RELATIONSHIPS AS RESOURCES: THE IMPACT OF SOCIAL CAPITAL ON PERCEPTION AND USE OF COVID-19 APPS

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Introduction

- COVID-19 pandemic necessitated innovative public health interventions
- Digital contact tracing and vaccination apps emerged as key technological solutions
- Apps designed to identify potential exposures and facilitate vaccine distribution
- Public adoption and sustained use proved challenging despite significant investment
- Limited understanding of social factors influencing app adoption
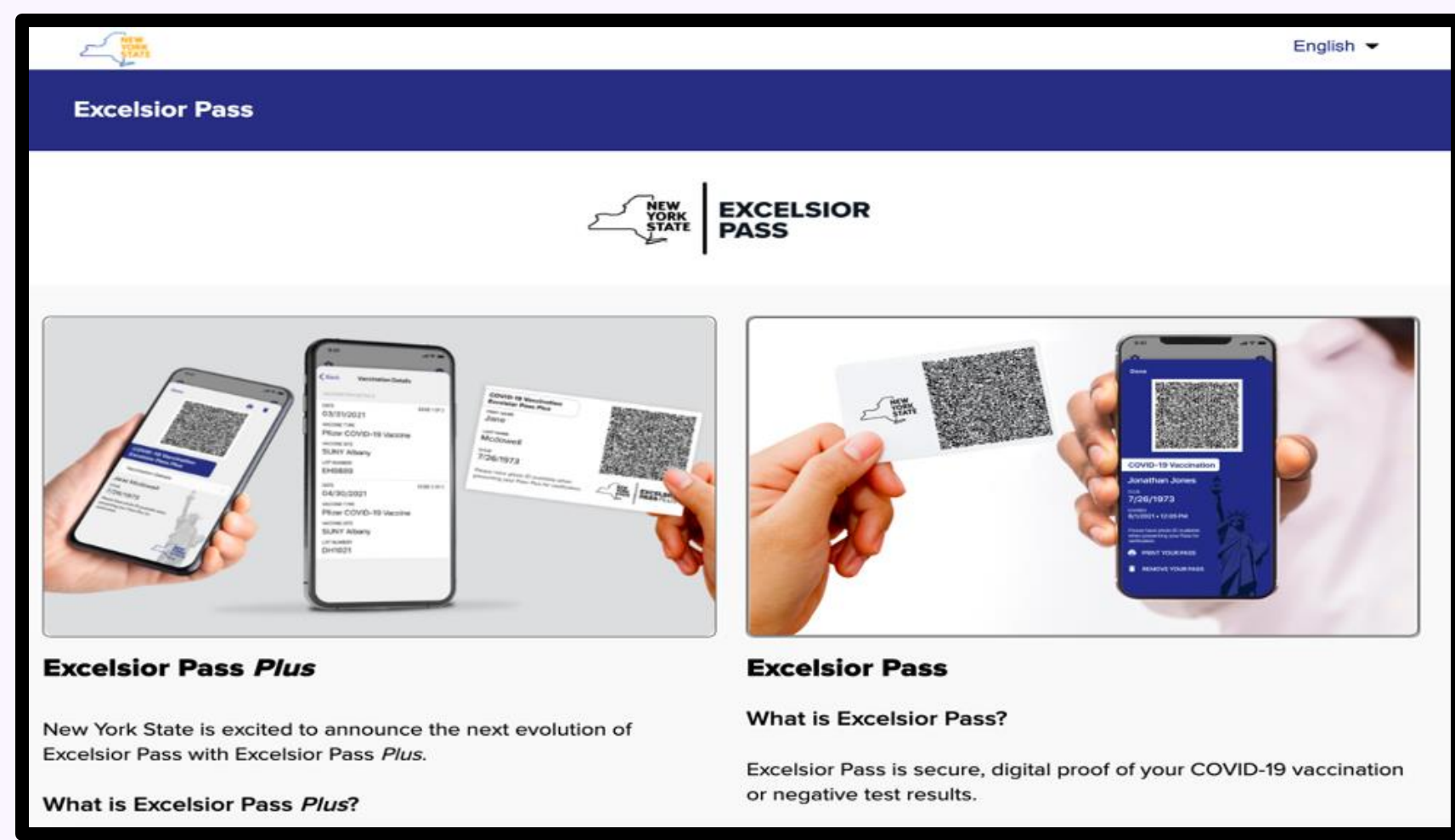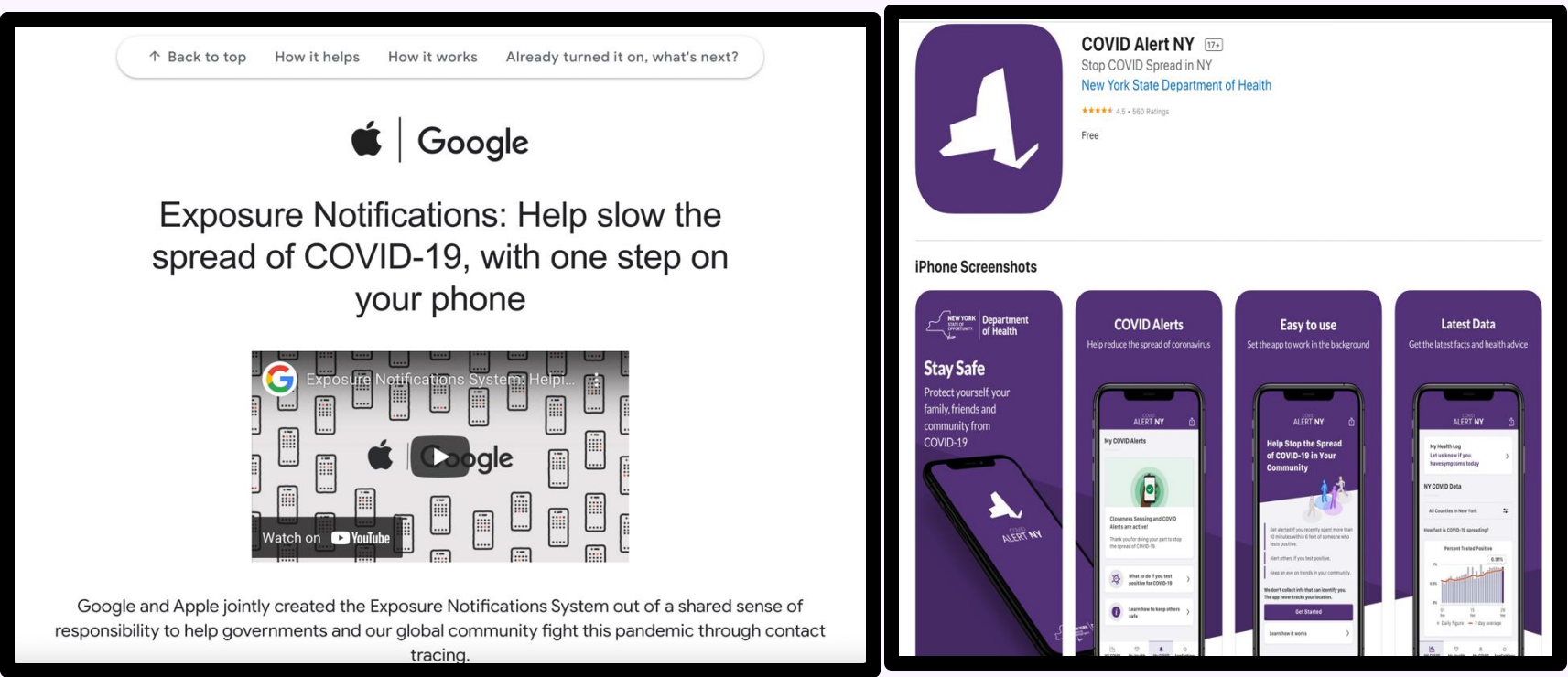
Research Gap

