VARIATIONS IN RESPONSE RATES AMONG TYPES OF PROGRAMS IN A NATIONAL LONGITUDINAL STUDY OF DRUG TREATMENT PROGRAMS

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The Treatment Outcome Prospective Study (TOPS) is sponsored by the National Institute on Drug Abuse (NIDA) with the cooperation of the National Institute of Justice (NIJ). This long-term, large-scale longitudinal study will provide information on the natural history of drug abusers seeking treatment in Federally funded drug abuse treatment programs. TOPS is designed to track a multi-year census of persons identified as eligible for treatment at selected drug treatment programs and the Treatment Alternatives to Street Crime (TASC) programs. These clients are interviewed at the time they contact the programs, periodically while in treatment, and then at specified intervals after their termination from treatment.

The treatment programs and individual clients voluntarily participate in the study. Program Researchers (PRs), hired and trained specifically for TOPS, are assigned to interview the clients at the treatment program. Demographic and baseline behavioral data are collected at the time the client seeks admission to the treatment program. At months one, three, and quarterly thereafter, for as long as the client remains in treatment, additional indepth assessments of behavior, attitudes, and treatment process are conducted. These assessments are continued in the post-treatment period by followup interviews at ninety days, one year and two years after termination.

Because of the longitudinal nature of TOPS, the differences among the four general approaches to drug treatment and the variability among individual programs, a high rate of retention of clients in the study is necessary for descriptive and comparative analyses. During the calendar year 1979, 4247 eligible applicants contacted treatment units participating in TOPS. The overall response rate for intake interviews for those clients eligible for TOPS was 80 percent (see table 1). The refusal rate was 5 percent. The remaining clients either did not physically contact the program for treatment or were not able to be scheduled for an interview during the time they attended the program.

A total of 2114 one month and 1264 three month intreatment interviews were attempted with clients remaining in treatment during calendar year 1979. The overall response rate was 89 percent for the one month and 90 percent for the three month interviews (see table 1). The direct refusal rate was 1.5 percent.

The purposes of this paper are (1) to describe the patterns of nonresponse experienced in the first year of TOPS, (2) to explore the reasons for particular patterns of nonresponse, (3) to assess the effects of nonresponse on the study results, and (4) to recommend methods of improving the response rate in subsequent years of the study. Variations in response rates among types of programs are discussed in terms of program modality/environment, time in treatment, number of interviewer/respondent contacts, and the age/sex/ethnicity match of interviewer and respondent.

SAMPLE

TOPS uses a purposive sample of cities and programs within each city. Eight cities were considered initially for the 1979 data collection to reflect particular types of drug abuse problems and approaches to treatment, and six were finally selected. Two additional sites were added in 1980. Stable, established programs covering the four major approaches to treatment were selected to permit an assessment of effects of the treatment process as it might optimally be conducted. Neither the cities nor the programs represent a national sample. Thirty-two different definable drug treatment program units were involved in the study during 1979. These included:

- five TASC agencies
- three outpatient detoxification units
- seven outpatient methadone units
- eight outpatient drug free units
- nine residential units

In the selected TOPS programs, a census of all eligible applicants is asked to participate in TOPS. ONLY PROGRAM CLIENTS OR APPLICANTS ELIGIBLE FOR THE DRUG TREATMENT PROGRAM ARE INCLUDED IN TOPS. Clients admitted primarily for alcohol or mental health problems are not included in the study. Clients with other initial diagnoses who are later transferred to a TOPS drug treatment component within the same program are interviewed for TOPS.

ALL APPLICANTS ACCEPTED BY TASC IN A CITY ARE INCLUDED IN TOPS. A TASC client referred to a TOPS treatment program is then placed on that program's intreatment interview schedule.

INTREATMENT INTERVIEWS ARE CONDUCTED WITH ALL CLIENTS REMAINING IN TOPS PROGRAMS, though intreatment interviews are not attempted with clients who refuse or who do not complete the intake interview.

