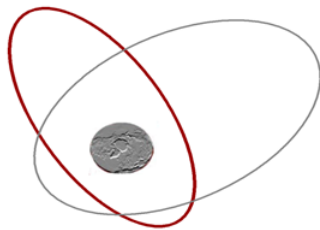


# **Interview Environment, Interviewer Characteristics, and Data Quality: Analysis from the Chitwan Valley Family Study in Nepal**



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# **BACKGROUND**

- ▶ In developing countries, survey data are often criticized for having large non-sampling errors, such as measurement error, and low quality (e.g. Axinn 1989; 1991; Campbell, Shrestha and Stone, 1979).
- ▶ Krosnick (1991) describes a form of measurement error called “satisficing” such as the use of “don’t know” as a response to survey questions.
- ▶ However, what factors contribute to “don’t know” response in rural settings such as Nepal is often overlooked.

# **RESEARCH QUESTIONS**

**What factors, measurable from paradata collected by interviewers, such as whether the respondent was reluctant to participate, contribute to measurement error?**

**What socio-demographic characteristics of interviewers such as gender, education and level of experience, contribute to measurement error?**

**Do these factors (interview environment and interviewer characteristics) differentially influence data quality for male and female respondents?**

# **EXPLANATIONS**

- ▶ Interview setting and interview environment factors that can foster satisficing:
  - ▶ Task difficulty, which includes distractions in the interview environment
  - ▶ Respondent ability
  - ▶ Respondent motivation

