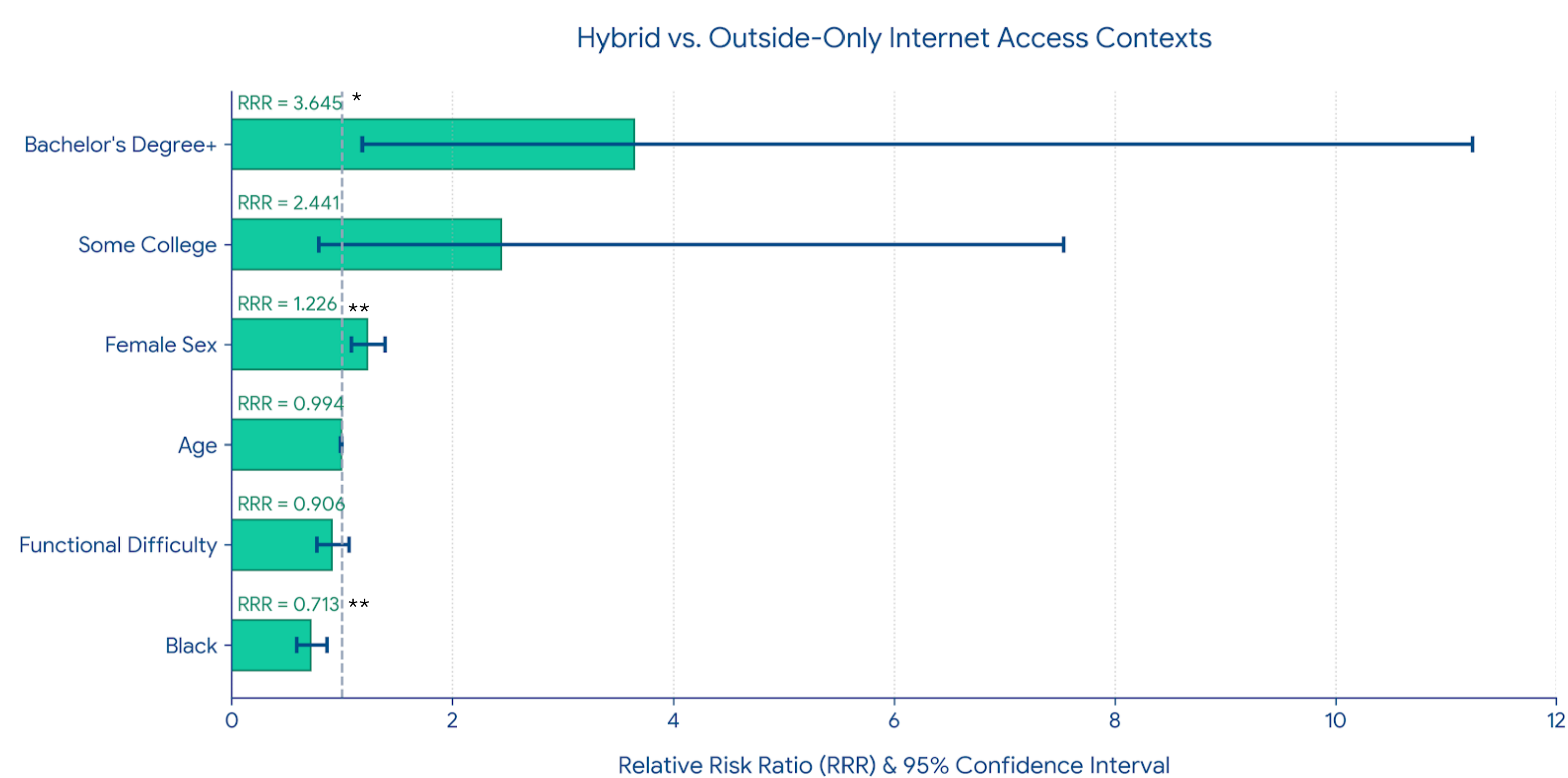
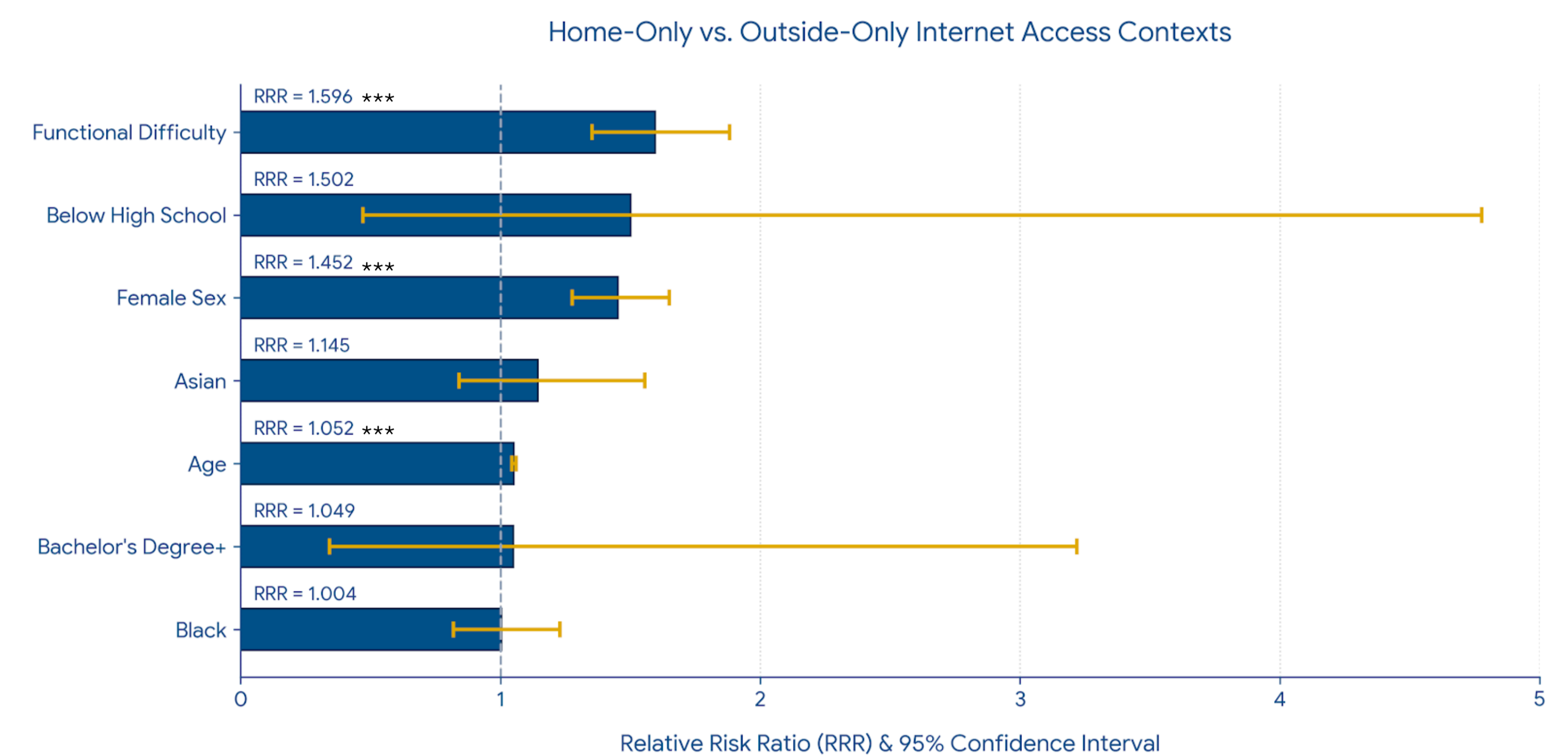
Controls: Age, Sex, Education, Race (6 categories)

