MEASURING INTERVIEWER EFFECTS ON SELF-REPORTS FROM HOMELESS PERSONS

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Introduction

Survey research has become one of the major tools for investigating the problem of homelessness. While sampling error in homeless surveys has been evaluated (Burnam and Koegel, 1988; Dennis and Iachan 1992; Rossi et al. 1986), little is known regarding sources of non-sampling error in these populations. In this study, we model several potential interviewer effects on a range of variables commonly examined in surveys of homeless persons.

Prior research has identified several types of interviewer effects on responses to survey questions (Sudman and Bradburn, 1974). Direct effects appear when survey respondents infer interviewer attitudes from observable characteristics such as age, race, and gender, and adjust their responses to be more acceptable to the interviewer's perceived values (Groves and Fultz 1985). In contrast, the social distance hypothesis suggests that it is not interviewer characteristics alone but the interaction of respondent and interviewer characteristics that accounts for interviewer effects on survey responses. Null interviewer effects have also been reported in several published studies. Conventional wisdom suggests that responses to survey questions not related to observable interviewer characteristics should be free of both direct and social distance effects (Groves 1989).

None of the prior research on interviewer effects has focused on a homeless population (for reviews, see Finkel, Guterbock and Borg 1991; Groves 1989; Kane and McCaulay 1993). In this study, a variety of responses are examined for the presence of social distance and direct interviewer effects among homeless persons interviewed in a large midwestern city.

Methods

Data Source

The data analyzed were collected as part of a study of alcohol and other drug use among homeless persons in Cook County, Illinois. Homeless persons were screened and interviewed in emergen-cy and transitional shelters, soup kitchens, drop-in centers, and single room occupancy (SRO) hotels. These facilities were selected with probability proportional to size, based upon operator estimates of the numbers of persons served at each facility per day. Field work was completed during October and early November, 1990. A total of 481 face-to-face interviews were completed, which was 78.2 percent of the eligible sample. All respondents were paid $10. Detailed information regarding this study is available in Johnson and Barrett (1991). Basic demographic characteristics of the sample are presented in Table 1.

Interviews were conducted by a staff of 14 interviewers, and their demographic characteristics are also displayed in Table 1. Thirteen were experienced field staff, and many had previously interviewed homeless persons in conjunction with other studies. Interviewers were not always randomly assigned to respondents. Within transitional shelters, soup kitchens and drop-in centers, interviewing assignments were made at random. In addition, interviewers were assigned at random to complete all interviewing within individual SRO hotels included in the sample. Within overnight shelters, however, efforts were made to match interviewers with respondents of the same gender whenever possible, given that shelter accommodations were usually segregated by gender and interviewing necessarily took place during evening hours in these facilities.

Males completed 62.6 percent of all interviews. By race, 71.9% of the interviews were conducted by black interviewers, and those interviewers 36 years of age or older conducted 68% of all completed interviews.

Measures and Analysis

Structural equation modeling (Bollen, 1989) was selected for the present analysis since it is a recognized technique for assessing sources of error in survey data. In particular, structural equation models allow multiple indicators of latent constructs and estimation of reliability and validity. This method also allows for the specification of structural relationships among the latent constructs. Five

latent endogenous constructs (and their indicators) were selected for the model, including homeless experiences (where slept and food sources during the last month), and three factors commonly-associated with homelessness, including substance abuse (alcohol and drug abuse were examined separately), mental health (the CES-D and the psychiatric symptoms subscale from the Addictions Severity Index, Radloff 1977; McLellan et al. 1985), and economic resources (income and employment status). These indicators are operationalized in Appendix A. Exogenous constructs include 9 single indicators, representing the direct effects of interviewer and respondent gender, race, and age, as well as three interviewer-respondent interaction terms on age, gender, and race dissimilarity.