DATA COLLECTION

The client data at the programs are collected by RTI staff or treatment program staff members who are hired specifically to implement TOPS. Selection criteria for the

Program Researchers (PRs) were developed as part of an extensive pretest. The PRs hired are trained and their technical performances are supervised and evaluated by field supervisors. Thirty-four full-time and one half-time Program Researchers worked as data collectors at some 70 interviewing sites in clinics and/or components of the program units during 1979. Because of the need for confidentiality and close coordination with treatment program staff, PRs were generally restricted to conducting interviews at the treatment programs in coordination with a client's scheduled visit to the program for treatment.

An attempt is made to conduct the intake interview when an applicant physically contacts the program, initiates the program's admission process, and is determined to be eligible for the treatment program and TOPS. During treatment, interviews are scheduled for the one, three, six, nine and twelve month anniversary of official program admission. The interviews must be conducted within three weeks of these key dates or the case is designated a noninterview. The series of intreatment interviews is terminated when the client is officially discharged from a program and is not readmitted within 15 days or when the client does not physically contact the program for treatment services within 30 days. Followup interviews are scheduled with a sample of clients who completed the intake interview and have met one of the discharge criteria listed above.

The intake interviews are completed in an average of 51 minutes and Intreatment interviews in an average of 26 minutes. Compensation of $8.00 for the intake and $5.00 for the intreatment interview is offered at most programs.

RESULTS

The data for the response rates are presented in tables 1-4. Three categories of response outcomes are presented: interviews, refusals and noninterviews. A refusal is defined as a direct, face to face statement by a respondent that he/she does not wish to be interviewed. Other non-interviews are defined as eligible cases that do not result in an interview or a direct refusal. Cases in which the clients were ineligible, deceased, hospitalized, or otherwise incapable of granting an interview have been deleted. The analyses of the factors that affected response rates are presented below.

Effects of Treatment Modality/Environment

From table 1 it is clear that response rates varied by treatment modality/environment. Generally, high response rates were obtained in outpatient detoxification, outpatient methadone and residential programs. The highest refusal rate (8 percent for intake) was obtained in the outpatient methadone programs, but the outpatient drug free programs have posed other problems that are difficult to resolve.

Table 1

Response Rates by Modality/Environment of Treatment by Type of Interview

Modality/Environment	Interview %	Interview (n)	Direct Refusal %	Direct Refusal (n)	Other Non-Interview %	Other Non-Interview (n)	Total Eligible Clients %	Total Eligible Clients (n)
Outpatient Detoxification								
Intake	85%	(511)	3%	(17)	12%	(74)	100%	(602)
Outpatient Methadone								
Intake	80	(1098)	8	(113)	12	(165)	100	(1376)
One Month Intreatment	91	(843)	3	(23)	6	(58)	100	(924)
Three Month Intreatment	90	(601)	2	(14)	8	(52)	100	(667)
Residential								
Intake	88	(907)	2	(24)	10	(101)	100	(1032)
One Month Intreatment	96	(574)	<1	(1)	4	(21)	100	(596)
Three Month Intreatment	98	(308)	-	(0)	2	(5)	100	(313)
Outpatient Drug Free								
Intake	72	(885)	6	(77)	22	(275)	100	(1237)
One Month Intreatment	77	(458)	1	(8)	22	(128)	100	(594)
Three Month Intreatment	81	(229)	2	(6)	17	(49)	100	(284)
All Modalities/Environments								
Intake	80	(3401)	5	(231)	15	(615)	100	(4247)
One Month Intreatment	89	(1875)	1	(32)	10	(207)	100	(2114)
Three Month Intreatment	90	(1138)	2	(20)	8	(106)	100	(1264)

The nature of the treatment delivery must be considered in the assessment of the problem of nonresponse rates in the four major types of modalities/environments. In outpatient detoxification programs medication is generally provided each day for a 14-28 day period. There is typically a high attrition rate from the program throughout the course of treatment. In the outpatient methadone programs medication is usually dispensed daily over a substantially longer period of time, in many cases for a year or longer. There is comparatively less attrition in the methadone programs, especially in the first month. In residential programs, which require clients to live at the program, clients are generally available for interviews. However, the attrition rate during the first weeks in residential programs is much higher than the other modalities. The approaches to treatment among individual outpatient drug free programs vary greatly. In general, these programs see clients once or twice a week or more often for counseling. Medication is seldom dispensed and the minimum criterion for retention in the program is that a client contact the program for counseling at least once within a thirty day period.