$$\ln \frac{P(\text{Access} = j)}{P(\text{Access} = \text{Outside})} = \beta_0 + \beta_1 (\text{Difficulty}) + \sum \gamma_k X_k$$

Descriptive



- Home-Only (approx. 12%)
- Hybrid (approx. 82%)
- Outside-Only (approx. 6%)



59.6%

More likely in Home-Only Reliance

Physical limitations lock older adults into their residential infrastructure, reducing spatial digital flexibility

Discussion & Implication


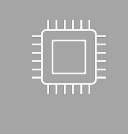


The "Digital Fortress"

- While home access provides privacy, Home-Only patterns are high-risk. If home connectivity fails, those with functional difficulties lack the mobility to seek "outside" alternatives

Vulnerability of Spatial Confinement and Connection Failures

- Spatial Orbit Compression:** Older adults with physical, sensory, or cognitive limitations have a highly restricted geographical range for digital activities
- The Single Point of Failure:** According to the multinomial logistic regression model, individuals with a functional limitation are 60% more likely to rely exclusively on home-only access compared to public outside-only access (RRR = 1.596, p < .001)
- The Displacement Barrier:** When a residential broadband connection fails due to a technical outage or an inability to pay, these individuals cannot relocate to alternative public access points

Social Work Role: Comprehensive Digital Care Audits

-  **Systematic Screening:** Replace vague "Do you have internet?" questions with an operationalized digital intake audit.
-  **Hardware Physical Accessibility:** Verify if the client can physically reach and interact with the router, modem, and primary computing devices as health statuses change.
-  **Connection and Context Parameters:** Document connection stability, monthly data limits, and the presence of a private, quiet space suitable for clinical telehealth sessions.
-  **Analogue Backup Systems:** Establish mandatory non-digital contingency communication protocols for crisis intervention.