- Limited examination of social capital's role in technology adoption
- Insufficient understanding of how social networks influence health technology use
- Need for qualitative exploration of contextual factors

Objectives

i. Identify social capital dimensions critical to understanding contact tracing and vaccination app experiences.
ii. Investigate how social capital dimensions influence participants' app adoption attitudes, intentions, and behaviors.
iii. Examine social capital related barriers and facilitators to app adoption and use

Theoretical Framework

Social Capital Theory (Bourdieu, 1986; Coleman, 1988; Putnam, 2000)
➤ Resources embedded within social networks and relationships

Dimensions of Social Capital

Bonding: Strong ties with similar individuals (family, close friends)
  Provides emotional support and shared norms

Bridging: Weak ties across diverse groups (community networks)
  Facilitates information flow and resource access

Linking: Connections to formal institutions and authority structures
  Enables access to power and formal resources

Research Design

- Secondary qualitative analysis of focus group data
- **Original Study:** Mixed-methods investigation of COVID-19 app adoption in New York State (2021)
- **Participants:** 63 New York residents aged 18 and older
  ➤ 16 focus groups with 6-8 participants each
  ➤ Convenience sampling with stratification by age, race/ethnicity, & socioeconomic status
  ➤ One-hour sessions conducted via Zoom

Key Findings

Distribution of Social Capital Types among participants

- Linking social capital was most prevalent (approx. 50% of participant comments)
  ➤ Participants heavily influenced by formal institutions and authorities
  ➤ Trust in/concerns about government-led health initiatives played major role
- Bonding social capital was least mentioned (slightly over 10%)
  ➤ Limited influence from close family/friend networks on app decisions
- Bridging social capital was moderate (approximately 40%)
  ➤ Cross-group interactions had some impact on app-related attitudes

Bonding Social capital: Double-edged nature of bonding social capital in terms of strong relationships both facilitated and created resistance to app adoption.
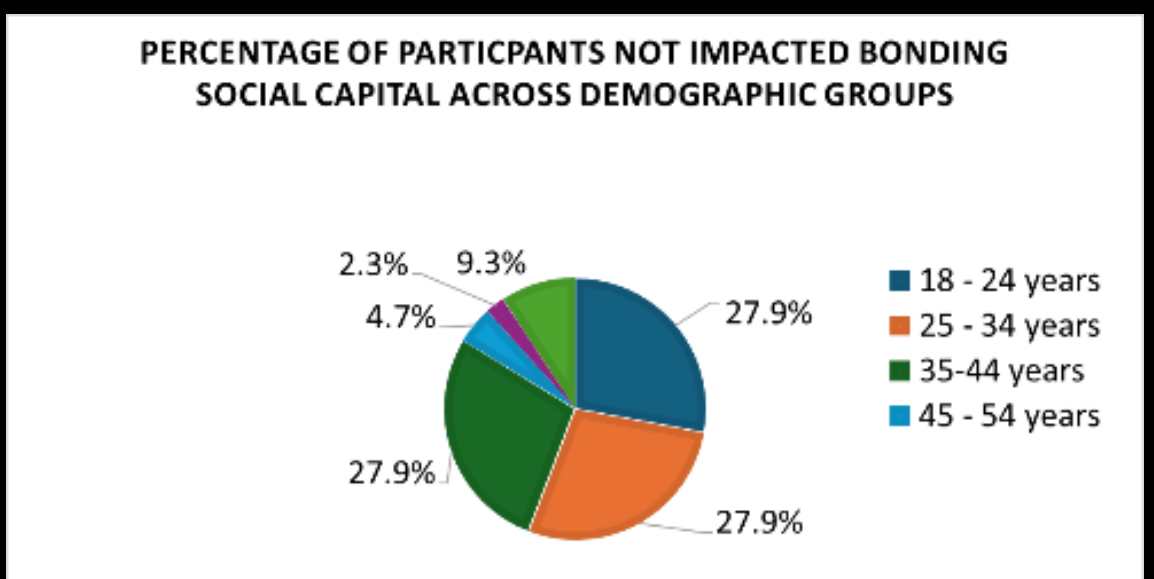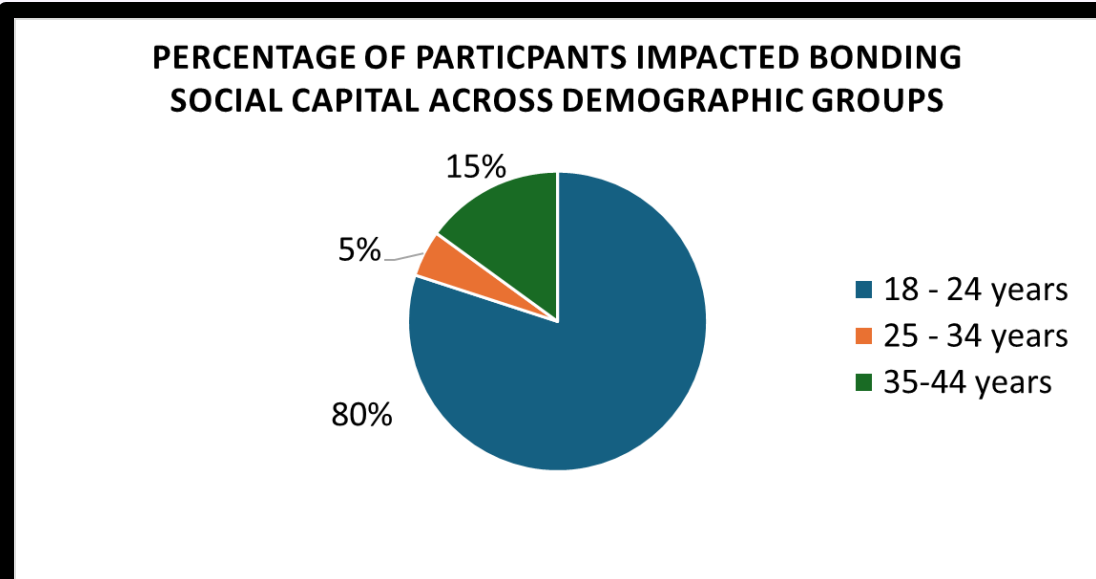
- **Family Influence and Support:**
  "My mom has this [Excelsior Pass]. She actually told me to download it when she first got it because she's always had her vaccine card on her phone. And it's just been way helpful."[Tiana,18 to 24 years old, Unassigned, Other]
- **Family-Based Resistance:**
  "I never really went out and then neither did my family, so I kind of just turn it off because I knew it wasn't going anywhere" [Elliot 18 to 24 years old, Male, White]