Given the substantial variation among the four general approaches, the pattern of nonresponse shown in table 1 does not seem unreasonable. The response rates for outpatient drug free programs are as might be anticipated lower than for the other modalities/environments.

Effects of Time in Treatment

As indicated above, the variability in response rates among programs may be explained in part by the amount of contact a client has with a program and consequently the opportunity the PR has to talk with a client. The most critical nonresponse problem is non-interviews with persons who have minimal contact with the program. The overall response rate was 82 percent for those clients admitted to the programs who received treatment and physically contacted the program on more than one day. Table 2 demonstrates that the response rates vary as a function of time in treatment and supports the argument that there was less opportunity to interview clients in outpatient drug free programs. The intake response rate for clients remaining in the three major modalities/environments for at least a month is 92 percent.

Table 2

Intake Interview Response Rates for Residential, Outpatient Methadone and Outpatient Drug Free Modalities/Environments Within Time in Treatment Categories

Modality/Environment	Interview %	(n)	Direct Refusal %	(n)	Other Non-Interview %	(n)	Total %	(n)
Outpatient Methadone								
One Day	61%	(40)	18%	(12)	21%	(14)	100%	(66)
One Day - One Week	42	(28)	29	(19)	29	(19)	100	(66)
One - Two Weeks	39	(22)	33	(19)	28	(16)	100	(57)
Two - Four Weeks	36	(59)	30	(49)	33	(54)	100	(162)
More Than Four Weeks	93	(949)	1	(14)	6	(62)	100	(1025)
Total	80%	(1098)	8%	(113)	12%	(165)	100%	(1376)
Residential								
One Day	29%	(10)	2%	(1)	69%	(24)	100%	(35)
One Day - One Week	55	(45)	12	(10)	33	(27)	100	(82)
One - Two Weeks	70	(61)	8	(7)	22	(19)	100	(87)
Two - Four Weeks	89	(120)	3	(4)	8	(11)	100	(135)
More Than Four Weeks	97	(671)	<1	(2)	3	(20)	100	(693)
Total	88%	(907)	2%	(24)	10%	(101)	100%	(1032)
Outpatient Drug Free								
One Day	48%	(107)	9%	(20)	43%	(94)	100%	(221)
One Day - One Week	70	(89)	6	(7)	24	(30)	100	(126)
One - Two Weeks	51	(38)	18	(13)	31	(23)	100	(74)
Two - Four Weeks	47	(73)	15	(23)	38	(58)	100	(154)
More Than Four Weeks	87	(578)	2	(14)	11	(70)	100	(662)
Total	72%	(885)	6%	(77)	22%	(275)	100%	(1237)
Total								
One Day	49%	(157)	10%	(33)	41%	(132)	100%	(322)
One Day - One Week	59	(162)	13	(36)	28	(76)	100	(274)
One - Two Weeks	56	(121)	18	(39)	26	(58)	100	(218)
Two - Four Weeks	56	(252)	17	(76)	27	(123)	100	(451)
More Than Four Weeks	92	(2198)	1	(30)	7	(152)	100	(2380)
Total	79%	(2890)	6%	(214)	15%	(541)	100%	(3645)

Effects of Number of Interview/Respondent Contacts

The opportunity for a PR to contact a client face-to-face also plays an important role in successfully obtaining intake interviews. In many programs, notification about admission and PR contacts must be initially coordinated through the treatment program staff. Some time may elapse between the time a client initially contacts the program and the PR approaches the client about TOPS. In most of the noninterviews (59 percent) the PR did not actually meet the client. No appointment could be made with 67 percent of the cases which resulted in a noninterview, and in another 25 percent only one appointment could be made. Most of the refusals (87 percent) occurred on the first face-to-face contact.