# **EXPLANATIONS**

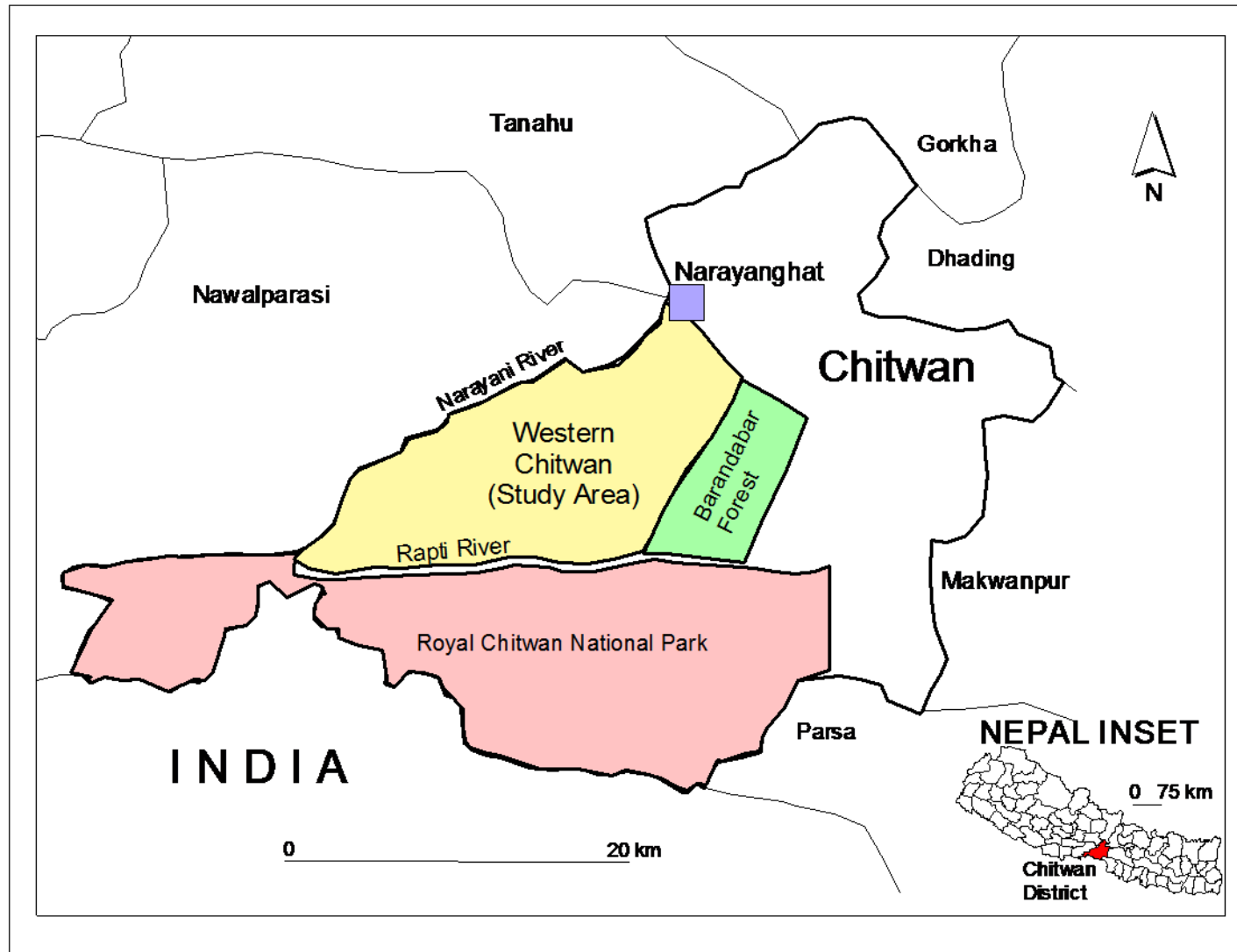
## **► Interviewer Characteristics**

- Results on interviewer characteristic effects are often mixed.**
- Consistent finding in methodological work that interviewer characteristics may influence respondent comprehension and judgment when the survey questions are related to observable interviewer traits.**

# Study Site – Chitwan, Nepal



# Study Site – Western Chitwan Valley



# Study Setting – Western Chitwan Valley

- ▶ Western Chitwan Valley situated in the south-central Nepal
- ▶ Before 1950s, the Valley was covered with dense forest
- ▶ During 1950s, the Valley opened for settlement with distribution of land to farmers of adjoining areas
- ▶ Population grew rapidly due to migration and high fertility





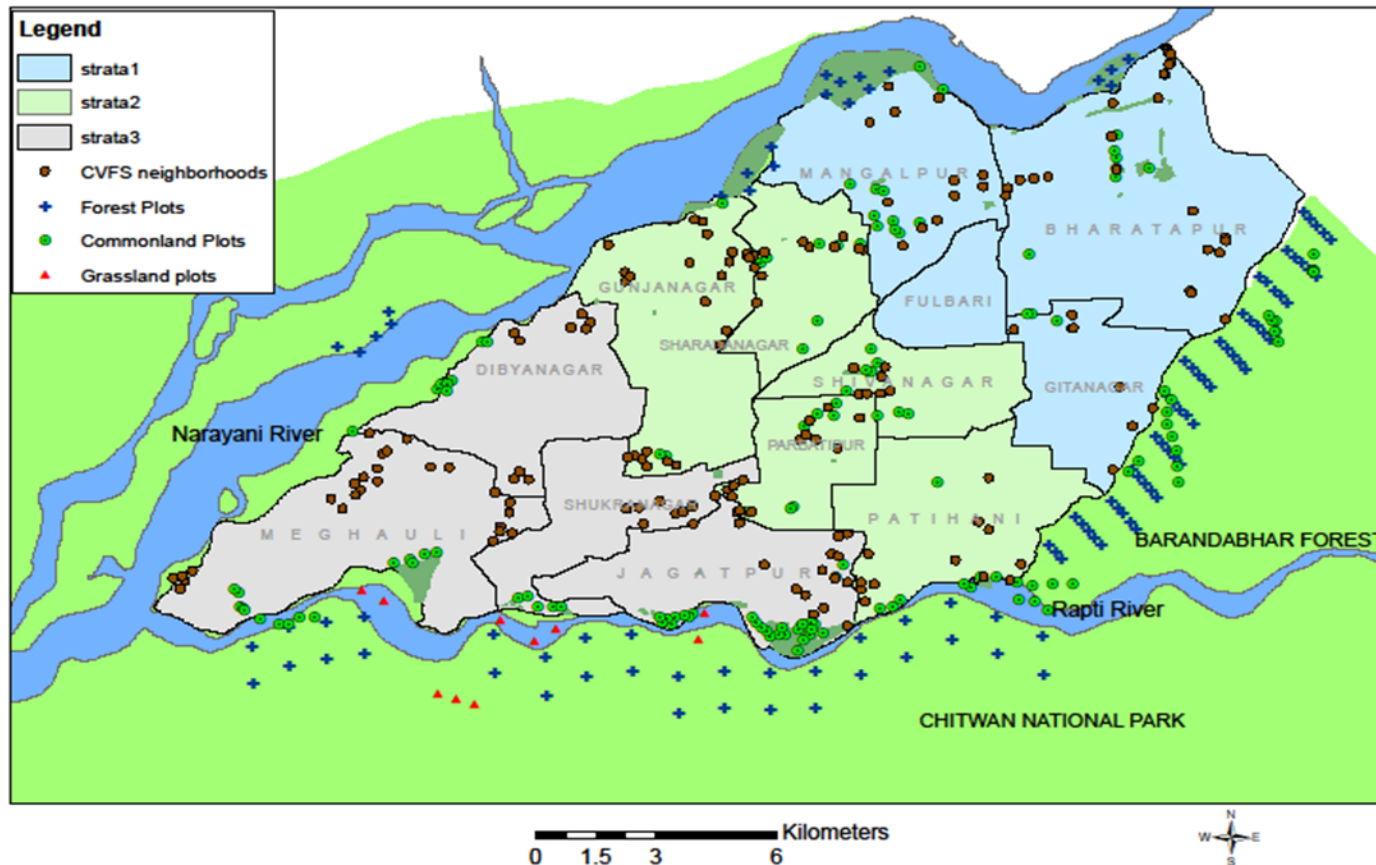
# Home of ...





