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The Journal of Sociology & Social Welfare

Volume 10
Issue 3 *September*

Article 8

September 1983

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Lawrence L. Martin
Arizona State University

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Recommended Citation

Martin, Lawrence L. (1983) "The Use of Telephone Surveys in Human Service Needs Assessment - An Idea Whose Time Has Come?," *The Journal of Sociology & Social Welfare*: Vol. 10 : Iss. 3 , Article 8.
Available at: <https://scholarworks.wmich.edu/jssw/vol10/iss3/8>

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"THE USE OF TELEPHONE SURVEYS
IN HUMAN SERVICE NEEDS ASSESSMENT
-AN IDEA WHOSE TIME HAS COME?-"

Lawrence L. Martin

Arizona State University

ABSTRACT

This article explores the potential use of telephone surveys for the conduct of human service needs assessments. After reviewing relevant literature bearing on the subject of telephone surveys, a theoretical telephone survey human service needs assessment of Maricopa County, Arizona is compared with an actual human service needs assessment using the traditional personal survey approach. The results suggest that the two approaches produce similar findings at the aggregate data, or community, level but that the underrepresentation of certain target groups of interest to human service administrators (e.g. low-income and ethnic minorities) may cause disaggregation problems. Methodological techniques to deal with the underrepresentation of these target groups in telephone survey human service needs assessments are discussed. The article concludes by suggesting that the successful utilization of a telephone survey approach to human service needs assessment may ultimately turn more on political rather than methodological concerns.

It has been said that no planning function is more important than needs assessment (1). The identification of human service needs to be addressed through the allocation of resources and the provision of services is the key to the remaining planning tasks.

There are numerous approaches to needs assessment--service provider surveys, key informant surveys, review of secondary data, review of management information, and public hearings--to name just a few. But of all the possible approaches to needs assessment, the most valid is the general population survey (1,14). The general population survey's major advantage over other forms of needs assessment is that it is based upon a random sample of the general population and thus permits statistically valid inferences to be made about the incidence of human service needs in the population as a whole.

Historically, the preferred mode of implementation of a general population survey has been the face-to-face interview or what shall be referred to in this text as a personal survey. Increasingly, however, cost considerations and disappointing response rates have prompted many researchers to begin exploring the possibility of utilizing telephone surveys as a viable alternative approach to personal surveys (5,8,9,10,12). The cost per completed personal survey interview has been estimated to vary anywhere from \$60 to \$200 depending upon the geographical dispersion of the respondents and the type of organization, commercial or non-commercial,

conducting the research (10). Most human service agencies generally lack staff skilled in survey research techniques thus necessitating the retention of an outside organization. Consequently, a human services administrator desiring to conduct a human services needs assessment, using the personal survey approach with a sample size of 1,000, might well be facing out of pocket expenses of some \$60,000 to \$75,000 for a community survey and upwards of \$200,000 for a statewide survey. While perhaps being somewhat overstated, it has nevertheless been suggested that by resorting to telephone survey techniques the costs of field work and sampling might be reduced by as much as 75 to 80 percent with significant overall cost savings (9). Regardless of the magnitude of cost savings, any cost savings would appear attractive to the human services administrator in this era of scarce resources.

The general phenomenon of declining response rates for personal surveys is also serving to enhance the credibility of telephone surveys as a viable alternative. At one time, telephone response rates of 50 to 60 percent were viewed as unacceptable by proponents and practitioners of the personal survey approach. But some recent studies have reported that response rates for personal surveys in metropolitan areas have likewise declined to levels close to 50 percent (8). Given the perceived cost advantage of telephone surveys combined with the possibility that response rates might be as good as those of personal surveys, the increasing attractiveness of telephone surveys is understandable.