Bridging social capital: Weak ties in terms of bridging social capital provided valuable information, but effectiveness varied by institutional outreach and community awareness.
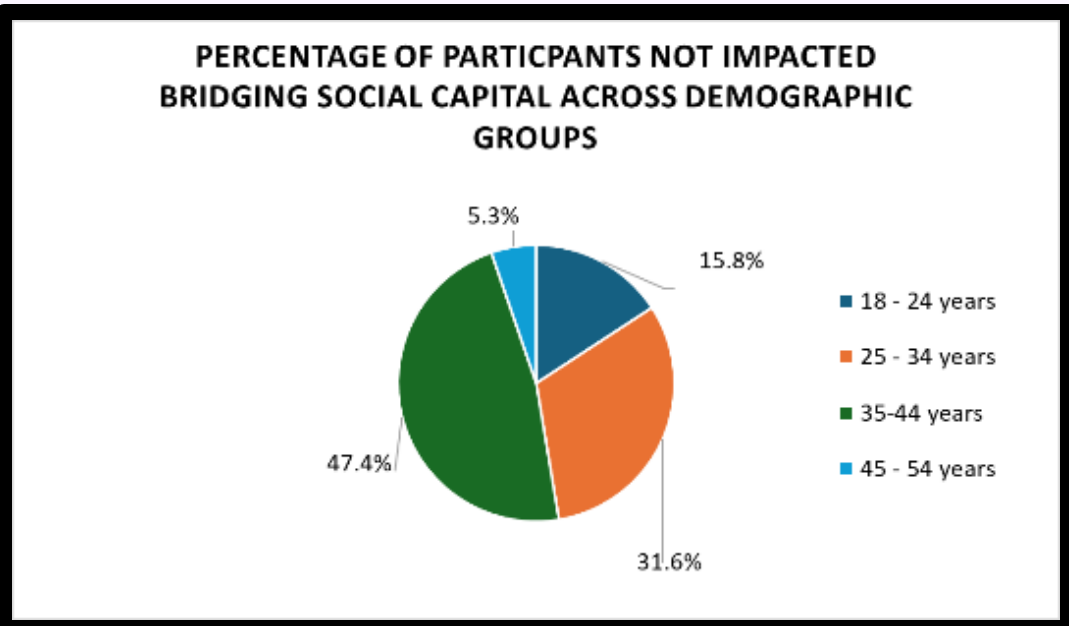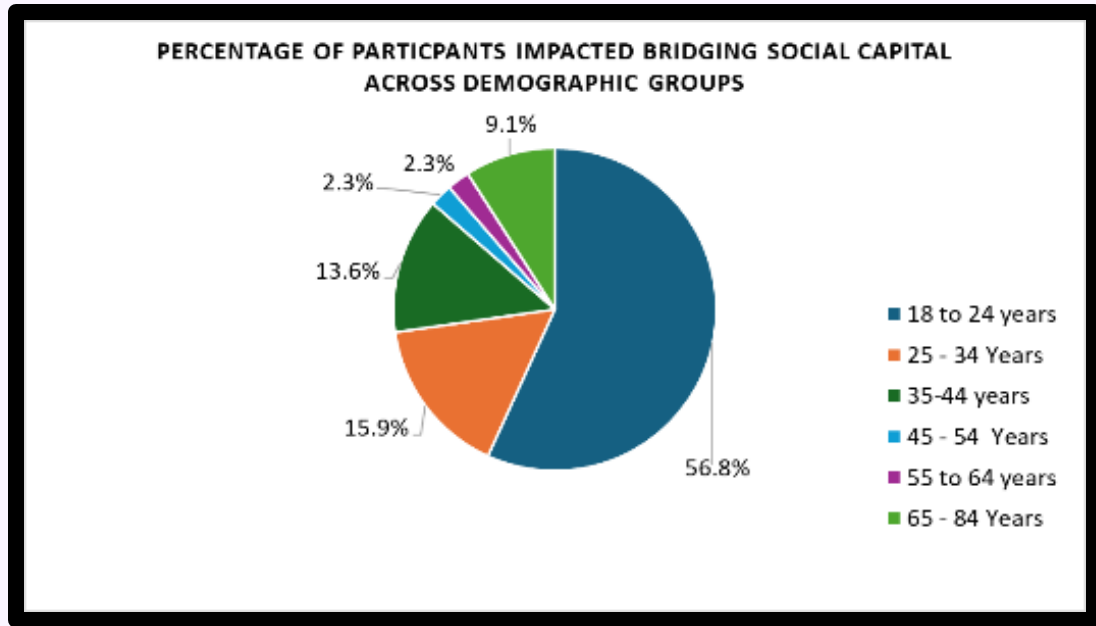
- **Institutional Connections and Information Diffusion:**
  "The university at Albany sent out a big email everyone basically promoting this app telling everyone to get it" [Dennis, 18 to 24 years old, Male, White]