# Study Sample: The Western Chitwan Valley

Figure 1: Map of Western Chitwan



- 151 Sample Neighborhoods
- 2500 Households within Sample Neighborhoods
- Over 7500 Individuals

# Data

- ▶ **2008 Baseline Individual Interview Data Collected from over 7500 Individuals**
- ▶ **Interviewer Characteristics Collected at the time of 2008 Baseline Individual Interview**
- ▶ **Paradata collected as part of interviewer observations and call records.**

# Variables

## Dependent Variable

Data quality measured as whether a respondent provided a 'don't know' response to any items, both factual and attitudinal, in the 2008 baseline individual interview.

Coded 1 if a respondent provided a response of "don't know" to any questionnaire item vs. 0 for all else

# Variables

## Explanatory Variables

### 1. Interview Environment

- a. *Interviewer observation of the interview setting and the interview.*
- b. *Time of day of interview.*

### Interviewer Observation

#### अन्तर्वार्ताकारको अनुभव

अन्तर्वार्ता लिने जाँने क्रममा उत्तरदाताको घटना पुर्या  
उत्तरदाता पसलमा बसेरहेको भएकी थियो। आफ्नो २ खेदभाकी  
परिचय दिदै आफ्नो आउनेको कक्षा सहित बताउँदै घर अद्वयनको  
प्रहरीको वीर जात्राको गराउँदै समयको अनुमाने मागो अन्तर्वार्ता  
शुरु गरि ।

अन्तर्वार्ता प्रति शुरु भयो, प्रत्येक प्रश्नहरू उत्तरदातालाई  
बोल्दै जाँने क्रममा ०.१२ मा उत्तरदाताले खिमेमा '१' भन्थी पनि हेर्दिन  
अनुभवको हुनाले व्यक्तिको व्यक्तित्व थियो भ्याएकी छु। यदरी उत्तरदाता  
लाई खण्ड १ मा पुगो ०.२ मा (१७) गर्दा पनि उत्तरदाताले '२' भन्थी  
पनि लाग्ने अनुभवको थियो। यदरी उत्तरदाताले खण्ड २ मा अन्तर्वार्ता  
पतिमा सहभागी हुदै अनुभवको थियो। खण्ड ३ मा खिमेको ३० वर्ष  
पछिका प्रश्नहरूमा बिराए व्यक्ती जेहेन भविष्यवाणी गर्न सकिदैन भन्ने  
के बाहेक खेद अर्को उत्तरहरू दिन गर्नु भएकी थियो।

राम्रमा अनुभव आफ्नो अन्तर्वार्ता लिने उत्तरदाताले अन्तर्वार्ता  
यदरी कोहीले पनि खेदले लगाउनु भनेर बिराउनु भएको थियो तर उहाँ  
बिराए पनि अन्तर्वार्ताले पूर्ण रूपमा सहभागी हुनु भएको थियो।