Effects of Matching Sex and Ethnicity of Respondent and Interviewer

Although no attempt was made to assign respondents and interviewers according to sex or ethnicity, the PRs were assigned to programs where the PR was familiar and comfortable with the client population. Each program was also consulted in the choice of the PR to work at that program, and the program's recommendation was taken into account in the assignment of PRs. Thirty-five PRs were assigned to programs during 1979. The sex/ethnicity classification of the PRs included two female Hispanics, five female blacks, thirteen female whites, one female Pacific Islander, eight male blacks and six male whites. The assignment pattern resulted in white PRs contacting 70 percent of the white respondents and black PRs contacting 75 percent of the black respondents. The two Hispanic PRs contacted a relatively higher proportion of Hispanic respondents (13 percent) than the relative proportion of Hispanic respondents among the total number of respondents contacted (4 percent).

In table 3 the intake interview response rates within sex categories are reported. Generally, there are no major differences although the female PRs have a somewhat higher response rate.

In table 4 response rates within the ethnicity classifications are reported. Higher response rates were obtained for black (86 percent) and Hispanic (83 percent) respondents than white respondents (77 percent). This result may be confounded by the fact that TOPS outpatient drug free programs had a higher proportion of white clients. As previously noted, the response rates in outpatient drug free programs are generally lower than the other modalities/environments.

No evidence of an effect of matching interviewers with respondents of the same ethnicity can be found in table 4. However, the response rates for Hispanic respondents is clearly higher if the interviewer is Hispanic (92 percent) or white (85 percent). The direct refusal rates are highest for black PRs attempting to interview Hispanic clients and for Hispanic interviewers attempting to interview white clients. These results need to be more carefully reviewed and re-analyzed controlling for other factors before conclusions can be more confidently drawn.

DISCUSSION

The major outcome of these analyses of response rates was that the response rates differed considerably among the types of programs included in the study. This would suggest that comparisons among the programs would be biased due to the differential representation of programs in the study. The analysis of response rates by time in treatment, however, indicates that much of the difference in response rates among the programs might be a function of the time the client remains at a program. Consequently, if one focuses on comparisons among active clients in programs, excluding clients who terminate early, the problem of differential response rate bias may be a lesser problem. On the other hand, if the focus is the investigation of behavior of individuals contacting the TOPS drug treatment programs, the differential response rates are a major problem. There is some descriptive data (age, sex, ethnicity) collected by programs that would permit some comparisons of respondents and nonrespondents. A supplementary data collection could also be used to attempt to interview early dropouts who were not interviewed in the programs.

Except for some unique patterns of refusals, the interviewer/respondent, sex/ethnicity match did not appear to affect response rates. Matching by ethnicity and sex would then would not appear to be a method of improving response rates.

RECOMMENDATIONS

In order to maximize response rates in TOPS, especially in outpatient drug free programs, data collection outside the program was proposed to supplement the basic data collection within the drug treatment program setting. Such supplemental data collection may be appropriate for any program based study.

Under this proposal, most data collection would remain program-based. Both intake and intreatment interviews would continue to be conducted by the PRs at the programs but interviews, intakes and/or intreatment, could be conducted outside the program with clients a) the PR was unable to interview in the program setting and b) who had been contacted about TOPS and c) who had expressed a willingness to

be contacted outside the program. Those likely to fall into these categories are a) clients who only briefly contact a TOPS program for treatment and are not formally admitted, b) clients who though admitted to the TOPS program stay in treatment only for a few days, c) clients who visit the program for treatment during hours when the PR is not physically present, d) clients who are only marginally involved in treatment (i.e., those who infrequently attend the program), and e) clients who are unable to spend enough time at the program to complete the TOPS interview(s) because of job time requirements, transportation schedules, etc. The effects of this change in data collection procedures could be most significant for outpatient drug free clients and early dropouts from residential programs.