Telephone survey techniques have also succeeded over the past several years in overcoming many of the criticisms that were previously levied against the approach, thus enhancing its general acceptance. For example, as demonstrable evidence of the increasing acceptability of telephone surveys within the social science disciplines, one can compare the first and second editions of Backstrom and Hursh-Cesar's Survey Research. The first edition (1963) warned researchers against resorting to telephone surveys while the second edition (1981) devotes equal time to telephone surveys together with personal and mail surveys.

The change in perspective regarding the acceptability of telephone surveys by the social science community over the last 20 years, is the direct result of the increasing number of households having access to telephones and to the cumulative effect of research findings exploring the biases perceived to be inherent with the telephone approach. The percentage of the population that have telephones today has been variously estimated at 90%, 90.4%, and 94% (7,8,13). Additionally, the difference in the estimation of population variance between personal surveys and telephone surveys has been found to vary only a few percentage points. Kelcka and Tuchfarber (9), in what is believed to be the first study comparing a random-digit-dialing telephone survey to a personal survey, found few significant differences between the respondents on either demographic variables or citizens' attitudes on crime. Groves and Kahn (8), in their work Surveys by Telephone, compared a national telephone survey to a national personal survey on some 200 different measures and concluded that demographic comparisons between the two modes of interviewing were more notable for their similarities rather than their differences.

At one time, it was also believed that responses to sensitive questions might be significantly different between personal surveys and telephone surveys. Recent research has found this concern to be unsubstantiated. For example, Colombotos (4) found that there was only a "slight" tendency for the telephone method to solicit socially acceptable answers. Coombs and Freedman (6), in a longitudinal

study of fertility, successfully asked telephone respondents a number of sensitive questions regarding pregnancy, fetal mortality, expectations of future births and income. Moreover, Groves and Kahn (8) found that telephone survey respondents were more likely to state extreme positions. This latter finding suggests that the anonymity of the telephone interview may be less likely to solicit socially acceptable responses.

Market researchers and political pollsters now routinely resort to telephone surveys to assess attitudes, as do some local governments. Dallas, Texas, Dayton, Ohio, and Tempe, Arizona, for example, have all resorted at different times to telephone surveys as a method of gathering information about citizen perceptions of city government and their preferences for public expenditures (15). Telephone surveys have also been utilized as a method of collecting human service needs assessment data (10,11,15). With respect to this latter use there is, however, a fundamental question regarding telephone surveys as a method of collecting human services needs assessment data that does not appear to have received much attention. The question is, whether the incidence of a human service need is a sufficiently different research question than is the incidence of a particular attitude toward a political candidate, a consumer product, or the workings of local government? If this research question is indeed different, then the successful use of telephone surveys for attitude assessment may not be sufficient substantiation of their validity for human service needs assessment.

In point of fact, most of the research suggesting comparability between the results of telephone and personal surveys appear to have focused almost exclusively upon the relative stability of demographic and attitudinal findings between the two approaches. Yet in one particular non-attitudinal study using 1970 Census data, Tull and Albaum (13), found significant (.001) differences between households having access to a telephone and those without with respect to the ownership of certain durable goods including housing, automobiles, and television sets.

The findings of Tull and Albaum suggest that while comparisons of demographic variables between personal and telephone surveys may yield similar results, dependent variables of the non-attitudinal type might well have significant variation. For human service needs assessment then, variation between personal and telephone surveys might also yield different results on dependent variables (needs). Also, it could be that while differences between dependent variables in a personal survey and a telephone survey human services needs assessment of the same population might not be statistically significant, the differences might nevertheless still be important for human services policy analysis purposes.

To explore the possibility that there might in fact be important differences with respect to human service needs between households with a telephone and those without, a secondary data analysis was conducted of a recent general population survey needs assessment conducted in Maricopa County, Arizona. The study was commissioned by the Maricopa Association of Governments and conducted by the Behavioral Research Center, a local commercial concern. The study, an area probability sample design, collected personal survey data on 1,319 households over a sixty day period in late 1981. One of the questions asked in the personal survey was, "Do you have an operating telephone in your home?" By inclusion of this question it became possible to separate respondents into two groups--one group consisting of all respondents and the second group consisting of only those respondents who had an operating telephone in their homes. By so separating respondents, a comparison of a human services needs assessment by personal survey and by telephone survey could be simulated.