Respondent was Angry



# Variables

## Explanatory Variables

### 1. Interview Environment

#### c. Call records – number of visits made to complete the interview

सम्पर्क विवरण				
विवरण	पहिलो पटक	दोस्रो पटक	तेस्रो पटक	कैफियत
मिति	२०६४-०६-०९	२०६४-०६-०९	०६४-१०-२२	
अन्तरवार्ता लिनेको नाम	चमेली वि.क	रुद्रा आ.७	चमेली वि.क	
परिणाम*	०६	०६	०९	
समय	विहान	विहान	दिउँसो	
अर्को पटक जाने मिति	—	—	—	
उत्तरदाताको हड अगाडी फर्क्यो भएकै को २ हड पछाडी फर्क्यो दुई भएकै गयो २०६४-०६-२२ गते पछि बोलिओ भएकै छ।	उत्तरदाताको ३० विहानमा आबु भएको र उहाँ १/२ महिला पछि आउनु हुने भएकै भएकै भएकै	उत्तरदाताको ३० विहानमा आबु भएको र उहाँ १/२ महिला पछि आउनु हुने भएकै भएकै भएकै	उत्तरदाताको ३० विहानमा आबु भएको र उहाँ १/२ महिला पछि आउनु हुने भएकै भएकै भएकै	
Visit 1	Visit 2	Visit 3		
Appt. was made with R.	R not at home	Interview completed		

सम्पर्क विवरण				
विवरण	पहिलो पटक	दोस्रो पटक	तेस्रो पटक	कैफियत
मिति	२०६४-०६-२३	२०६४-०६-२३	२०६४-०७-२७	
अन्तरवार्ता लिनेको नाम	अनुप वि.मि	अनुप वि.मि	अनुप वि.मि	
परिणाम*	०६	०६	०९	
समय	विहान	विहान	विहान	
अर्को पटक जाने मिति	—	—	—	
उत्तरदाताको ३० विहानमा आबु भएको र उहाँ १/२ महिला पछि आउनु हुने भएकै भएकै भएकै	उत्तरदाताको ३० विहानमा आबु भएको र उहाँ १/२ महिला पछि आउनु हुने भएकै भएकै भएकै	उत्तरदाताको ३० विहानमा आबु भएको र उहाँ १/२ महिला पछि आउनु हुने भएकै भएकै भएकै	उत्तरदाताको ३० विहानमा आबु भएको र उहाँ १/२ महिला पछि आउनु हुने भएकै भएकै भएकै	
Visit 1	Visit 2	Visit 3		
R goes to work. Can be available in the evening only	R busy at work.	Interview completed		

\* १. अन्तरवार्ता पूरा भएको २. उत्तरदाता घर नभएको ३. अन्तरवार्ता विचैमा रोक्नु परेको  
४. अन्तरवार्ता दिन नचाहेको ५. अन्तरवार्ता आशिक पूरा भएको ६. अन्य भए खुलाउने.....

# Variables

## Explanatory Variables

### 2. Interviewer Characteristics

- i. *Age*
- ii. *Gender*
- iii. *Education*
- iv. *Work experience*
- v. *Marital status*
- vi. *Caste/ethnicity*

## Controls

- Length of interview
- Number of items asked
- Whether respondents were exposed to the survey items in 1996
- Respondent characteristics such as age (in years), gender, education (years of schooling), marital status, and caste/ethnicity

