USING TECHNOLOGY TO IMPROVE LONGITUDINAL DATA COLLECTION WITH HOMELESS YOUTH

Kimberly A. Bender, PhD
Stephanie Begun, MSW, Doctoral Student
There are approximately 1.6 million homeless youth in the U.S. at any given time. Compared to their housed peers, homeless youth experience increased risks for: (Bender, Thompson, Komlo, & Pollio, 2010; Gaetz, 2004; Gangamma, Slesnick, Toviessi, & Serovich, 2008; Greene, Ennett, & Ringwalt, 1997; Kipke, Simon, Montgomery, & Iversen, 1997; Ringwalt, Greene, Robertson, & McPheeters, 1998; Solorio et al., 2008; Stewart et al., 2004; Tyler, Whitbeck, Hoyt, & Yoder, 2000; Unger, Kipke, Simon, Montgomery, & Johnson, 1997; Whitbeck, Hoyt, & Bao, 2000)
HOMELESS YOUTH: A HIDDEN POPULATION

- Transience
  Widely dispersed across communities

- Fluctuate in and out of shelters and public institutions

- Lack stable contact information

Challenges of studying homeless youth

(Ringwalt et al., 1998)
Cell phones, texting, and online social networks hold promise in maintaining connections with this highly transient population. However, few studies have examined the utility and efficiency of using these different technological modalities to retain homeless youth research participants.

(Eyrich-Garg, 2010; Rice et al., 2012; Rice, Lee, & Taitt, 2011)
RESEARCH QUESTIONS

The current study explored, among homeless youth:

1) How many contact attempts, and over what period of time, are necessary to maintain contact?

2) Which contact methods do youth prefer over time?

3) What youth characteristics are associated with study retention?
As part of a clinical trial for homeless youth, data were collected from youth ages 18-21 \((N = 98)\) accessing services in a homeless youth shelter in Denver.  

- 40-bed overnight shelter offered dormitories, a medical clinic, mental health assessment, and case management aimed at helping youth achieve family reunification or self-sufficiency.

Inclusion criteria:
- Be at least 18 years of age
- Willingness to sign informed consent form
SAMPLE DEMOGRAPHICS

- $N = 98$ (baseline)
- Age: Mean = 19, ($SD = 0.8$)
- Average years homeless: 1.37 ($SD = 1.68$)
METHODS: DATA COLLECTION

- Four time points
  - Baseline ($20)
  - 1-week follow-up ($20 + cell phone)*
  - 6-week follow-up ($50)
  - 3-month follow-up ($60)
- *At 1-week follow up, participants were given active cell phones (pre-paid for 3 months with unlimited talk and text), and participants’ e-mail and Facebook information were collected
METHODS: DATA COLLECTION

- Baseline and 1-week follow up interviews were conducted in-person at shelter by Research Assistants (RAs): 2 MSW students and 2 PhD students

- For subsequent interviews:
  - Protocol was used to structure retention efforts:
    - First attempt: phonecall
    - If no response after 24 hours, second attempt: phonecall and text
    - If still no response after another 24 hours, final attempt: phonecall, text, e-mail, and Facebook (as available)
METHODS: MEASURES

- In a contact log, RAs documented each attempt at contacting youth, including:
  - Number of attempts
  - When each attempt occurred (date/time)
  - Method of contact (phone call, text, e-mail, Facebook)
  - Each response from youth (including number of contacts, timing, method of contact)
  - Resulted in string of exchanges

- Demographic (age, gender, ethnicity, education) and risk variables (days slept on street, transience, service utilization, time homeless, RCT group assignment, PTSD and substance use disorder [MINI])

- Asked youth…
  - Tell me what you thought about getting cell-phone calls to check in between interviews.
  - Tell me what you thought about text messages to check in between interviews.
  - What encouraged you to participate?
METHODS: DATA ANALYSES

- Descriptive statistics (frequencies, percentages, means, standard deviations) were used to describe the number of attempts to reach youth, number of days of contact, technology methods used by youth, interview format, and whether youth were retained in the study at each follow-up.

- Bivariate analyses (chi-square, t-tests) were used to compare youth retained in the study with study dropouts on demographic and risk variables.

- Brief answers to open-ended questions were categorized using an iterative content analysis process by 3 coders. Categories were compared across coders, and divergent codes were discussed and reconciled.

