INNOVATION PARTNERSHIPS
UNIVERSITY OF MICHIGAN

Respondent Driven Sampling Tools (RDSTools)

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Software
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OVERVIEW

RDSTools is a comprehensive software suite for end-to-end management and analysis of Respondent Driven Sampling (RDS) surveys, streamlining hard-to-reach population research.

- Integrates dashboard-driven monitoring, automated sample management, and statistical analysis via intuitive applications and R/Python packages.
- Addresses the critical market gap for effective, scalable tools to conduct and analyze large-scale, network-based survey studies, especially among hidden or minority groups.

BACKGROUND

Collecting robust data from rare or hard-to-reach populations, such as recent immigrants or minority subgroups, is vital for advancing public health, policy, and social research. Traditional survey methods are often costly or impractical for these purposes, frequently underrepresenting targeted groups and failing to capture important intra-group differences—issues with significant implications for health equity and social policy. Respondent Driven Sampling (RDS) offers a network-referral approach to locate and recruit these populations but remains operationally complex and statistically challenging: data quality, variance estimation, and monitoring sampling progression are longstanding problems without streamlined solutions. Increasing demand for efficient, cost-effective, and statistically sound tools is driven by legal mandates for granular demographic data, the rise in global migration, and heightened interest in addressing health disparities.

INNOVATION

RDSTools simplifies every stage of RDS-based research into a seamless digital workflow. The suite includes a real-time dashboard for monitoring survey recruitment, automation for managing participant networks and incentives, and user-friendly analytical modules with graphical interfaces—alongside powerful R and Python packages for advanced users. Unlike piecemeal or generic survey tools, RDSTools is purpose-built for RDS, enabling researchers to visually track chain referrals, automate coupon distribution, ensure protocol fidelity, and perform specialized statistical analyses that account for network structures. This innovation directly tackles the historic bottlenecks of RDS—operational complexity and analytical ambiguity—making rigorous, transparent, and scalable RDS possible for public health, social science, and market research applications.

ADDITIONAL INFORMATION

PROJECT LINKS: https://rdstools.isr.umich.edu

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