However, the lack of broad awareness emerged as a significant issue:

- **Community Awareness and Social Norms:**
  "In New York, I was in the Bronx, and I went to school, I was in school in downtown Manhattan. For my area where I live, they didn't really have too many or like advertise too many contact tracing apps or things." [Angela,18 to 24 years old, Nonbinary, Black or African American]

Linking Social Capital: Institutional credibility dominated COVID-19 app adoption: Government trust was the biggest factor influencing app adoption.

- **Government and Policy Ties:**
  "I feel that the New York State government has really done their due diligence in terms of getting the information out there, making sure that people are aware of what's going on, and also providing the necessary resources."[Nancy,65-84 years old, Female, Black or African American]

Social Capital Facilitators and Barriers: Influence, Collective Care, Transparency:
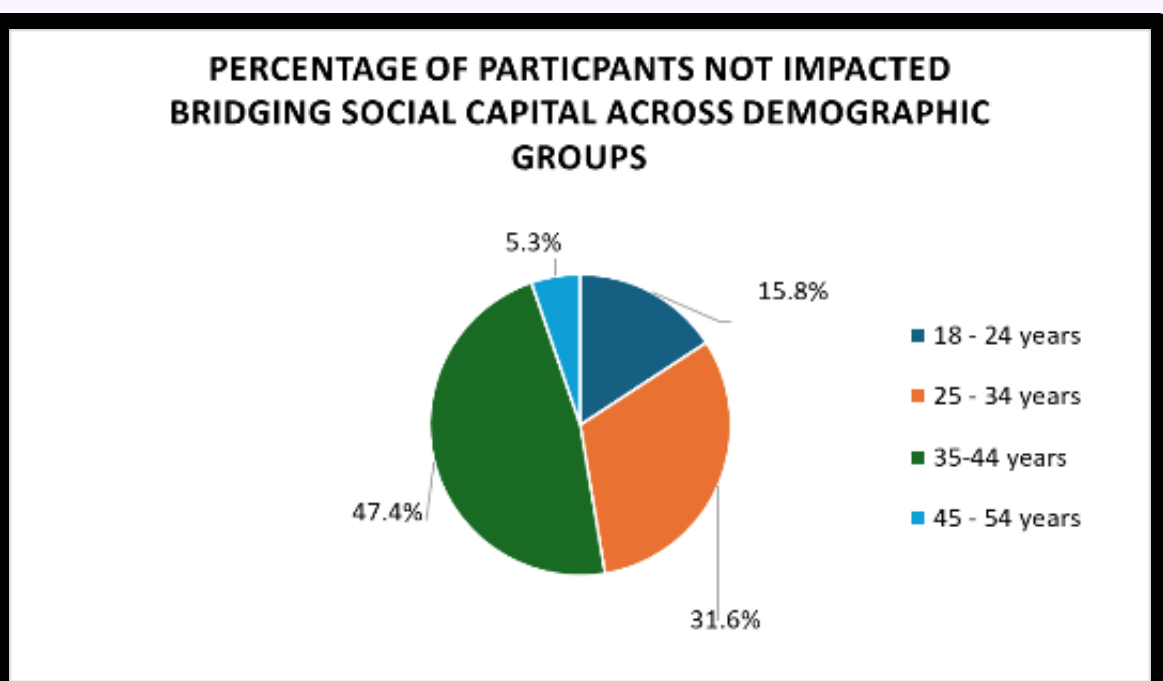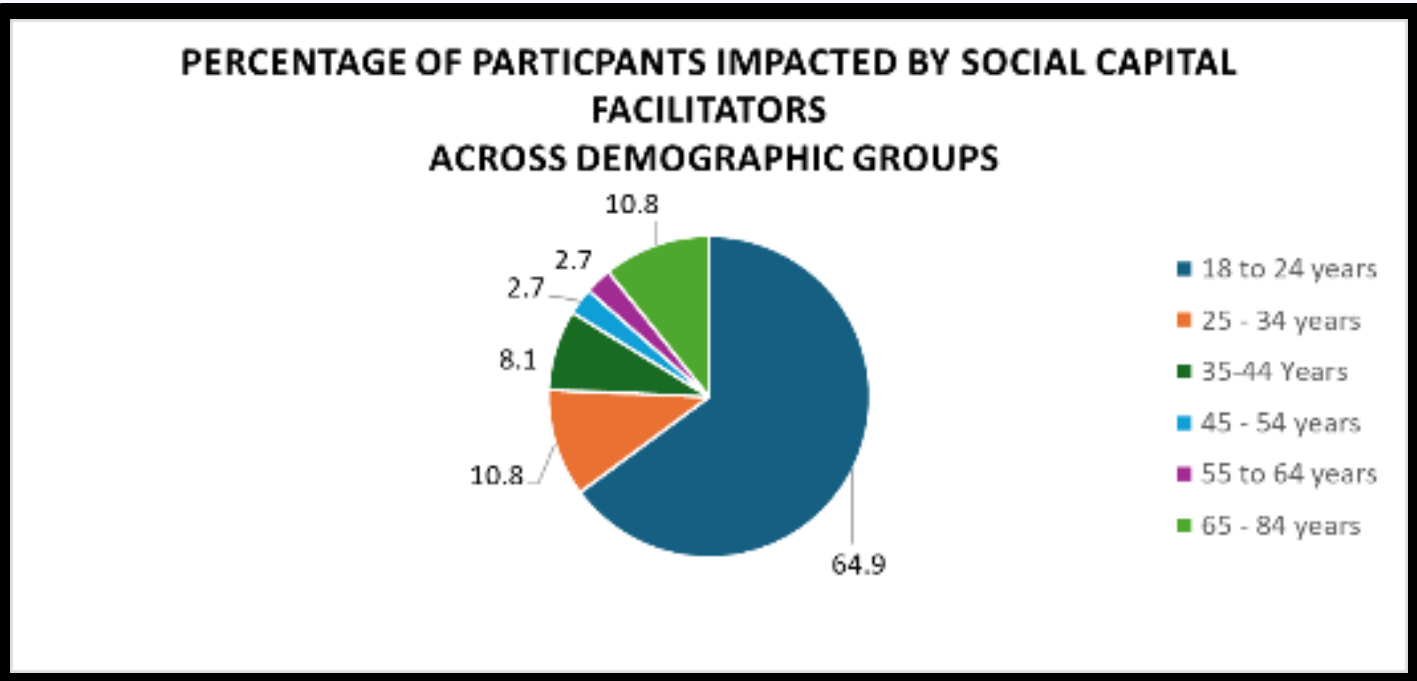
Age significantly influences whether social networks help or hinder COVID-19 app adoption

- Young adults (18-24 years) most likely to experience social capital as facilitator for app adoption
- Middle-aged groups (25-44 years) more often encountered social capital as barrier than facilitator
- Older adults (65-84 years) viewed social capital as facilitator more than barrier within this group
- Adults aged 45-54 showed no clear facilitator/barrier pattern

Discussion

- Linking social capital (institutional connections) was the strongest influence on COVID-19 app adoption
- Paradox emerged: individuals with greatest social support also faced significant adoption barriers
- Age significantly determined whether social networks helped or hindered app use
- Findings challenge conventional health behavior models that emphasize family influence
- Institutional credibility more important than family/friend recommendations for app adoption

Conclusion

- Social capital shapes COVID-19 app adoption beyond individual attitudes, with institutional connections (linking social capital) emerging as the strongest influence
- Paradox identified: individuals with greatest social support also encountered major adoption barriers, demonstrating complexity of social determinants in health technology decisions

