

Conversational Interviewing vs. Standardized Interviewing: Initial Quantitative Findings from an Experiment Using a Sexual Behavior Assessment of MSM

Methods Core Seminar

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Specific Aims

- To determine whether administering a survey using conversational interviewing, when compared to standardized interviewing, improves respondents' comprehension of the intended meaning of survey questions that ask about their own sexual behavior
- To determine whether conversational interviewing, when compared to standardized interviewing, improves comprehension by assessing accuracy of responses to questions about the sexual activities of people portrayed in vignettes (a context in which answers can be objectively evaluated as correct or incorrect)
- To identify and better understand the types of comprehension issues that occur during a survey that asks questions about sexual behavior

Excerpt from David Steinberg's Psychiatrist Sketch

Psychiatrist: So, what seems to be the problem?

Patient: Doctor, I have trouble communicating.

Psychiatrist: (Pause) I have no idea what you mean.

Self-reported sexual behavior is not always accurate

- Accuracy at a premium when assessing levels of risk or the efficacy of an HIV/STI prevention intervention
- Allocation of time and money (perhaps millions of dollars) depend on results
- Exacerbated by small sample sizes (sensitive questions, hard-to-reach populations) that limit power and precision

Usual “fixes” not applicable

- Physiological Measures: invasive, assess arousal so cannot differentiate high risk from low risk, does not always match self-reports
- Direct Observation: affect the behavior being observed, culturally proscribed
- Biological Markers: high cost, low incidence, imperfect indicator of high risk behavior because of mitigating factors (e.g., disease reservoir in community, circumcision, genital health, etc.)

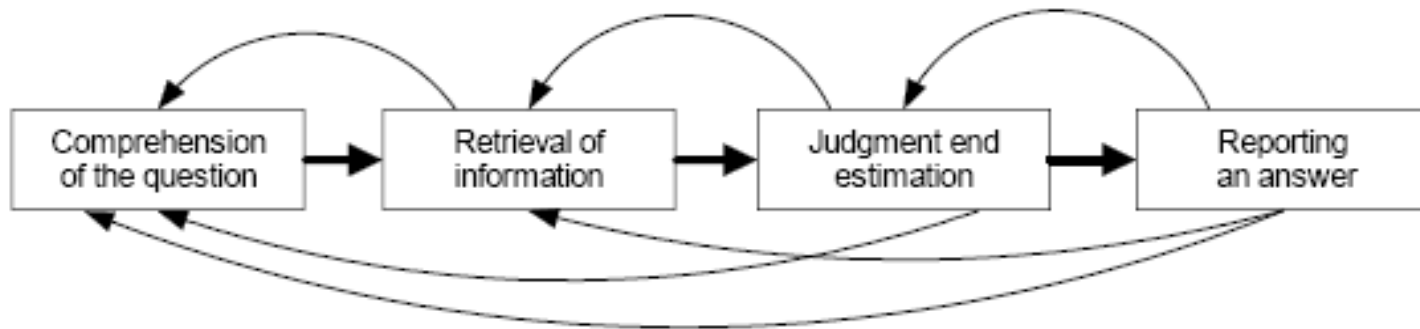
Standard Question-Answer Response Model



Components of the Response Process

Component	Specific Process
Comprehension	Attend to questions and instructions Represent logical form of questions Identify question focus (information sought) Link key terms to relevant concepts
Retrieval	Generate retrieval strategy and cues Retrieve specific, generic memories Fill in missing details
Judgment	Assess completeness and relevance of memories Draw inferences based on accessibility Integrate material retrieved Make estimate based on partial retrieval
Response	Map judgment onto response category Edit response

Response Model With Feedback



Problems with comprehension can lead to:

- Inconsistent response
- “Uncoded affirmative” response
- Non-response
- Inappropriate inclusion or exclusion

Standardized interviewing does not address the issue of comprehension

- Standard interviewing is designed to reduce interviewer-related error by insuring that all participants receive the same stimulus (the same question worded the same way); interpretation of the question is up to the respondent
- Critics argue that response validity is undermined if all respondents do not interpret the question in the same way, i.e., all respondents are not really receiving the same stimulus

Standardized Interviewing

“The fundamental instructions to interviewers can be stated simply: Read each question and transition statement *exactly* as written, including all the response categories, without any deviation; ask all the questions, even if you think the answer has already been given...”

Blair J, Czaja RF, Blair EA (2014). *Designing Surveys: A guide to Decisions and Procedures*. Los Angeles, CA: Sage.

If the respondent asks what a word or concept means:

- The standard response is to tell the respondent, “Whatever it means to you.”
- For particular technical terms, all interviewers may have been provided a uniform definition
- If the respondent says they cannot answer without knowing what is meant by a word or term, the interviewer should code it as a “don’t know” response

If the respondent asks for information beyond what is in the question:

- The interviewer should say, “If your answer is based on just what I’ve told you, would you say...” and then repeat the response categories
- If the respondent insists they cannot answer without knowing whether a particular condition applies, or without more information, the interviewer should code it as a “don’t know” response

Conversational Interviewing

“...the interviewer should answer the respondent’s query using whatever words it takes to help the respondent understand the question from the survey designer’s perspective, without unduly influencing the response. “

Conrad FG, Schober MF. (2000). Public Opinion Quarterly, 64: 1-28.

Conversational interviewing can entail:

- Reading or paraphrasing all or part of a question
- Reading or paraphrasing all or part of a definition
- Asking questions of the respondent to elicit information so that the interviewer and respondent can jointly reach a correct response
- Intervening at the respondent's request or voluntarily whenever it appears that the respondent is having trouble answering

Standardized Interview Example

- **Interviewer:** So, I would like to ask you a question about this encounter between Sam and Mark. Were condoms used for the entire time anal sex was happening? To help you answer, let me repeat the definition of anal sex that was used earlier. We will call anal sex any time a man puts his penis inside another person's anus. Were condoms used for the entire time anal sex was happening?
- **Respondent:** Well, that depends on if the pushing counts as anal sex, before Mark put the condom on.
- **Interviewer:** Do you want me to repeat the definition of anal sex?
- **Respondent:** No. I understood the definition you gave, but is the foreplay they had before Mark put on a condom considered anal sex?
- **Interviewer:** What do you think?
- **Respondent:** Well, I'm not sure. Does pushing inside, just for a few seconds, count as anal sex? (Pause) I wouldn't count that as anal sex, not if it's just a second or two. So, yes, condoms were used the whole time.