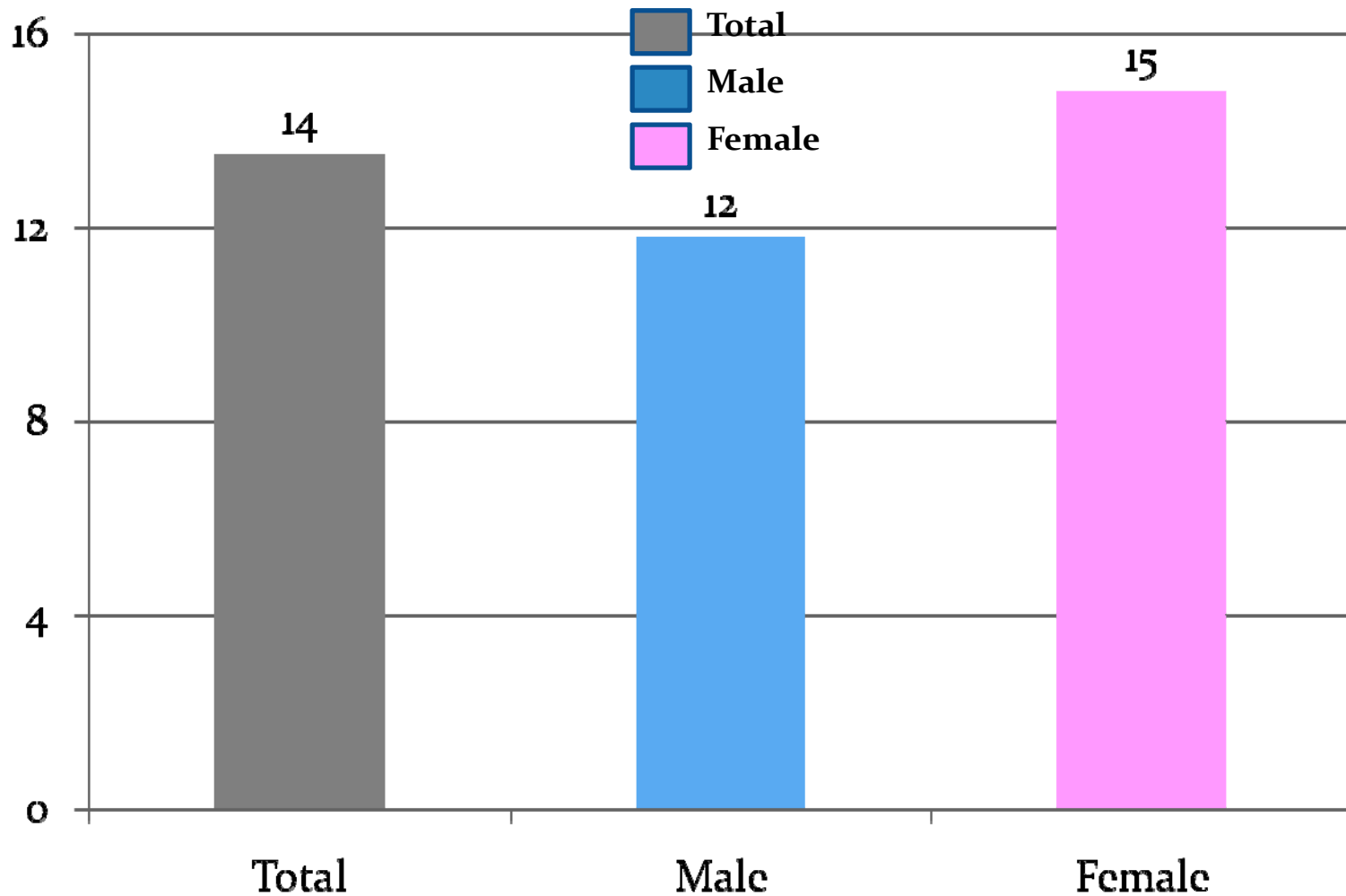
# Analysis

- ▶ **Descriptive: Frequency, percent, mean, standard deviation**
- ▶ **Multivariate: (Binary) Logistic Regression**