Results

Our model loaded each of the 9 exogenous variables on the 5 latent constructs. Results of the measurement model are in Table 2. Several of the conventional and accepted approaches were used to assess model fit. The squared multiple correlation coefficients, or reliabilities for the selected indicators, suggested a respectable measurement model, evidenced by a coefficient of determination for these observed variables of .998. Likewise, the coefficient of determination for the structural equations was .551. The model chi-square was 253.34 with 146 degrees of freedom, a ratio of 1.7. The goodness of fit index was .949, and the adjusted goodness of fit index .903. Though these goodness of fit measures are sensitive to sample size, they do suggest a plausible fit of the model to the data.

Table 3 displays the unstandardized structural parameter estimates and their associated standard errors. Each of the respondent demographic characteristics were significantly associated with 4 of the 5 constructs examined, consistent with previously reported findings (Rossi, 1989; Wright, 1989). The only observable direct interviewer effects were that of race on reporting of alcohol abuse and economic resources. In both cases, blacks were significantly less likely than interviewers of other races to obtain reports of alcohol abuse and economic resources. One social distance effect was also observed: when interviewers and respondents were dissimilar with respect to age, reports of economic resources were likely to be greater.

Discussion

Limitations of these data are acknowledged.

Interviewers and respondents were not paired with one another completely at random in 2 of the 5 settings where interviews were completed (SRO hotels and emergency shelters). Random assignment should be a prerequisite for rigorous evaluation of response effects in social surveys. In addition, this analysis is based upon a relatively small sample of interviewers and did not control for the clustering of respondents within interviews (Dijkstra 1983).

Moreover, although structural equation modeling is a valuable technique for examining hypothesized relationships between interviewer characteristics and respondent reporting, the model tested here is by no means conclusive. There are likely to be other models that fit the data equally well. Additionally, the relationships examined here are not deterministic, as there are likely to be other important constructs particular to the experience of homeless persons not represented in the model.

This study is nonetheless a first attempt to identify response effects in a survey of homeless persons. Controlling for respondent characteristics, interviewer race was found to be associated with responses to two of the domains of questions commonly examined in the homeless literature. Homeless respondents reported more alcohol abuse and greater economic resources to white interviewers.

These findings are of notable interest, as most prior research on race-of-interviewer effects has focused on race-related opinion and attitude questions, rather than more objective behavioral measures such as those reported here. White interviewers may be generally perceived by homeless persons as having more power or authority. If this power/authority is interpreted by these respondents as evidence of legitimacy, it may account for the increased reporting of very sensitive information to white interviewers. It is also possible that these respondents may be overreporting some information, perhaps in an effort to impress or deliberately deceive those interviewers perceived as representing the authority system. The likelihood that white interviewers are receiving more credible information may be supported by the fact that increased substance abuse reports are generally viewed as undesirable (although not necessarily among all homeless persons), while increased economic resources are, presumably, a desirable outcome.

The observed social distance effect suggests that homeless persons report fewer economic resources to interviewers of a similar age, though the reasons for this are unclear. More telling is the fact that 14 of the 15 social distance effects examined in this

analysis produced null findings. This suggests that there is generally little difference in the information generated by similar and dissimilar pairs of respondents and interviewers.

One potentially important interviewer effect could not be examined in these data, given that none of the study's interviewers were themselves homeless. It may be that none of the sociodemographic characteristics examined here are as central to or as discriminating in the lives of these respondents as is their status as homeless persons. Consequently, we cannot rule out the possibility that gross social class differences between homeless respondents and interviewers may be influencing these data.

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APPENDIX A: DEFINITIONS OF OBSERVED VARIABLES

ALCOHOL ABUSE
Detoxa: Been in a detox center for alcohol abuse (1=yes)
Mast: Alcoholism symptom scale (# of yes responses to 13 items) (Selzer, Vinokur, and van Rooijen 1975)
Argalc: Ever argue with family about alcohol consumption (1=yes)
Alclast: Most recent time had alcoholic beverage (range 0-6, 6= wi/in last 30 days; 0 = never)

DRUG ABUSE
Detoxd: Ever been in detox center for drug abuse (1=yes)
Drug30: Number of different drugs taken in past 30 days (range 0-6)
Drprob: Drug dependency scale (# of yes responses to 7 items) (Skinner and Goldberg 1986)
Argdrug: Ever argue with family about drug use (1=yes)