Under this system all clients to be interviewed, whether at the program or outside the program, are contacted and their cooperation for TOPS solicited at the program. Procedures for asking the clients for permission to contact them outside the program are worked out with each program. If programs so require, a signed authorization is obtained from all clients to be contacted. In most programs, all initial client contacts regarding TOPS are by the PR; however, in a few programs an intake worker initially informs the client about the TOPS research and requests that he/she meet with the PR. In these programs, intake workers would be trained to request permission from the client to contact him/her outside of treatment should he/she be unable to complete the TOPS interview at the program.

Conducting intake and intreatment interviews outside the treatment program setting can improve the TOPS data base in several ways including:

(1) Improving the overall response rate,
(2) Providing for better representation of specific client subgroups,
(3) Providing for better representation of specific types of programs,
(4) Allowing inclusion of small programs where a full-time PR could not be efficiently assigned,
(5) Increasing timeliness of intreatment interviews for clients marginally included in treatment

The procedures for this supplementary data collection system are currently being implemented. The effects of the differences in approaches on response rates and response quality will be monitored across all programs. Small scale experimental studies are planned to assess specific aspects of the two types of data collection systems which may affect response rates and data quality.

Table 3

Intake Interview Response Rates for Male and Female Respondents
Assigned to Male and Female Interviewers

Number of Interviews Attempted by Sex of Interviewer	Sex of Respondent: Male (n=3238) Interviews	Refusals	Non-interviews	Female (n=1227) Interviews	Refusals	Non-interviews	Total (n=4465) Interviews	Refusals	Non-interviews
Male (n = 2189)	79% (1226)	5% (83)	16% (249)	76% (480)	5% (33)	19% (118)	78% (1706)	5% (116)	17% (367)
Female (n = 2276)	82% (1379)	6% (95)	12% (206)	80% (479)	6% (35)	14% (82)	82% (1858)	6% (130)	12% (288)
Total (n = 4465)*	80% (2605)	6% (178)	14% (455)	78% (959)	6% (68)	16% (200)	80% (3564)	6% (246)	15% (655)

*The total includes 218 clients who contacted TASC programs and were not assigned to a program at the time of the Intake interview.

Table 4

Intake Interview Response Rates for White, Black and Hispanic Respondents
Assigned to White, Black and Hispanic Interviewers

Number of Interviews Attempted by Ethnicity of Interviewer	Ethnicity of Respondent: White (n=2270) Interviews	Refusals	Non-interviews	Black (n=1456) Interviews	Refusals	Non-interviews	Hispanic (n=483) Interviews	Refusals	Non-interviews	Total* (n=4209) Interviews	Refusals	Non-interviews
White (n = 2244)	77% (1223)	6% (92)	17% (278)	86% (276)	5% (17)	9% (30)	85% (278)	5% (16)	10% (34)	79% (1777)	6% (125)	15% (342)
Black (n = 1794)	78% (472)	5% (30)	17% (106)	86% (947)	4% (44)	10% (105)	72% (64)	14% (13)	14% (13)	83% (1483)	5% (87)	12% (224)
Hispanic (n = 171)	65% (45)	12% (8)	23% (16)	81% (30)	5% (2)	14% (5)	92% (60)	2% (1)	6% (4)	79% (135)	6% (11)	15% (25)
Total (n = 4209)*	77% (1740)	6% (130)	17% (400)	86% (1253)	4% (63)	10% (140)	83% (402)	6% (30)	11% (51)	81% (3395)	5% (223)	14% (591)

*Total excludes respondents whose ethnicity is other than white, black or Hispanic, and all clients interviewed by the interviewer who was not white, black or Hispanic.