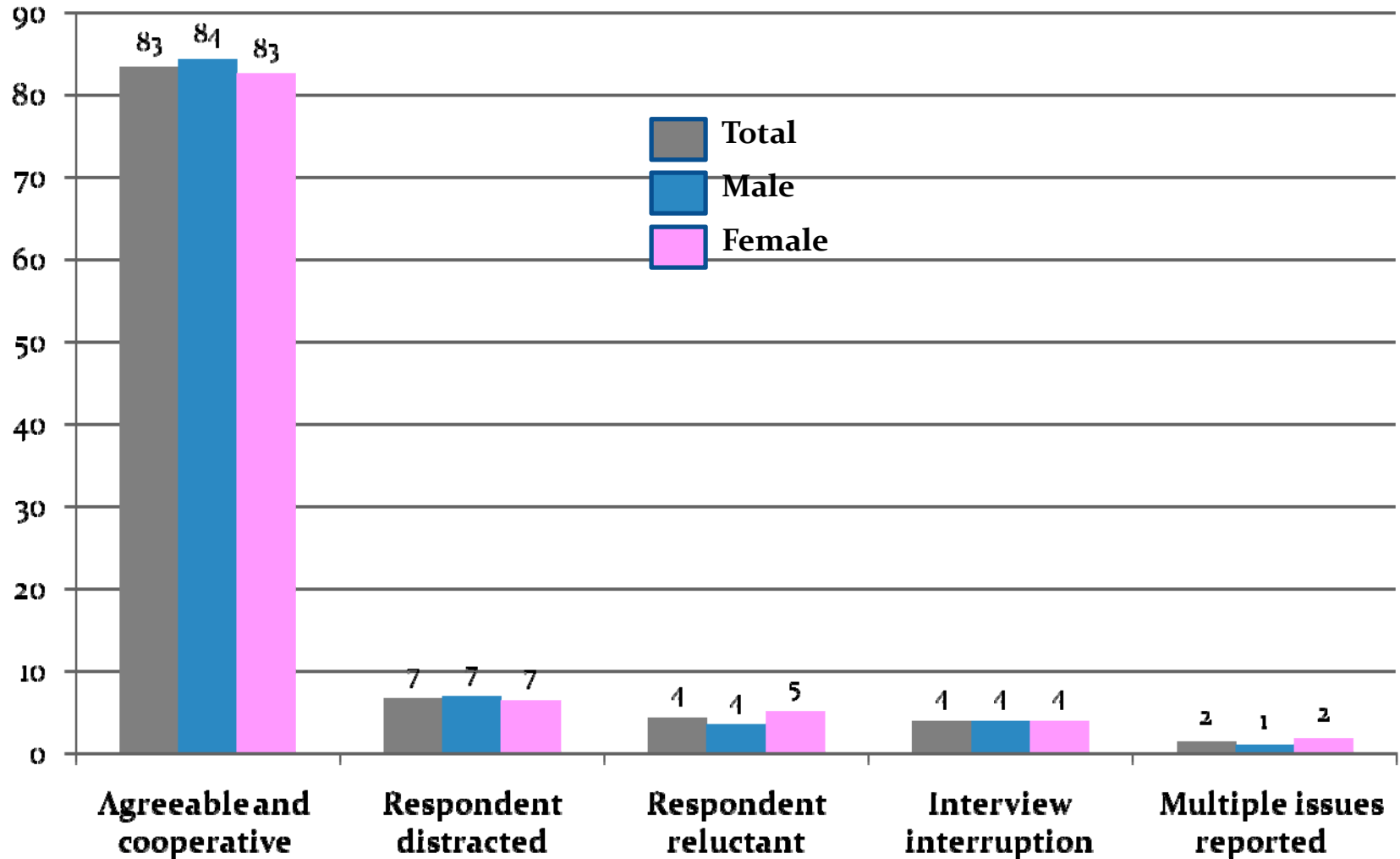
# Results

## Percent Responding 'Don't Know'



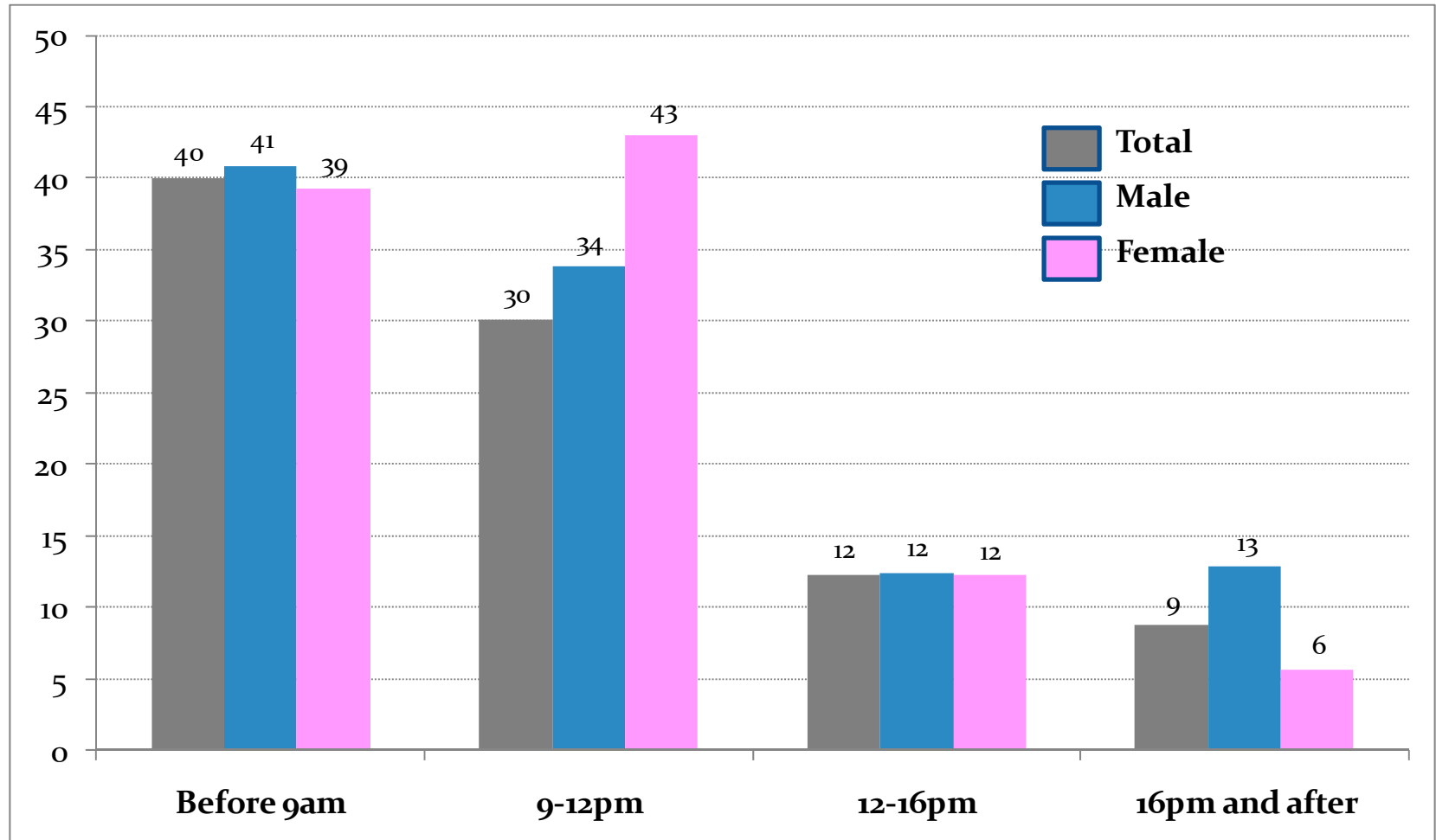
# Results...