Conversational Interview Example

- **Interviewer:** So, I would like to ask you a question about this encounter between Sam and Mark. Were condoms used for the entire time anal sex was happening? To help you answer, let me repeat the definition of anal sex that was used earlier. We will call anal sex any time a man puts his penis inside another person's anus. Were condoms used for the entire time anal sex was happening?
- **Respondent:** Well, that depends on if the pushing counts as anal sex, before Mark put the condom on.
- **Interviewer:** Do you want me to repeat the definition of anal sex?
- **Respondent:** No. I understood the definition you gave, but is the foreplay they had before Mark put on a condom considered anal sex?
- **Interviewer:** The definition is "any time a man puts his penis inside another person's anus." That's the definition for the purpose of this study.
- **Respondent:** Well, ok then, I guess foreplay would count then. I mean, I wouldn't usually count that as anal sex, since it's just for a second or two, so then, no, condoms were not used the entire time.

Conversational Interviewing Increases Accuracy of Responses

- A series of experiments by Conrad and Schober demonstrated that conversational interviewing, when compared to standardized interviewing, yielded more accurate responses to questions about personal behavior as well as fictional scenarios
- Personal behavior questions were from extant national surveys on topics like the number of bedrooms in your house and furniture purchases

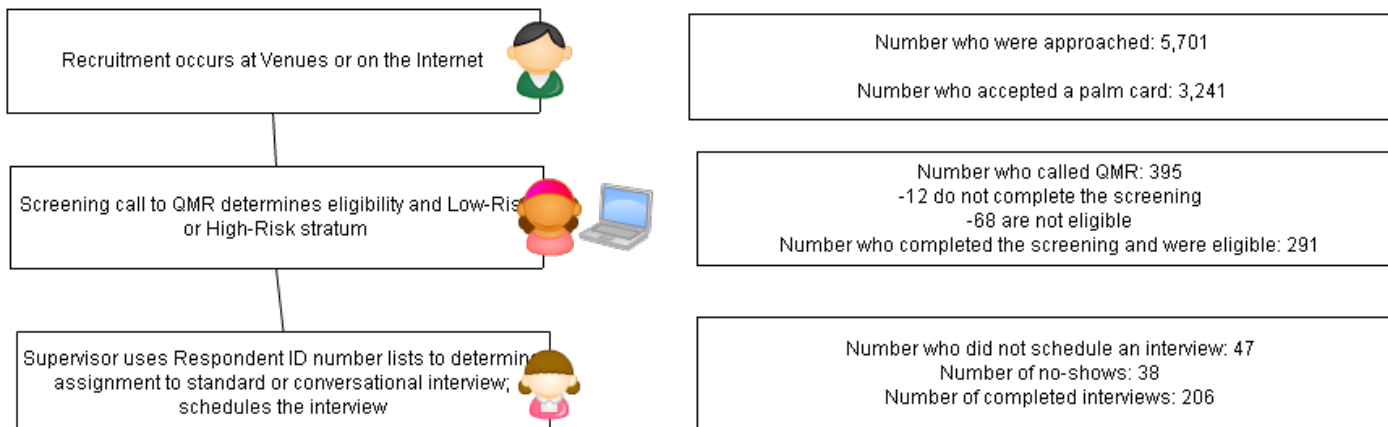
Especially true for “complicated mappings”

- An ambiguous correspondence between the survey question and the respondent’s actual experience is referred to as a “complicated mapping”
- Lack of understanding of terminology used in survey question
- Definitions used in survey conflict with respondent’s definitions
- The respondent is unsure whether his experiences fit the definitions used in the survey
- The respondent cannot figure out how to fit the correct answer into the response set provided to him

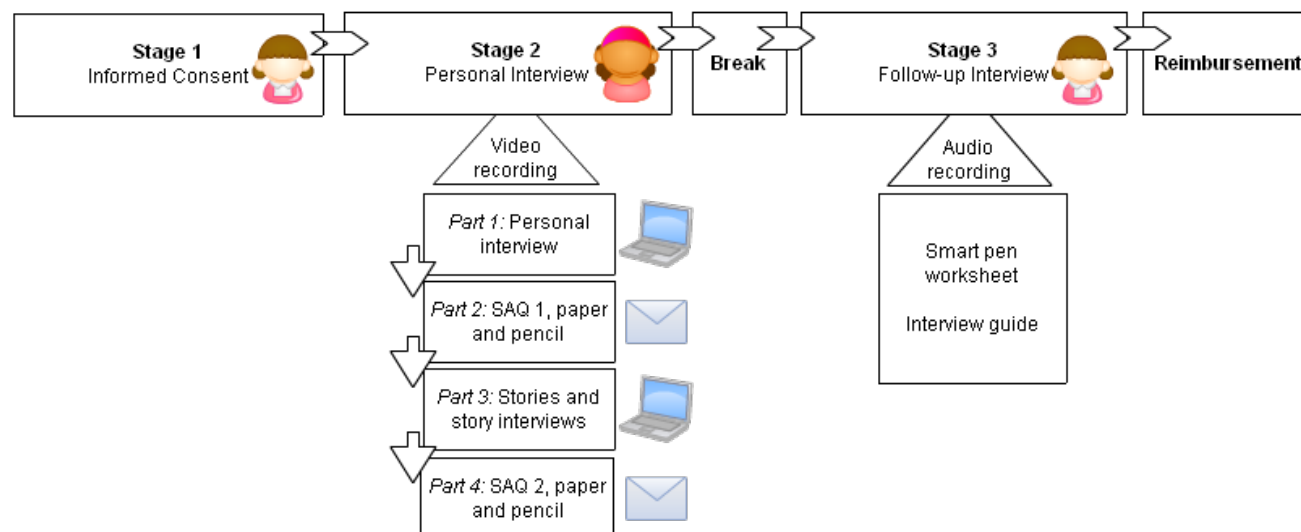
Compare Conversational Interviewing vs. Standardized Interviewing when Assessing Sexual Behavior

- Recruit (very) sexually active adult MSM
- Randomly assign them to either a conversational interviewing condition or a standardized interviewing condition
- Same questionnaires used in both conditions
- Assess the respondent's own sexual behavior
- Ask questions about fictional scenarios describing sexual encounters between two men
- Have respondents rate their confidence in their responses
- Debrief respondents on how they answered questions, what gave them problems

THE PRELIMINARIES



THE INTERVIEW



We hypothesized that subjects in the conversational interviewing condition would:

- Have less uncertainty in their responses to questions about their own behavior (less non-response, “uncoded affirmative” responses, inconsistent responses)
- Give more accurate responses to questions about fictional scenarios, particularly for less straightforward scenarios
- Have greater confidence in their responses to questions about their own behavior and to questions about fictional scenarios

Instrument Development

- Wanted a sexual behavior assessment that approximated national behavioral surveillance surveys, but we wanted “good” questions too, so we primarily relied on our own instruments
- Put together initial draft and assessed it’s performance via cognitive interviews with 18 MSM recruited via Craigslist in May 2010

Instrument Development

- Revised instruments pre-tested with MSM recruited primarily from Bay Area bathhouses and sex clubs
- 10 interviews per condition in July-August 2010, 5 more conversational interviews in September 2010
- Information from pre-test used to refine procedures and inform interviewer training