Table I presents the data, in percentages, comparing the results of the personal survey (P.S.) with the simulated telephone survey (T.S.) on certain selected demographic variables and on four selected health and human service problem areas. The primary problem in the household is a composite index of some twenty health and behavioral health problems. The secondary problem in the household is an index of other social problems.

As can be seen, the major comment that might be made regarding the demographic variables in Table I is that they are singularly uninteresting. Using Chi Square as the measure, there are no statistically significant (.01) differences between demographic variables. This finding is very much in keeping with what the literature suggests and is simply a function of the small percentage of persons, (7.9%) or 104 respondents without telephones, who are included in the personal survey (P.S.) but who are not included in the telephone survey (T.S.). In essence the 104 cases simply get "washed out" in the personal survey (P.S.) of 1,319 cases. This is, of course, the major argument put forth by the proponents of telephone surveys. The number of cases of persons not having telephones that are included in personal interviews is generally so small that the impact and thus the differences between what would be found in a telephone survey vis-a-vis a personal survey are not statistically significant. It is at this point, however, that some of the proponents of telephone surveys would end their analysis. Having found no statistically significant differences between the findings of the telephone survey and the personal survey with respect to demographic variables they conclude that the methods are similar.

But what about the dependent variables (needs)? When we turn our attention to the data on dependent variables presented in Table I, what can we discover? At first glance it appears that there is a statistically significant difference between the personal survey (P.S.) and the telephone survey (T.S.) with respect to one of the dependent variables--lack of transportation. However, the difference of 2.9 percent between the findings is still within the plus or minus 3 percent range attributable to sampling error in this study and consequently we must conclude that the findings are the same. With respect to the other three dependent variables (unemployment and the presence of primary and secondary problems), the differences between the personal survey (P.S.) and the telephone survey (T.S.) are not statistically significant despite the 4 percent variation between the groups on the secondary problem variable.

Considering the finding of no statistically significant differences on the four dependent variables, of which two are broad indexes of health and human services problems, the data appear to suggest that the full range of potential variation is captured just as well in the telephone survey as would be the case in the personal survey.

But there is more to human service needs assessment than statistical significance and aggregate data for the general study population at large. Specific data on certain target groups (e.g. low income and ethnic minorities) of interest to human services administrators are also usually desired and conclusions regarding these target groups--conclusions that may have policy implications--are drawn. If the 104 cases that are lost between the personal survey (P.S.) and the telephone survey (T.S.) in our simulated comparison were to be pursued further, would such analysis shed additional light on, for example, the target groups of low income and Hispanic? Hispanics constitute the largest ethnic minority in Maricopa County, Arizona.

TABLE 1
 A SIMULATED COMPARISON OF RESPONDENTS TO A
 PERSONAL SURVEY (P.S.) AND A TELEPHONE SURVEY (T.S.)