## Interviewer Observation of the Interview Environment (Percent)



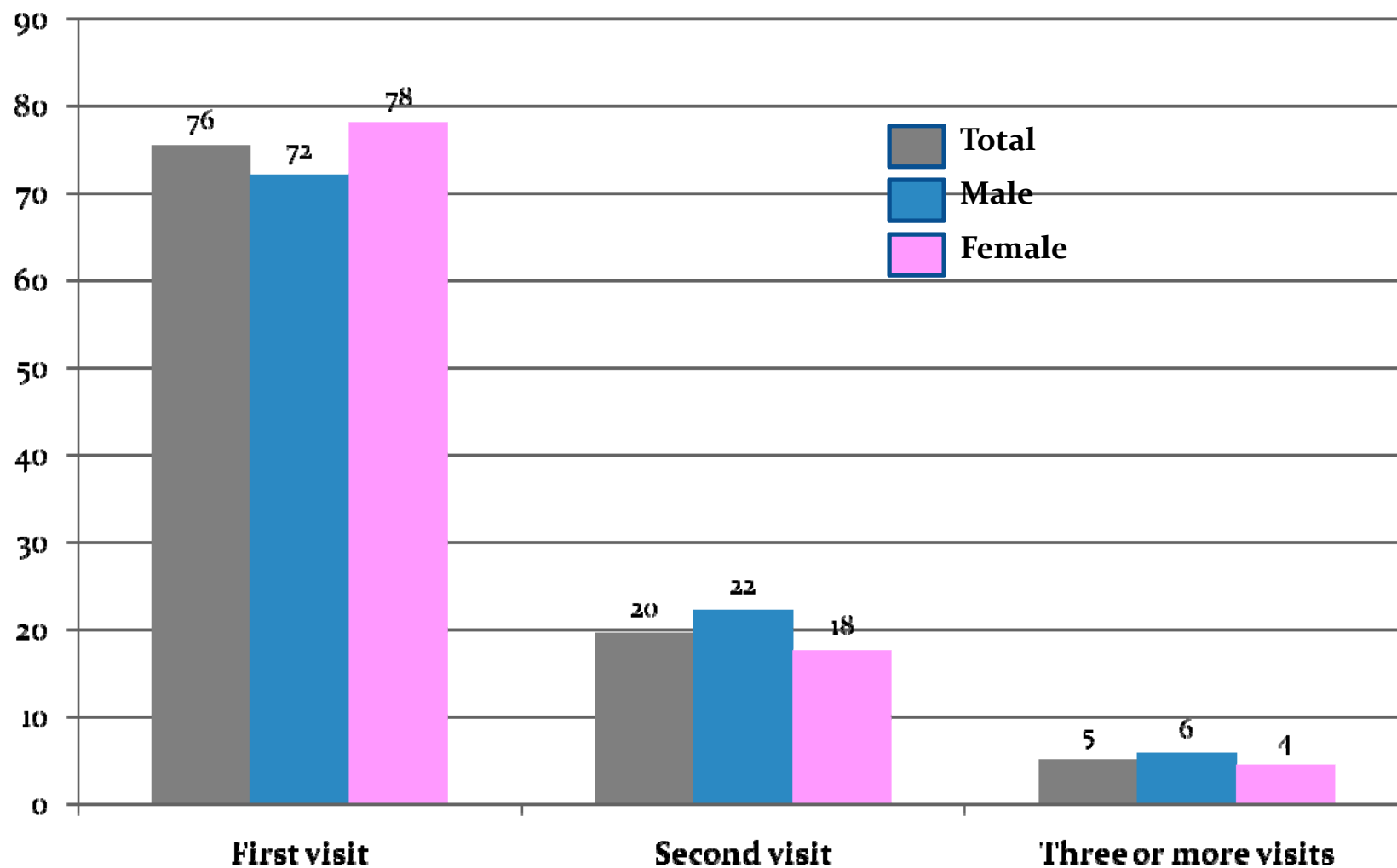
# Results...