- Qualitative field notes supplemented quantitative data by describing the challenges RAs encountered in maintaining contact with youth using various technologies.
RESULTS

- Average number of exchanges and days required to achieve interview over time:

  - 6 week follow up (n=76):
    - Average exchanges: 2.36
    - Average Days: 3.99
  - 3 month follow up (n=68):
    - Average exchanges: 3.95
    - Average Days: 5.24
RESULTS

- Percentage of youth who responded utilizing each technology type over time:

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6 week follow up (n=75) | 3 month follow up (n=68)
Texts | Calls | Facebook | Email
--- | --- | --- | ---
28.9 | 30.3 | 5.3 | 4.4
26.5 | 39.7 | 8.8 | 4.4
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- 6 week follow up (n=75):
  - Texts: 28.9%
  - Calls: 30.3%
  - Facebook: 5.3%
  - Email: 4.4%

- 3 month follow up (n=68):
  - Texts: 26.5%
  - Calls: 39.7%
  - Facebook: 8.8%
  - Email: 4.4%
RESULTS

- Percentage of interviews completed in-person versus by phone over time:

- **6 week follow up (n=76)**:
  - In person interview: 55.3%
  - Phone interview: 44.4%

- **3 month follow up (n=68)**:
  - In person interview: 55.9%
  - Phone interview: 44.0%
IN YOUTHS’ WORDS...

- Phone calls were: “awesome”, “helpful” made youth feel “important” and “connected” (87.5%)
  - “a little annoying”, “inconvenient” or “bothersome” because conflicted with work schedules or not preferred method of communicating (12.5%)

- Texts were: “a lot easier” and “more convenient” especially for those in work or school, used as a reminder to schedule a better time to talk, cool to see researchers texting, less suspicious of texts from unknown numbers than calls (70%)

- Youth participated because: liked incentives, especially phones (33%); commitment to learning about self, sharing knowledge, giving back (52%); advancing research on homelessness (15%)
IN YOUTHS’ WORDS…

- Having a project phone:
  - “has built stability in my life because it's hard to …do job interviews on the streets and it has helped my life a lot.”
  - “helped [me] stay connected and access outside resources” (i.e., looking for a job and going on an interview)
  - It also “helps to keep me safe” and “…got me on my feet for a little while.”
YOUTH RETAINED VS. DROP OUTS

- Retained youth did not differ significantly from study dropouts in regards to:
  - utilization of other services (e.g., case management, GED, job training)
  - randomized group (experimental vs. control)
  - time homeless
  - number of nights spent on the street
  - transience (number of inter-city moves)
  - substance use disorder or PTSD
  - Age
  - ethnicity
  - education
  - sexual orientation

- Although no gender differences were found at 6-weeks, at 3-months a greater proportion of females (86.1%) than males (58.3%) were retained in the study \( (X^2[2] = 9.56, p < .01) \).
DISCUSSION

- Persistence is required to retain homeless youth in longitudinal studies
  - Frequent attempts at contact prior to getting a response
  - Once response is achieved, back and forth exchanges are often required to complete interview
  - Rapport
  - Dependent upon youths’ commitment to follow through with study
  - Ethics and vulnerable youth

- Several methodologies are useful in retaining youth
  - Cell phones demonstrate particular promise in retention (transient/difficult-to-reach)
    - Cell and text more consistently utilized vs. email/Facebook
    - Although youth valued being given phones, some were lost, stolen, broken, or given away (thus requiring back-up contact methods)
DISCUSSION

- Challenges of conducting interviews by phone; difficulty of administering several instruments
- Email and Facebook elicited inconsistent responses from youth
- Presence at shelter was crucial
- Lack of differences in retained vs. dropouts surprising, but promising for generalizability of findings
DISCUSSION

- Ethics in reaching youth longitudinally via technologies
  - FB makes confidential informational available to the interviewers when youth post personal info on status updates
  - Mental health crises and suicidal ideations come to attention of research staff
  - Privy to relationship problems among youth participants
  - Driving while interviewing – safety and privacy in conducting interviews by phone
IMPLICATIONS

- Future longitudinal research with this difficult-to-track population would benefit from providing phone access while also collecting back-up methods.
- Challenges in conducting interviews by phone for youth who are no longer in the area/available may be overcome using other innovative technologies:
  - Video clips
  - Online surveys
  - Google Hangout, Skype, etc.
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