		Percentages		Significance	
		P.S.	T.S.	χ^2	
A. Household Demographic Characteristics					
<u>Income</u>					
Under \$7.5K	20.1	16.4	n.s.	at .01	
\$7.5K to \$12.5K	16.5	16.5			
\$12.5K to \$19.9K	20.6	21.0			
\$20K to \$29.9K	21.4	23.1			
\$30K plus	21.5	23.0			
	(n=1,245)	(n=1,149)			
<u>Race</u>					
Non-minority	82.2	84.3	n.s.	at .01	
Hispanic	12.8	10.5			
Other Minority	5.0	5.2			
	(n=1,317)	(n=1,213)			
<u>Age</u>					
Under 35	34.4	32.5	n.s.	at .01	
35-49	22.7	23.1			
50-59	15.8	16.3			
60+	27.1	28.1			
	(n=1,316)	(n=1,212)			
<u>Marital Status</u>					
Married/Living As	65.9	68.1	n.s.	at .01	
Single	34.1	31.9			
	(n=1,317)	(n=1,213)			
B. Incidence of Selected Social Problems					
<u>Education</u>					
Grade School or Less	11.2	9.6	n.s.	at .01	
Some High School	45.6	45.3			
Some College	43.3	45.1			
	(n=1,317)	(n=1,213)			
<u>Own/Rent Home</u>					
Own	69.6	72.4	n.s.	at .01	
Rent	30.4	27.6			
	(n=1,317)	(n=1,211)			
<u>Household Contains Elderly</u>					
Yes	32.1	33.3	n.s.	at .01	
No	67.9	66.7			
	(n=1,319)	(n=1,213)			
<u>Household Contains Children</u>					
Yes	40.8	41.6	n.s.	at .01	
No	59.2	58.4			
	(n=1,319)	(1,213)			
<u>Income Sources</u>					
Job Only	54.8	56.7	n.s.	at .01	
Job plus Other	12.1	12.3			
S.S. or Pension Only	26.3	26.4			
Gov. Subsidy Only	6.0	4.1			
Other	7.6	7.6			
	(n=1,747)	(n=1,597)			
<u>Unemployed</u>					
Yes	15.2	14.0	n.s.	at .01	
No	84.8	86.0			
	(n=1,319)	(n=1,213)			
<u>Lack Transportation</u>					
Yes	8.2	5.3	sig	at .01	
No	91.8	94.7			
	(n=1,314)	(n=1,210)			
<u>Presence of Primary Problem in Household*</u>					
Yes	46.9	46.0	n.s.	at .01	
No	53.1	54.0			
	(n=1,317)	(n=1,213)			
<u>Presence of Secondary Problem in Household*</u>					
Yes	3.8	8.0	n.s.	at .01	
No	96.2	92.0			
	(n=1,317)	(n=1,213)			

Note:
 The difference in the "N's" on some variables is due to: (1) the number of persons in a household to whom the question applies and (2) to non-responses on some questions.

Table II details the actual number of cases in the personal survey (P.S.) and the telephone survey (T.S.) as well as the number of lost cases (L.C.) and the percentage of lost cases between the P.S. group and the T.S. group. As can be seen, the lost cases are distributed in quite different proportions than might have been suggested by the apparent lack of difference between the personal survey (P.S.) distributions and the telephone survey (T.S.) distributions. With respect to the two target groups of low income and Hispanic, both fare badly. Nearly one quarter (24.8%) of the total number of cases representing respondents with annual incomes below \$7,500 per year is lost between the personal survey and the telephone survey. Nearly a quarter (24.3%) of all the Hispanic cases is also lost. Other target groups with significant case losses include: persons under 35 years of age (12.8%), those with less than a grade school education (21.1%), and individuals whose only income is from a government subsidy, i.e., welfare (37.1%). Among dependent variables the lost cases represent 17.4% of all unemployed persons and a substantial 40.7% of those lacking transportation.

In Table III, the 104 lost cases are pursued further by juxtaposing those respondents with telephones (W.T.) and those without (W.O.T.). As can be seen, an entirely different picture emerges that appears to have both policy analysis implications and statistical significance. Of the thirteen demographic and dependent variables there are statistically significant differences between the group W.T. and the group W.O.T. on ten measures.

In terms of policy analysis implications, our simulated comparison suggests that significant amounts of data on citizens of Maricopa County, Arizona who are: low income, Hispanic, under 35, renters, welfare recipients, unemployed, transportation handicapped, and who possess less than a grade school education would be lost in a telephone survey. From a human services policy analysis perspective, this lost data could constitute a real problem for it is specifically these types of groups that are generally most in need of human services. Clearly, the implication here is that while at the aggregate data level there may be no significant difference between, for example, the distribution of income for respondents to a personal survey and a telephone survey, there may be disaggregation problems. The lost cases (data that would not be captured in a telephone survey) might preclude meaningful disaggregate analysis in that: (1) the data may be so biased that their validity is questionable and (2) cross tabulations on such variables as unemployment among Hispanics might be precluded due to insufficient numbers of cases.