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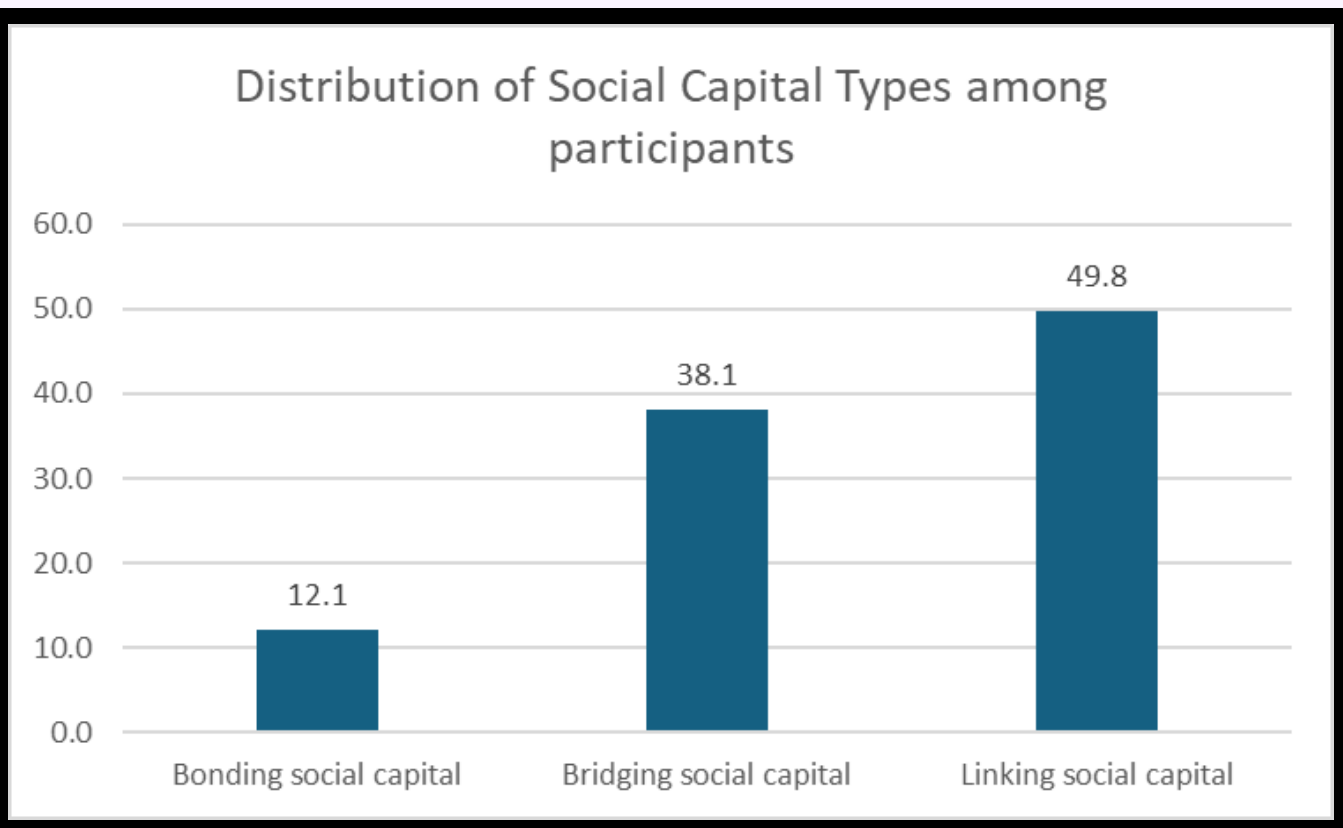Wen, M. (2017). Social Capital and Adolescent Substance Use: The Role of Family, School, and Neighborhood Contexts. *Journal of Research on Adolescence: The Official Journal of the Society for Research on Adolescence*, *27*(2), 362–378. https://doi.org/10.1111/jora.12299