Interviewer Training

- No training materials for conversational interviewing available prior to study
- Conrad and Schober did NOT use people with previous survey interview experience in their experiments
- Training interviewers experienced in the standardized method (what is likely to occur in the “real world”) takes time and persistence

Interviewer Training

- Identical instruments for both conditions
- Interviewers were blind to the experiment
- Interviewers were assigned to only one condition and only performed that type of interview during the study
- Training of interviewers was separate for each condition (trained on different days, had different training manuals with different study titles, told not to discuss study with others)
- During study, only one condition per day was implemented

Sample

- Wanted sexually active MSM with fairly high levels of sexual behavior in order to avoid getting mostly “0” and “1” responses
- Primarily recruited at Bay Area bathhouses and sex clubs from November 2010 through March 2011
- Recruits given very basic information about study and contact number for “signing up”

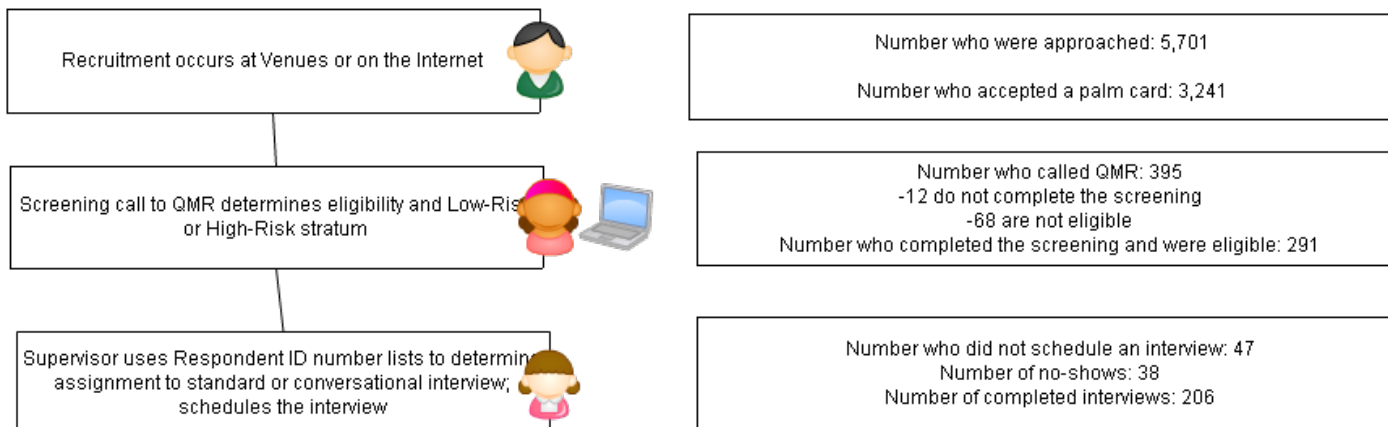
Sample

- Scripted telephone screening interview using CATI conducted by a QMR staff member
- Adult MSM who report anal sex with a man in the prior 3 months qualified for study
- Also screened for sex venue use: men who reported having sex at a bathhouse/sex club AND either used the Internet to “hook up” with another man for sex or had sex in a cruising area were deemed “high risk”

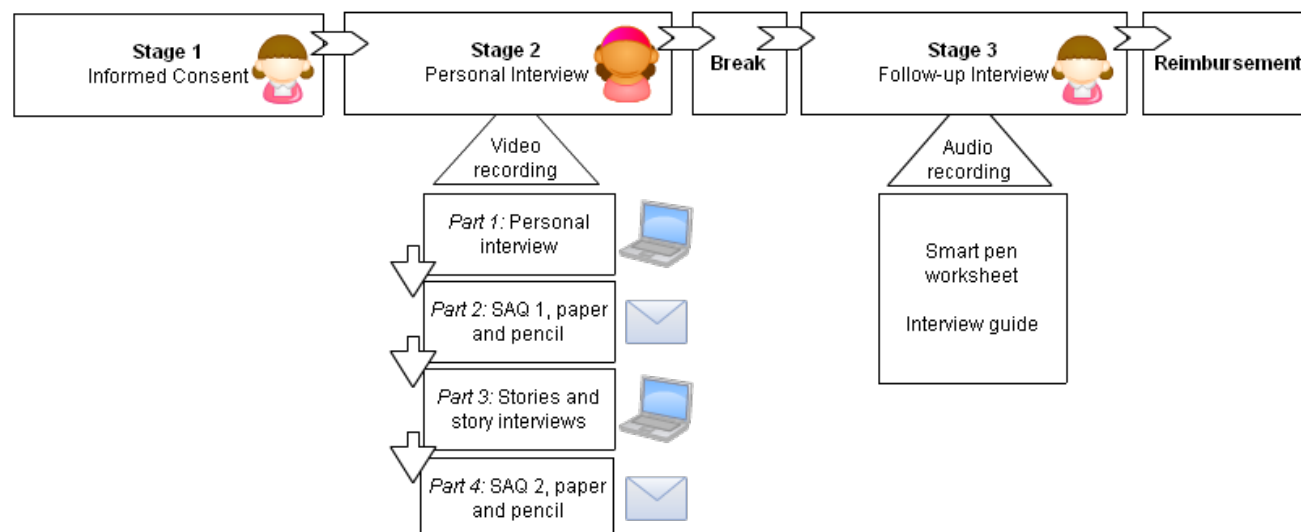
Sample

- All others deemed “low risk”
- Eligible men were randomly assigned to either the conversational interviewing condition or the standardized interviewing condition
- Randomization was done separately for each risk stratum to insure sample balance
- Participants were then scheduled for an in-person interview at QMR in Oakland

THE PRELIMINARIES



THE INTERVIEW

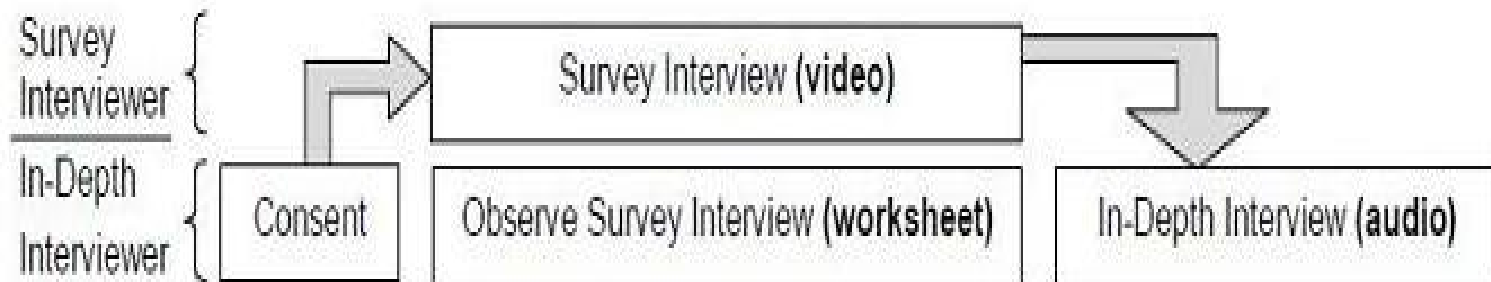


Procedure

- 1) Written consent obtained by debriefing interviewer
- 2) Personal interview conducted by condition-specific interviewer using CAPI (video and audio recorded, observed by debriefing interviewer)
- 3) First part of personal interview is sexual behavior assessment
- 4) Self-administered PAPI instrument asking about confidence in responses (7 items)