## Interview Time of Day (Percent)



# Results...

## Call Record: Interview Completed in (Percent)



# Results...

## Interviewer Characteristics (Percent)

Characteristics	Total	Male	Female
<b>Age</b>	23.7	24.2	23.0
<b>Gender</b> (Female =1)	55.9	100.0	100.0
<b>Education</b>			
SLC or below	46.2	56.3	38.6
IA and BA level	53.8	43.7	61.4
<b>Work experience</b>			
New interviewers	94.6	93.2	95.6
Experienced interviewers	5.4	6.8	4.4
<b>Marital status</b>			
Married	70.5	81.9	37.9
Else (unmarried and others)	29.5	18.1	62.1
<b>Caste/Ethnicity</b>			
Brahmin/Chhetri	53.7	41.2	62.9
Hill Indigenous (Janajati)	10.4	19.3	3.7
Dalit	5.1	2.8	6.8
Newar	10.7	7.2	13.3
Tarai Indigenous (Janajati)	20.2	29.5	13.3

# Multivariate Results...

## ■ Net of controls

Variables	Models		
<b>Interview Environment</b>	Total (Pooled)	Males	Females
1. Those who were observed to be reluctant –seemed not cooperative, angry, and fearful were ..... to report ‘don’t know response’ than those who were agreeable and cooperative	Significantly more likely	More likely but no difference	Significantly more likely
2. Those who were interviewed in the second visit were..... to report ‘don’t know response’ than those who were interviewed in the first visit	Significantly less likely	Less likely but no difference	Weakly significantly less likely
<b>Interviewer Characteristics</b>			
1. Age. Older interviewers were ..... to obtain ‘don’t know response’ than younger interviewers	Significantly less likely	Significantly less likely	Less likely but no difference
2. Gender. Female interviewers were ..... to obtain ‘don’t know response’ than males	Significantly less likely	-	-
3. Education. More educated interviewers were ..... to obtain ‘don’t know response’ than less educated interviewers	Significantly more likely	Significantly more likely	More likely but no difference
4. Work Experience. Experienced interviewers were ..... to obtain ‘don’t know response’ than less experienced interviewers	Significantly less likely	Significantly less likely	Significantly less likely
5. Caste/Ethnicity. Compared to interviewers who belong to Brahmin/Chhetri caste, interviewers belonging to.....	Dalit and Newar were significantly less likely	Hill janajati and Newar were significantly less likely	Hill janajati were significantly less likely

# Conclusions and Implications

- ▶ Interview environment, particularly when respondents are observed to be reluctant, were more likely to provide don't know response.
- ▶ Respondents interviewed on the second visit had fewer don't know responses.
- ▶ Interviewer characteristics do effect data quality—older, female, experienced, less-educated interviewers had fewer don't know responses.
- ▶ Implications for data quality management and data quality improvement...

## ACKNOWLEDGEMENTS

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