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Yuan, X., Bennett Gayle, D., Jung, E. S., & Dadson, Y. A. (2023). COVID-19 Contact Tracing Mobile Applications in New York State (NYS): An Empirical Study. In H. Degen, S. Ntoa, & A. Moallem (Eds.), *HCI International 2023 – Late Breaking Papers* (pp. 505–524). Springer Nature Switzerland. https://d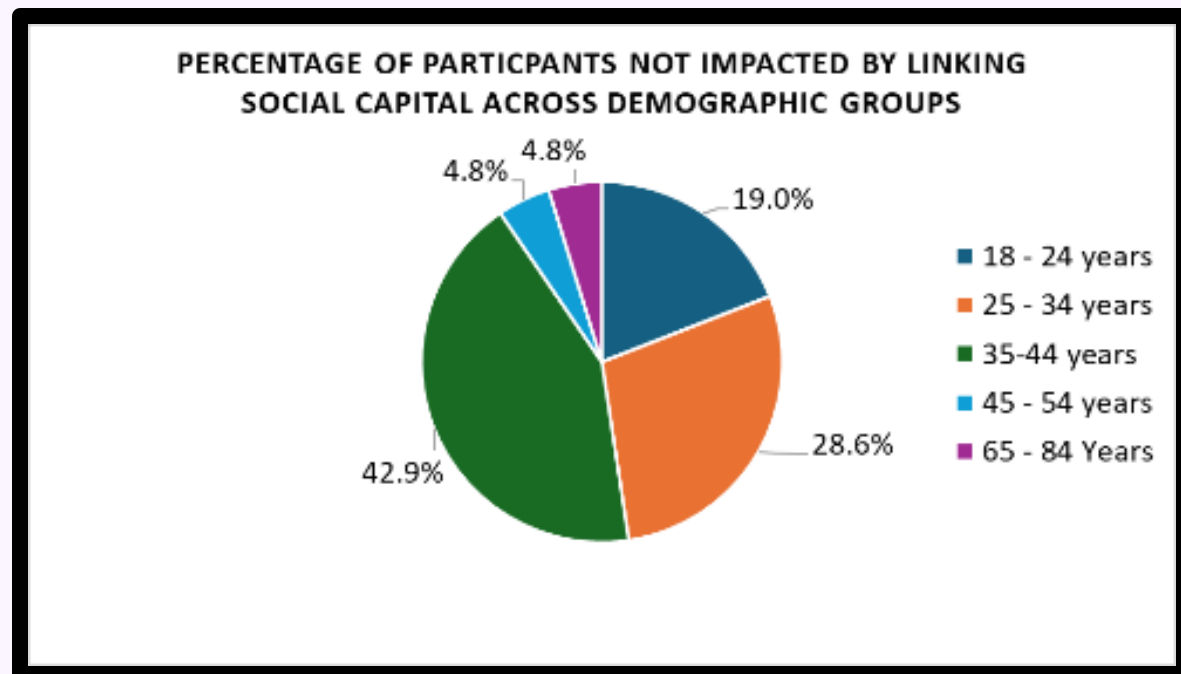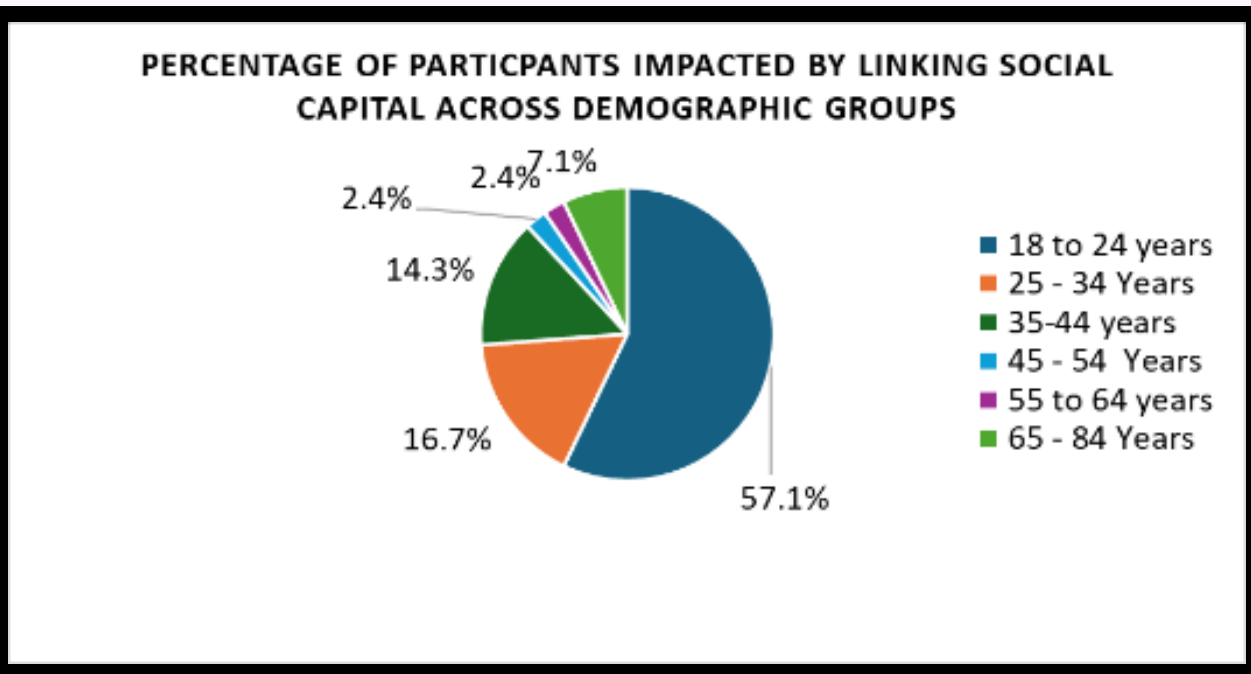oi.org/10.1007/978-3-031-48057-7_32