Procedure

- 5) In second part of personal interview respondent is presented 4 short vignettes (one at a time) and is asked the same set of questions about each vignette
- 6) Self-administered PAPI instrument asking about confidence in responses to the questions about the vignettes (2 items)
- 7) After a break, the debriefing interview is conducted (audio recorded)



Debriefing Interview

- Debriefing interviewer observed personal interview (through one-way mirror) and made own audio recording using “smart pen” technology
- Used a semi-structured qualitative interview guide to review with the respondent his survey experience and some of the answers he gave
- Answers to personal interview questions of specific interest to the research team were probed as well as questions the respondent had trouble answering
- Probing was facilitated by being able to use the “smart pen” to play back to the respondent the actual exchange between themselves and the interviewer

Screeners Data (N=206)

<u>Variable</u>		<u>Conversational</u>	<u>Standardized</u>
Stratum	High risk	63	63
	Low risk	39	41
Race/ Ethnicity	Non-Hisp. White	49	56
	Non-Hisp. Black	17	18
	Hispanic	24	18
	Non-Hisp. Other	12	11
Education	HS diploma or less	18	23
	Some college	36	30
	College degree	31	35
	Advanced degree	17	16

Fidelity to Interview Guidelines: Standardized Interviewing

- All appropriate questions read verbatim?
- Question reread when asked?
- Definition reread when asked?
- *Avoided* re-reading questions or providing definitions when *not* asked?
- Allowed for ambiguity instead of providing information (either unsolicited or solicited)?

Approach to Conversational Interviewing

- Read the question as written and record answer (same as standardized interview)
- Intervene if respondent shows any verbal OR non-verbal indication of having trouble answering the question (warned against preemptive intervention)
- Record whether respondent changed answer or not, record new answer if changed (this was executed in BOTH conditions)

Fidelity to Interview Guidelines: Conversational Interviewing

- All parts of the introduction to the conversational interview were read?
- All appropriate questions read verbatim?
- Voluntarily helped the respondent understand the intended question meaning?
- When explicitly asked, helped respondent understand the intended question meaning?
- Caught inconsistencies in answers from the respondent?

Fidelity to Interview Guidelines: Conversational Interviewing

- Caught when respondent used definitions or terms incorrectly?
- Helped respondent when he indicated that he needed help?
- Paid attention to non-verbal aspects of the interview?
- Avoided pre-emptive remarks (e.g., rephrasing a question before the respondent had a chance to answer)?

Fidelity to Interview Guidelines

- 2 cases were not implemented according to protocol
- Both cases in the conversational interviewing condition (low risk stratum)
- In fact, neither case met the standard for a survey interview regardless of condition
- Remaining 204 cases assigned a Fidelity score (range 1-9) by Qualitative Analysis team

Fidelity to Interview Guidelines

<u>Score</u>	<u>N</u>
9	79
8	53
7	39
6	14
5	6
<5	11

Fidelity to Interview Guidelines

<u>Condition</u>	<u>Mean</u>
Conversational	7.36
Standardized	7.86

$t(202)=2.08, p=.038$

Sexual Behavior Assessment

Introduction to Conversational Interview

It's very important to us to gather the most accurate information possible from this interview. We've found that even slightly different interpretations of a question can affect the answer's accuracy.

I'd like you to help me be sure the answers in this interview are not affected by unclear questions. You can do this by simply telling me whenever a question I ask is even a little bit confusing. Sometimes a question can be confusing because it uses a word or phrase that you are familiar with but you are not sure exactly how it is being used.

This interview is different from other interviews you may know of or have participated in, where people are expected to respond to each question as best they can and move on, even if they are unsure about what the questions mean.

Sexual Behavior Assessment

Introduction to Conversational Interview

In most survey interviews, people are encouraged to hurry up and answer even when they are not entirely sure what the question is trying to ask. Or to answer even if none of the answer choices are really right.

In this interview, I don't want you to answer any question that's not perfectly clear.

Instead, I want you to tell me *whenever you first have to think over what the question means, rather than just thinking about your answer.*

Sexual Behavior Assessment

Introduction to Conversational Interview

When I read the answer choices to you, please tell me anytime *it's not immediately clear which response option is right.*

Some other things I'd like you to tell me are:

- when *you sort of know what a word means*, but aren't 100% sure, or aren't quite sure how it's being used in the particular question
- when *a word is close but doesn't quite describe your experience*

Sexual Behavior Assessment

Introduction to Conversational Interview

What I'm saying is that when you have even the slightest doubt about any question; please tell me so that we can work together to figure out what the question is asking about.

Let's start with an example of a question just to be sure we're on the same page.

If I asked the question: *"When do you have sex?"*

What first comes to mind?

How do you think some people might answer this question?

Sexual Behavior Assessment

Introduction to Conversational Interview

Location-related Responses

- When I'm at the bathhouse/sex club.
- When I'm cruising.
- When I'm out with my fuck buddy.

Emotion-related Responses

- When I'm pumped up.
- When I'm happy.
- When I meet someone I'm attracted to.
- When I'm bored.
- When I'm in the mood.

Sexual Behavior Assessment

Introduction to Conversational Interview

Physical Responses

- When I'm horny.
- When I'm high.
- After I've been partying.
- When I'm attracted to someone.

Time-related Responses

- Saturday nights.
- In the mornings.
- On the weekends.
- After work.

Sexual Behavior Assessment

Introduction to Conversational Interview

Other Responses

- When my partner wants to.
- Whenever someone else is willing.
- Whenever I can.

These are all reasonable interpretations.

In a regular conversation, if someone asked you “When do you have sex?” you might say “What do you mean?” This sort of thing happens all the time when people are talking.

But when asked a vague survey question, suddenly people think they should just go ahead and answer. That is what we want to avoid.

Sexual Behavior Assessment

Definitions

Sex

Any voluntary activity between two men that involves bodily contact and is sexually exciting or arousing

Oral Sex

Any time one man's penis is inside another man's mouth. Oral sex could be either...

When another man performs oral sex on you, that is, when your penis is inside his mouth; or...

When you perform oral sex on another man, that is, when his penis is inside your mouth.