ECONOMIC RESOURCES
Income: Total income last year
Employed: Current employment status (1=full-time/part-time)

HOMELESS EXPERIENCES
Food source: Source of food in last 30 days (1=bought or from friends or relatives; 2=shelter or soup kitchen; 3=restaurant handout or food from the streets)
Residential Stability: 1=Respondents who spent all nights in SRO for past 30 days, 2=Respondents who had spent nights in shelters in past 30 days, 3=Respondents who spent nights on streets in past 30 days

MENTAL HEALTH
CES-D: Depressive symptoms scale (Radloff 1977)
ASI-PSS: Psychiatric symptoms subscale (McLellan et al. 1985)

TABLE 1
Respondent and Interviewer Characteristics

Interviewer characteristic	Respondent		Interviewers	
	n	**%**	**n**	**%**
GENDER				
Male	305	63.4	10	71.4
Female	176	36.6	4	28.6
RACE				
Black	308	65.0	9	64.3
White	164	34.1	5	35.7
Unknown	9	1.9	-	---
AGE				
≤ 35 years	234	48.6	5	35.7
≥ 36 years	246	51.2	9	64.3

TABLE 2
Unstandardized Measurement Parameter Estimates, Associated Standard Errors, and Squared Multiple Correlations for Latent Variables

| Variables | | Unstandardized | Standard | Squared Multiple |
Latent	Observed	Coefficient	Errors	Correlations
ALCOHOL ABUSE	Detoxa*	1.000	---	0.354
	Mast	10.432	0.964	0.657
	Argalc	1.200	0.123	0.404
	Alclast	3.875	0.533	0.193
DRUG ABUSE	Detoxd*	1.000	---	0.530
	Drug30	2.058	0.171	0.392
	Drprob	7.825	0.472	0.833
	Argdrug	1.095	0.081	0.479
ECONOMIC RESOURCES	Income*	1.000	---	0.583
	Employed	0.125	0.014	0.333
HOMELESS EXPERIENCES	Food Source*	1.000	---	0.514
	Res. Stability	1.262	0.101	0.671
MENTAL HEALTH	Cesd*	1.000	---	0.444
	ASI-PSS	0.365	0.036	0.542

* Fixed Parameter
NOTE: All loadings significant at $p < .05$.

TABLE 3
Unstandardized Structural Parameter Estimates and Associated Standard Errors

Dependent Variable	Independent Variables								
	I-Race	I-Age	I-Sex	R-Race	R-Age	R-Sex	IR-Race	IR-Age	IR-Sex
ALCOHOL ABUSE	-.058*	.001	.034	.053*	.006	.162*	-.003	.028	-.001
	(.029)	(.029)	(.029)	(.027)	(.026)	(.028)	(.027)	(.025)	(.025)
DRUG ABUSE	-.017	.006	.041	.130*	.079*	.090*	.014	.009	-.004
	(.029)	(.030)	(.030)	(.028)	(.027)	(.026)	(.027)	(.026)	(.026)
ECONOMIC	-.741*	-.116	.306	.123	-.568*	1.091*	-.148	.538*	.266
	(.311)	(.313)	(.314)	(.289)	(.279)	(.278)	(.288)	(.272)	(.271)
HOMELESS EXPERIENCES	-.021	-.027	.057	.191*	.205*	-.117*	.062	.058	-.037
	(.061)	(.061)	(.062)	(.058)	(.056)	(.055)	(.057)	(.053)	(.053)
MENTAL HEALTH	-.322	-.736	.169	.948*	1.042*	.061	.294	.385	.100
	(.463)	(.469)	(.468)	(.435)	(.420)	(.412)	(.431)	(.406)	(.404)

* p < .05.

CODING:
I-race, R-race: 1=black; I-age, R-age: 1=35 and under; I-sex, R-sex: 1=male.
Interactions: IR-race: 1=interviewer and respondent dissimilar on race; IR-age: 1=interviewer and respondent dissimilar on age; IR-sex: 1=interviewer and respondent dissimilar on gender.