To summarize, the simulated comparison of a personal survey and a telephone survey needs assessment in Maricopa County, Arizona suggests that there are systematic differences between households that have access to a telephone and those which do not. Furthermore, target groups of particular interest to human services administrators (e.g. low income, minorities, unemployed, welfare recipients, etc.) are found disproportionately among the group lacking access to a telephone. Thus the use of a telephone survey for a human services needs assessment may either preclude analysis or paint a biased picture of the incidence of human services needs among certain target groups due to their underrepresentation in the telephone survey sample. This finding of underrepresentation of specific target groups in telephone surveys is in keeping with other findings reported by both Groves and Kahn (8) and Backstrom and Hursh-Cesar (3).

The systematic bias inherent in the use of telephone surveys for human service needs assessments does not, however, totally preclude their use. To the extent that human service administrators are interested only in the aggregate

TABLE 11
 A SIMULATED COMPARISON OF RESPONDENTS TO A
 PERSONAL SURVEY (P.S.) AND A TELEPHONE SURVEY (T.S.)
 WITH AN ANALYSIS OF LOST CASES (L.C.)

		P.S.		T.S.		L.C.		P.S.		T.S.		L.C.	
		#	(%)	#	(%)	#	(%)	#	(%)	#	(%)	#	(%)
A. Household Demographic Characteristics													
Income													
Under \$7.5K	250	188	62 (24.8)										
\$7.5K to \$12.5K	205	189	16 (7.8)										
\$12.5K to \$19.9K	257	242	15 (5.8)										
\$20K to \$29.9K	266	265	1 (.4)										
\$30K plus	267	265	2 (.8)										
	(n=1,245)	(n=1,149)	(n=96)										
Race													
Non-minority	1,082	1,023	59 (5.4)										
Hispanic	169	128	41 (24.3)										
Other Minority	66	62	4 (6.1)										
	(n=1,317)	(n=1,213)	(n=104)										
Age													
Under 35	452	394	58 (12.8)										
35-49	299	280	19 (6.4)										
50-59	208	198	10 (4.8)										
60+	357	340	17 (4.8)										
	(n=1,316)	(n=1,212)	(n=104)										
Marital Status													
Married/Living As	867	826	41 (4.7)										
Single	450	387	63 (14.0)										
	(n=1,317)	(n=1,213)	(n=104)										
Education													
Grade School or Less	147	116	31 (21.1)										
Some High School	601	550	51 (8.5)										
Some College	569	547	22 (3.9)										
	(n=1,317)	(n=1,213)	(n=104)										
Dwn/Rent Home													
Own	917	877	40 (4.4)										
Rent	400	334	66 (16.5)										
	(n=1,317)	(n=1,211)	(n=106)										
Household Contains Elderly													
Yes	423	404	19 (4.5)										
No	894	809	85 (9.5)										
	(n=1,317)	(n=1,213)	(n=104)										
Household Contains Children													
Yes	538	504	34 (6.3)										
No	781	709	72 (9.2)										
	(n=1,319)	(n=1,213)	(n=106)										
Income Sources													
Job Only	957	905	52 (5.4)										
Job Plus Other	212	196	16 (7.5)										
S.S. or Pension Only	460	421	39 (8.5)										
Gov. Subsidy Only	105	66	39 (37.1)										
Other	13	9	4 (30.8)										
	(n=1,747)	(n=1,597)	(n=150)										
B. Incidence of Selected Problems													
Unemployed													
Yes	201	166	35 (17.4)										
No	1,118	1,047	71 (6.4)										
	(n=1,319)	(n=1,213)	(n=106)										
Lack of Transportation													
Yes	108	64	44 (40.7)										
No	1,206	1,146	60 (5.0)										
	(n=1,314)	(n=1,210)	(n=104)										
Presence of Primary Problem in Household													
Yes	619	558	61 (9.9)										
No	698	655	43 (6.2)										
	(n=1,317)	(n=1,213)	(n=104)										
Presence of Secondary Problem in Household													
Yes	50	47	3 (6.0)										
No	1,267	1,166	101 (8.0)										
	(n=1,317)	(n=1,213)	(n=104)										
Note:													
The difference in the "N's" on some variables is due to: (1) the number of persons in a household to whom the question applies and (2) to non-responses on some questions.													