Sexual Behavior Assessment

Definitions

Anal Sex

Any time one man's penis is inside another man's anus. Anal sex, from your perspective, could be either...

Insertive, that is, when your penis is inside another man's anus; or...

Receptive, that is, when another man's penis is inside your anus.

Sexual Behavior Assessment

Definitions

Condom Use

By wearing a condom during anal sex I mean...

That during insertive anal sex you wear a condom ALL the time your penis is inside the other man's anus; or...

That during receptive anal sex the other man wears a condom ALL the time his penis is inside your anus.

Sexual Behavior Assessment (Last 3 Months)

Section A: received oral sex, performed oral sex, insertive anal sex, receptive anal sex (follow-up questions on condom use and inserter cumming inside receptor

Section B: venues where had oral/anal sex (home, bathhouse/sex club, x-rated bookstore/ movie theater, public cruising area, other)

Sexual Behavior Assessment (Last 3 Months)

Section C: last time had sex with a man after meeting him on an Internet cruise site, last time went to a sex party, last time had group sex, last time had sex with a man (how long ago, type of partner, Section A – type questions, feeling effects of drugs/ alcohol, partner's serostatus)

Sexual Behavior Assessment (Last 3 Months)

Section D: orientation, disclosure of orientation, coming out, primary relationship

Section E: demographics (age, education, Hispanic ethnicity, race, HIV serostatus, STI dx in last 12 months)

Personal Interview Demographics

	<u>Conv.</u>	<u>Stan.</u>
Age (mean)	45.1	43.5
Educ HS diploma or less	20.0	19.2
Some coll/AA/tech	34.0	33.7
4-yr college degree	27.0	29.8
Advanced degree	19.0	17.3

Personal Interview Demographics

		<u>Conv.</u>	<u>Stan.</u>
Hispanic*		25.0	12.5
Ethnicity	Black	16.3	20.4
	White	59.2	61.2
	Other/Mixed	24.5	18.4

(race/ethnicity 3 df test not significant)

Personal Interview Demographics

	<u>Conv.</u>	<u>Stan.</u>
HIV-positive	37.1	38.0
STI diagnosis last 12 mo.	23.5	21.2

Sexual Behavior Assessment

Mean #Men Had Sex With

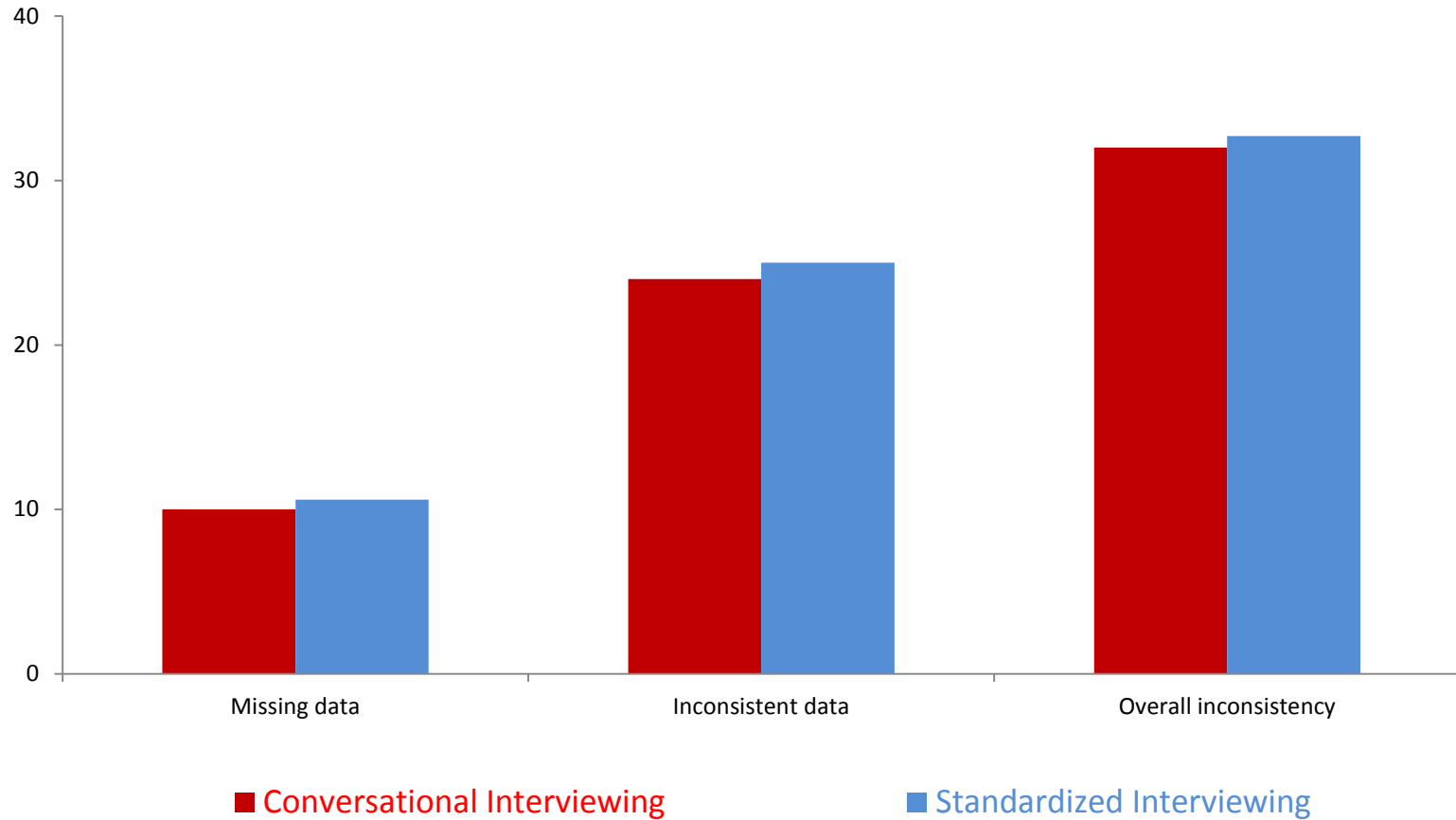
	<u>Conv.</u>	<u>Stan.</u>
R performed oral sex on	15.8	11.1
Performed oral sex on R	12.4	11.0
Insertive anal sex	6.6	5.1
Receptive anal sex	5.0	4.2

Sexual Behavior Assessment

Mean #Men Had Sex With

	<u>Conv.</u>	<u>Stan.</u>
Insertive UAI	4.4	3.0
Receptive UAI	3.2	2.1
Insertive UAI, orgasm	2.3	1.5
Receptive UAI, orgasm*	3.7	1.3

Uncertain Responses in Personal Interview (% any occurrence)



How certain are you that the answers you gave were accurate to questions about ...

- The number of men with whom you had anal sex?
- Using condoms during anal sex?
- The places where you had anal sex?
- The type of oral sex or anal sex you had in each place?
- The last time you had oral sex or anal sex with a man?
- Your sexual attraction to men?
- Your HIV test result?

