

# Questionnaire Design Considerations when Expanding a Survey Target Population to Include Children

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# Expanding Target Population to Include Children

- **Study Objectives**
- **Questionnaire Design**
  - Using appropriate language
  - Response scales suitable for younger children
  - Shortening reference periods
- **Key Considerations for NSDUH:** IRB, Questionnaire Issues, Data Quality, Timing, Nonresponse, and Cost

# About the NSDUH

- The National Survey on Drug Use and Health (NSDUH) is an annual face-to-face, general population survey with non-institutionalized population 12 and older.
- Conducted by RTI under contract with SAMHSA since 1988.
- Study is the nation's leading source of information on substance use behaviors and mental health.

## About the NSDUH, con't

- Administered with Computer Assisted Personal Interviewing (CAPI) and Audio Computer Assisted Self Interviewing (ACASI) components.
- Data collected on a quarterly basis each year
- Approximately 700 Field Interviewers (FIs) staffed
- Approximately 180,000 household screenings and 67,500 interviews completed annually

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# NSDUH Methods Study Background

- Potential for additional data
  - Some children under 12 use drugs
  - Estimates of undercoverage in past year initiation for 11 and younger, which also affects the mean age at first use estimate
- Methods Study
  - Examine feasibility and impact of expanding target population to include 10 and 11 year olds
  - Ensure accurate estimates of drug use can be obtained for this age group
  - Ensure data quality and integrity are maintained if survey population is expanded

# Institutional Review Board Concerns

- Parent Coercion
  - Reveal answers to sensitive topics
  - Collect incentive
- Assent Comprehension
- Cognitive ability of younger children
- Sensitive question exposure (Ceci and Bruck, 1993)

# Suggestions for Addressing IRB Concerns

- Emphasize confidentiality and voluntary participation
- Cognitive interviews
- Usability tests
- Modify Instrument
- Female interviewers (if parents hesitate to leave younger children with FI)

# Incentives

- Cash incentives are most effective with children who are at least 9 years old (Bagley et al. 2007)
- Consider non-monetary incentive for younger children



# Data Quality

- Underreporting of sensitive topics
  - Greater pressure by parents to reveal survey responses
  - Lack of confidentiality comprehension
  - Lack of cognitive capacity to accurately recall past use
- Data quality increases with cognitive growth, which can be modeled by years of education (Borgers and Hox 2001)

# Data Quality, cont

- Accuracy of self-reports to sensitive questions
  - Stueve and O'Donnell (2000) found that retraction of baseline answers at a follow-up study was greater for younger respondents for rarer and more socially undesirable behaviors
- Reliability
  - Children particularly unreliable in reporting about time factors, such as duration and onset of symptoms (Schwabstone et al., 1994)
  - Youths appeared less consistent than adults in their reporting of substance use, particularly in the cases of lifetime and past year non-medical prescription drug use and past year alcohol use (Kennet et al. 2007)

# Questionnaire Complexity

- **Question Comprehension**
  - Self-reports of young children valid-only when using age appropriate instrument (Varni et al., 2007, 1)
  - Age 8-11 can competently complete many common-type surveys (Borgers et al 2000)
- **Questionnaire Suggestions**
  - Recommend identifying and modifying vocabulary and constructs that are more complex than a 4<sup>th</sup> grade level
  - Avoid ambiguous scales, negative language, and highly sensitive questions
  - Considerations of introducing ‘adult content’ topics to the younger group (STDs, pregnancy, suicide, slang terms for drugs)

# Questionnaire Mode

- According to a Kaiser Family Foundation report, 8-10 year olds spend less time using a computer than older kids. However, this age group still averages 46 minutes a day.
- Familiarity with computers would lend support to the feasibility of an ACASI mode.
- Respondents as young as 11 use ACASI for the National Survey of Child and Adolescent Well-Being (NSCAW)
- “Assisted ACASI” is used with 5-10 year old respondents
- Other studies found validity to be lower in ACASI compared to a face to face mode (Bender et al 2007)

# Questionnaire Timing Data (2008)

	Respondent Age (Years)					
	12	13	14	15	16	17
Sample Used in Analysis	<b>3,475</b>	<b>3,665</b>	<b>3,777</b>	<b>3,808</b>	<b>3,933</b>	<b>3,814</b>
Mean Length of IW	<b>64.5</b>	<b>61.5</b>	<b>60.1</b>	<b>60.7</b>	<b>61.3</b>	<b>62.2</b>
Variance	<b>257.4</b>	<b>243.0</b>	<b>257.3</b>	<b>245.3</b>	<b>261.6</b>	<b>280.0</b>
Std Dev	<b>16.0</b>	<b>15.6</b>	<b>16.0</b>	<b>15.7</b>	<b>16.2</b>	<b>16.7</b>

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# Timing Considerations

- A longer interview for the younger age group would increase costs of interview administration.
- High burden may lead to cognitive shortcuts, mental fatigue, forgetting to report past behaviors.
- Consider whether younger children should be administered an abbreviated instrument.
- However, the use of an abbreviated questionnaire may introduce context effects.

# 2008 NSDUH Weighted Refusal Rates (12-17 yrs)

Interview Result Codes	Respondent Age (Years)					
	12	13	14	15	16	17
	%	%	%	%	%	%
Interview Complete	84.3	83.6	86.0	85.2	85.6	84.0
Overall Refusal	11.1	13.2	10.4	11.5	11.2	11.2
Refusal	1.7	2.5	2.0	2.6	3.5	4.1
Parental Refusal	9.4	10.7	8.4	8.9	7.7	7.1

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# Nonresponse

- Parents more likely to refuse for child if parent refuses survey themselves
  - Among parents who completed a NSDUH interview, 96% of adolescents also completed an interview
  - Among parents who refused their own survey, 42% of adolescents went on to complete the NSDUH interview
- Consider sensitive topics and their affect on response rates with the younger age group

# Summary

- Cannot assume that survey procedures that are appropriate for a 12+ age group will be suitable for younger children
- Cognitive sophistication has an impact on questionnaire design and data quality

# Summary, con't

- Research suggests that the validity of young children's self-reports may only be acceptable when using age-appropriate instruments and measuring non-sensitive behaviors
- Pretesting and pilot testing of procedures could provide a comprehensive source of data that will help answer many of these questions

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Thank you!

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