TABLE 111
 A COMPARISON OF SAMPLE RESPONDENTS
 WITH A TELEPHONE IN THE RESIDENCE (M.T.) AND THOSE WITHOUT (W.O.T.)

A. Household Demographic Characteristics	M.T.	W.O.T.	Significance	Education	M.T.	W.O.T.	Significance	B. Incidence of Selected Problems	M.T.	W.O.T.	Significance
			χ^2				χ^2				
<u>Income</u>				Grade School or Less	9.6	29.8	Sig at .01	<u>Unemployed</u>			
Under \$7.5 K	16.4	64.6	Sig at .01	Some High School	45.3	49.0		Yes	14	33	Sig at .01
\$7.5K to \$12.5K	16.5	16.7		Some College	45.1	21.2		No	86	67	
\$12.5K to \$19.9K	21.0	15.6			(n=1,213)(n=104)				(n=1,213)(n=106)		
\$20K to \$29.9K	23.1	1.0		<u>Own/Rent Home</u>				<u>Lack Transportation</u>			
\$30K plus	23.0	2.1		Own	72.4	36.5	Sig at .01	Yes	5.3	42.3	Sig at .01
	(n=1,149)	(n=96)		Rent	27.6	63.5		No	94.7	57.7	
					(n=1,211)(n=104)				(n=1,210)(n=104)		
<u>Ethnicity</u>				<u>Household Contains Elderly</u>				<u>Presence of Primary Problem in Household</u>			
Non-minority	84.3	56.7	Sig at .01	Yes	33.3	18.3	Sig at .01	Yes	46.0	58.7	n.s. at .01
Hispanic	10.5	39.4		No	66.7	81.7		No	54.0	41.3	
Other Minority	5.2	3.9			(n=1,213)(n=106)				(n=1,213)(n=104)		
	(n=1,213)	(n=104)		<u>Household Contains Children</u>				<u>Presence of Secondary Problem in Household</u>			
				Yes	41.6	32.1	n.s. at .01	Yes	8.0	2.9	n.s. at .01
<u>Age</u>				No	58.4	67.9		No	92.0	97.1	
Under 35	32.5	56.6	Sig at .01		(n=1,213)(n=106)				(n=1,213)(n=104)		
35-49	23.1	17.9		<u>Income Sources</u>							
50-59	16.3	9.6		Job only	56.7	34.7	Sig at .01				
60+	28.1	16.0		Job plus other	12.3	10.7					
	(n=1,212)	(n=104)		S.S. or Pension only	26.4	26.0					
				Gov. Subsidy only	4.1	26.0					
<u>Marital Status</u>				Other	.6	2.6					
Married/Living As	68.1	39.4	Sig at .01		(n=1,597)(n=150)						
Single	31.9	60.6									
	(n=1,213)	(n=104)									

Note:
 The difference in the "N's" on some variables is due to: (1) the number of persons in a household to whom the question applies and (2) to non-responses on some questions.

incidence of human service needs in the general population, the biases inherent in the telephone approach are not significant. If data at a level lower than that of the general population (i.e., target group) are desired, a telephone survey can still be used provided the biases are compensated for.