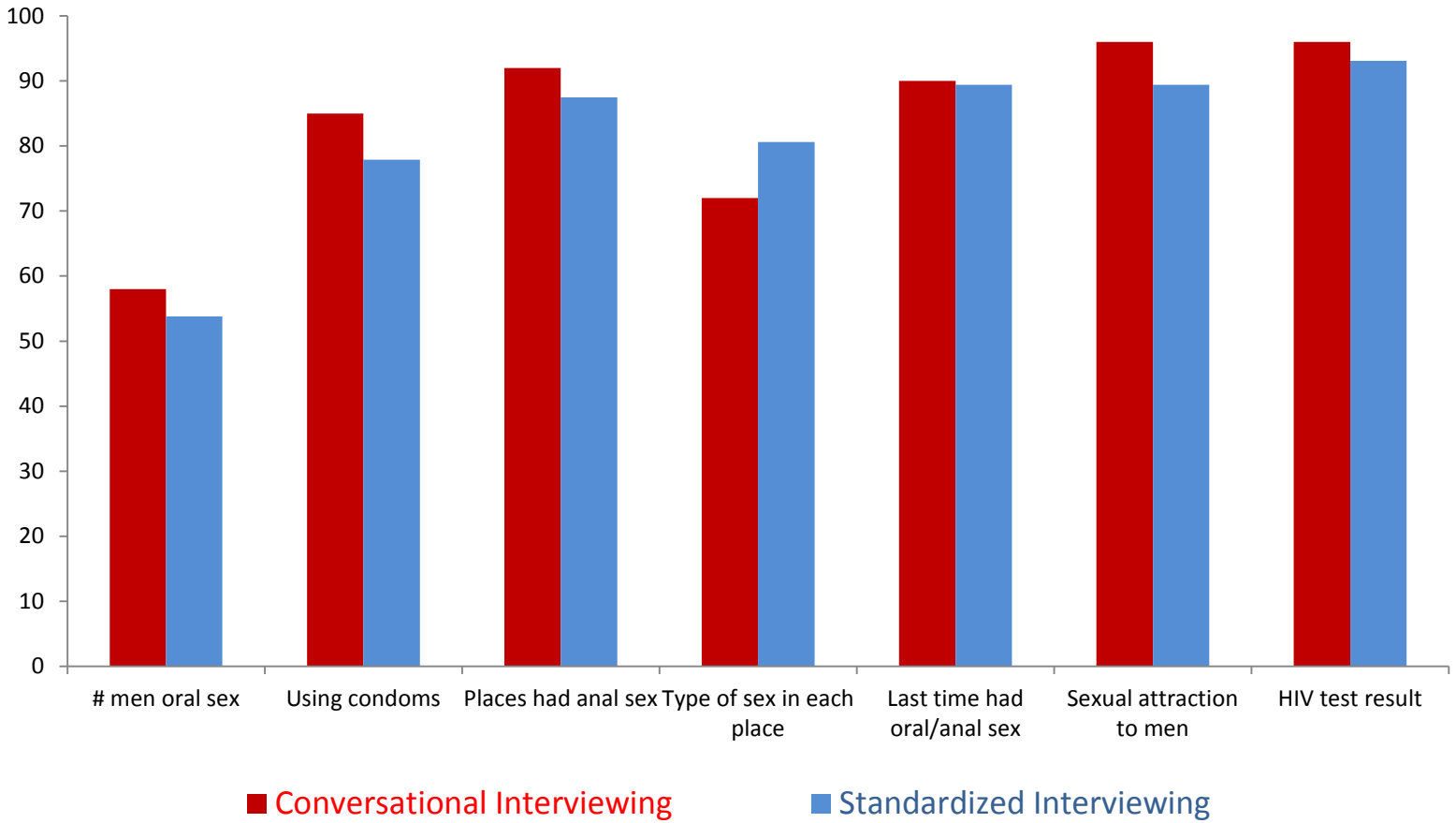
Self-Rated Certainty in Personal Interview

5-point response scale: Very uncertain
 Somewhat uncertain
 Neither certain nor uncertain
 Somewhat certain
 Very certain

	<u>Conv.</u>	<u>Stan.</u>
Summed Certainty Index (5-35)	33.8	33.0

$t(124.57) = 2.09, p = .038$

Self-Rated Certainty in Personal Interview Responses (% very certain)