Backstrom and Hursch-Cesar (3) suggest three approaches that might be used in overcoming the biases inherent in the use of telephone surveys: weighting, oversampling, and the selected use of personal interviews. Weighting involves giving added value to the responses of target groups known to be underrepresented in the telephone sample. This statistical manipulation achieves the net effect of increasing the target group's overall representation in the sample. However, a problem with this approach is that if the target group members surveyed are not characteristic of the total target group, weighting only compounds the error. In oversampling, an attempt is made to interview more members of the underrepresented target group than would otherwise be the case, with the intended hope that more of the variation within the target group will be captured. Weighting must also be used in conjunction with oversampling to distill the responses down to their appropriate proportional values. Because oversampling involves weighting, this approach suffers from the same potential problem--if the target group members who are oversampled are unrepresentative of the target group in general, the error is again compounded.

The third approach suggested by Backstrom and Hursch-Cesar (3) is the selected use of personal interviews. In this approach, target groups that are known to be underrepresented in telephone surveys would be contacted using a personal interview. Working from census data, community informants, or other sources, areas of high concentration of target group members can be identified. Sufficient numbers of personal interviews are then secured and the personal interviews can be used to validate the telephone interviews and suggest appropriate weightings.

A recent experience suggests that when weighting, oversampling and the selected use of personal interviews are combined with a strategy for building community consensus around the telephone survey approach to human services needs assessment, the results in terms of validity, acceptance of the process, and use of the resulting data may be significantly enhanced.

The burden of proof that there is no difference between particular target group members (Hispanics, for example) who have telephones and those who do not, falls to those human services administrators who would use the telephone survey approach to conduct a human services needs assessment. The issue of comparability may become as much a political issue as a methodological one. The socio-economic correlates of telephone ownership are generally known to and understood by low income persons, minorities, and their advocates. Human services administrators utilizing the telephone survey approach to human services needs assessment should be prepared to adopt an implementation strategy that will allay the fears of underrepresented target groups and their advocates or run the risk that the resulting data will be viewed with suspicion thus affecting its usefulness.

As a follow-up to the personal interview human services needs assessment reported on in this paper, Arizona State University and the Maricopa County Human Resources Department pilot tested a telephone survey approach to human services needs assessment in Chandler, Arizona during 1982. A key aspect of the implementation strategy was the creation of an advisory committee made up of local Chandler government and private sector members including representatives of target groups which would be potentially underrepresented in the telephone

survey. University researchers attempted to educate the advisory committee members on the potential biases of the telephone approach and how the biases would be dealt with. In turn, the advisory committee members assisted the University researchers in determining areas where high concentrations of potential underrepresented target groups resided and where personal interviews would be conducted. The advisory committee also served as a community diffusion mechanism for information concerning the continued progress of the needs assessment project. Data gathered in the personal interviews will be used to validate the telephone survey and assist in determining appropriate weighting factors for underrepresented target groups. While the final report has not been released, human services administrators with the Maricopa County Human Resources Department are very optimistic about the overall receptivity with which the report will be received.

In conclusion, this paper has attempted to illustrate that, despite great strides over the last 20 years, telephone surveys still present significant problems for human services administrators who consider using this approach to conduct a human services needs assessment. Nevertheless, the problems are not insurmountable and the biases associated with a telephone survey human services needs assessment can be compensated for using weighting, oversampling, and selected use of personal interviews. In the last analysis, the success or failure of a telephone survey human services needs assessment--as with any needs assessment--will ultimately turn on how well the data are received and utilized. It has been suggested in this paper that the potential success of a telephone survey human services needs assessment can be increased by educating and involving significant segments of the survey community in the process.

As a concluding comment, it appears that telephone surveys as a method of conducting human services needs assessments may be an idea whose time has not totally come. Yet there will be increasing economic pressures to abandon the more costly personal surveys. The challenge will be to insure that in the trade off between cost and method, the validity and usefulness of the resulting human services needs data are not compromised.

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