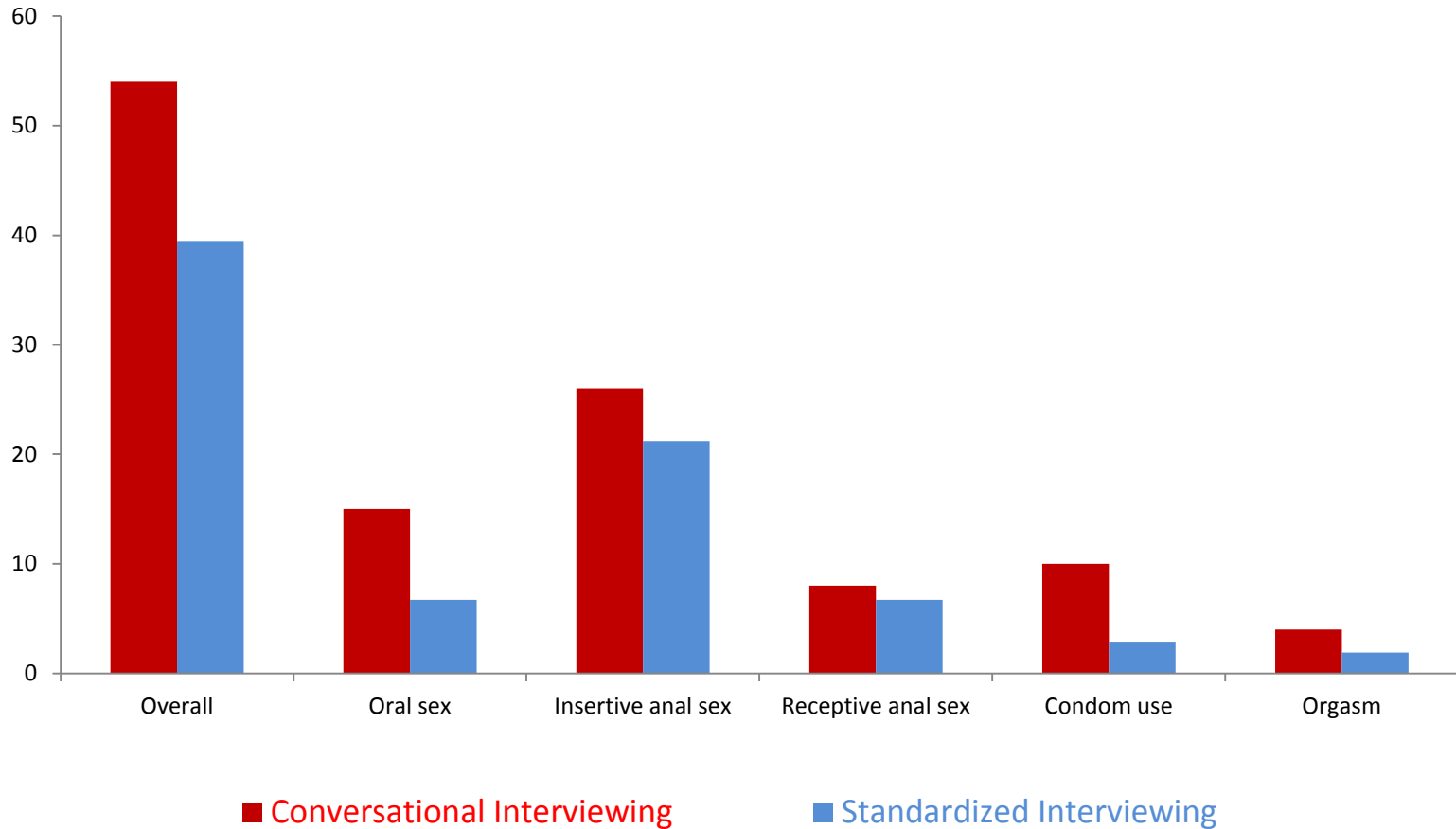


Personal Interview

Changes from Initial to Final Response

<u>#changes</u>	<u>N</u>
0	109
1	61
2	20
3	10
4	3
5	1

Changes from Initial to Final Response by Question Type (% any change)



Mean Length of Personal Interview

Conversational Interviewing 35.5 minutes

Standardized Interviewing 16.7 minutes

$t(121.94) = 13.415, p < .001$

Vignette Interview

- Respondents told the same definitions used in the personal interview still apply
- Respondent handed an envelope containing one brief vignette about a sexual encounter between Roger and another man
- Once the respondent signaled readiness, he was asked questions about the vignette (respondent could refer to vignette as needed)

Vignette Interview

- Interviewers did NOT know the content of any of the vignettes
- The name of Roger's partner was randomly varied so that a given name could not be attached to a given vignette
- The first vignette was a straightforward story in which Roger performed and received oral sex and had both insertive and receptive UAI to orgasm

Vignette Interview

- Other 3 vignettes presented in random order
- One vignette involved rimming, fingering, and frottage but no oral or anal sex as defined for the study
- One vignette had Roger's partner blow air on Roger's erection but without actually engaging in oral sex, and a dipping episode prior to using a condom so that Roger had a brief receptive UAI experience

Vignette Interview

- One vignette had Roger put on a condom before entering his partner, but the condom broke resulting in insertive UAI
- The same potential 9-question sequence followed all 4 vignettes
 1. In the story you just read, did Roger perform oral sex on the other man?
 2. Did the other man perform oral sex on Roger?

Vignette Interview

3. Did Roger have insertive anal sex?
4. When Roger was having insertive anal sex, did he wear a condom all the time his penis was inside the other man's anus?
5. When Roger was having insertive anal sex, did he cum while not wearing a condom when his penis was still inside the other man's anus?
6. Did Roger have receptive anal sex?

Vignette Interview

7. When Roger was having receptive anal sex, did the other man wear a condom all the time his penis was inside Roger's anus?
8. When Roger was having receptive anal sex, did the other man cum while not wearing a condom when his penis was still inside Roger's anus?
9. What is the HIV status of the man Roger had sex with? Is he HIV-positive, HIV-negative, or is his HIV status unknown?

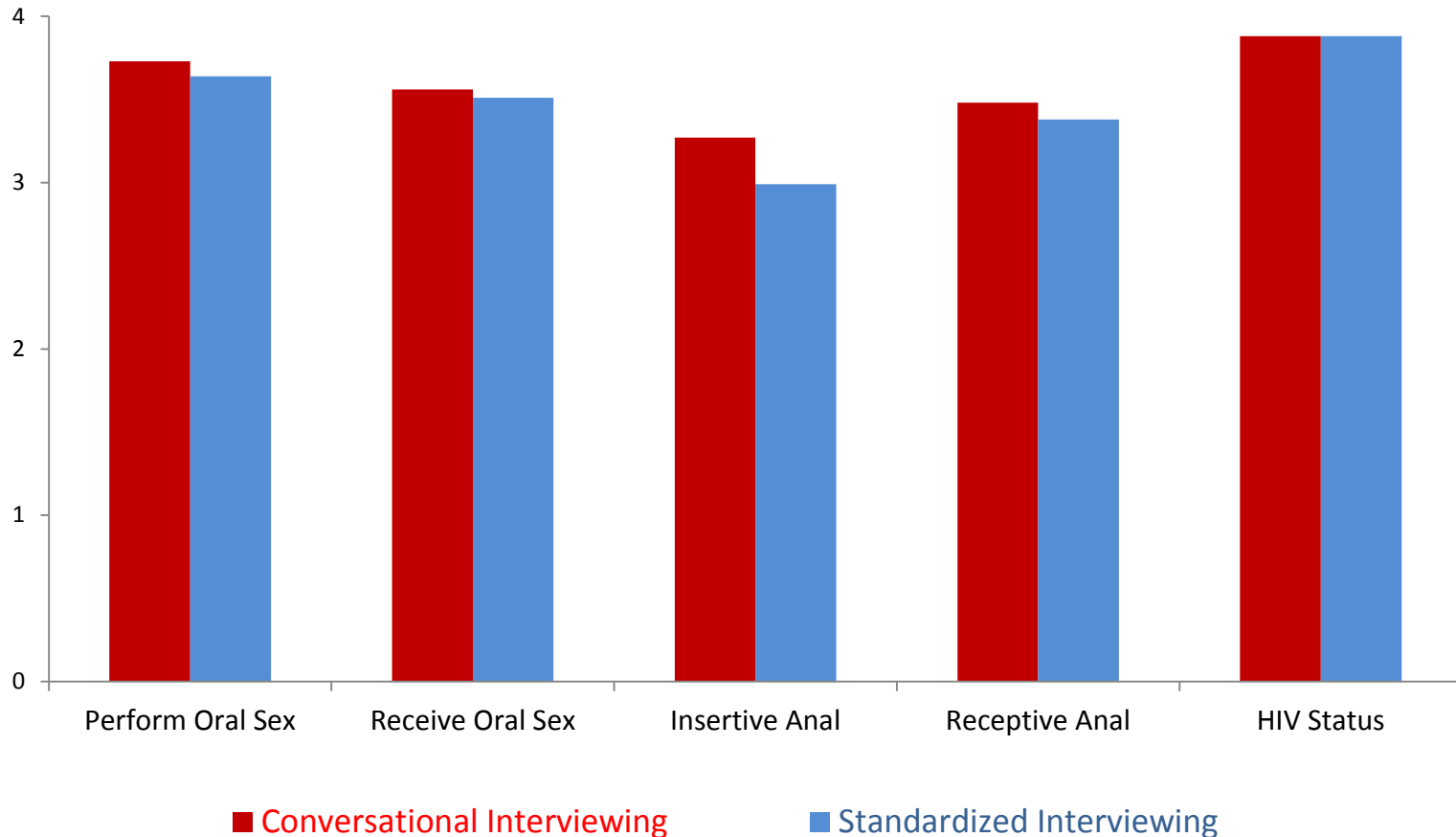
Vignette Interview

- First 8 questions are yes/no answers, partner's HIV status can be positive, negative, or unknown
- Each scenario scored for 0-5 correct answers: Roger performed oral sex, received oral sex, had insertive anal sex, had receptive anal sex, partner's serostatus
- For anal sex the answer is only correct if all the pertinent responses about it (did it, used condom if did it, came inside if condom not used) are correct
- Did this to avoid inflating number of errors

Mean Number of Accurate Responses to Vignette Questions by Vignette

	<u>Conv.</u>	<u>Stan.</u>
Straightforward	4.83	4.75
No oral or anal sex	4.64	4.55
Brief receptive UAI	4.21	4.30
Condom broke (insertive)*	4.24	3.78
Last 3 vignettes combined*	13.09	12.63

Mean Number of Accurate Responses to Vignette Questions by Subject Matter



Self-Rated Certainty in Vignette Interview

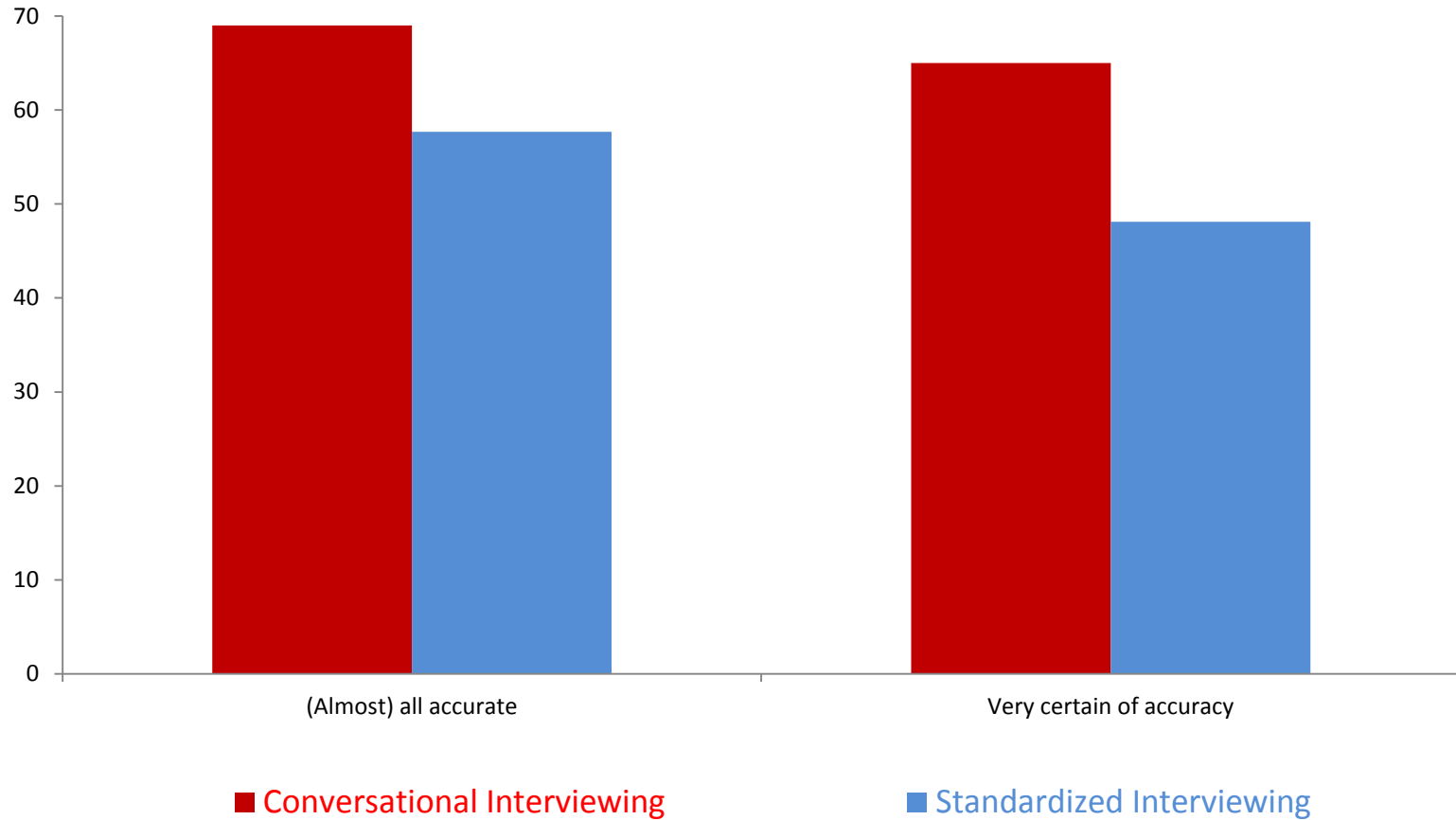
Thinking about the answers you gave to all the questions asked about the four stories, for how many of those questions are you certain you gave an accurate answer?

(all or almost all, most, about half, some, almost none or none)

Thinking about the answers you gave to all the questions asked about the four stories, how certain are you of the accuracy of your answers?

(very certain, somewhat certain, neither certain nor uncertain, somewhat uncertain, very uncertain)

Self-rated Accuracy and Certainty in Vignette Interview Responses



Summary of Results

- No differences in reported behavior, but perhaps an indication that conversational interviewing promotes disclosure
- No reduction in uncertain responses
- More respondents in the conversational interviewing condition than in the standardized interviewing condition changed an answer in the personal interview

Summary of Results

- Conversational Interviewing yielded more participant confidence in their answers (more evident in the vignette interview than in the personal interview)
- Accuracy in responding to questions about fictional scenarios slightly higher in the conversational interviewing condition
- Conversational interviews took twice as long as standardized interviews

Conclusions

- Given the time resources used in training, programming, and interviewing, we would recommend using conversational interviewing techniques be used only for “key” questions
- Key questions include those where point estimates must be as precise as possible, and those questions where misclassification might lead to larger errors

More To Do

- Look at item complexity as a moderator
- Look more closely at the types of changes being made in responses
- Look more closely at the types of inconsistent data
- Look at whether interviews were before or after “second training” moderates results