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Factors Affecting Agreement between Alcohol Abusers' and Their Collaterals' Reports*

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ABSTRACT. *Objective:* Because of their low cost and ease of use, collaterals' reports are the most frequent source of independent corroboration with alcohol abusers' self-reports of drinking and related events. Although several reviews have shown that we can have confidence in the accuracy of alcohol abusers' reports of their drinking and in the use of collateral reports as an independent validity criterion, neither data source is error free. This study examined factors that influence the level of agreement between collaterals' and alcohol abusers' reports. *Method:* Using data from a study of natural recoveries from alcohol-related problems, this study examined how agreement between 120 alcohol abusers' (79.2% male) and their collaterals' reports varied as a function of collateral type and of the collaterals' ratings of their confidence in the accuracy of their reports of the subjects' drinking and related behaviors. Collaterals' awareness of nonalcohol-related levels was also examined. *Results:* The best agreement occurred for reports from alcohol abusers' spouses who were fairly confident about the information provided. For all variables, some proportion of collaterals respond to demand characteristics of the interview by providing very specific information about subjects' behavior yet admit to being unsure of this information. *Conclusions:* Collaterals who are fairly sure of the information they provide are the preferred informants to corroborate alcohol abusers' reports of drinking and related behaviors. In some cases the best collaterals are spouses who are fairly sure of the information they reported. It is also recommended that treatment outcome studies should accept reports only from collaterals who are confident about the information they report. (*J. Stud. Alcohol* **58:** 405-413, 1997)

WHEN GATHERED under appropriate conditions, alcohol abusers' self-reports of drinking and related events are generally accurate for most research and clinical purposes (Babor et al., 1990; Brown et al., 1992; Sobell and Sobell, 1990). However, it is also known that some proportion of alcohol abusers' self-reports are inaccurate (Sobell and Sobell, 1990; Toneatto et al., 1992). For this reason, the validity of alcohol abusers' self-reports is often evaluated against alternative measures (e.g., official records, liver function tests, breath alcohol tests, collateral reports). Reports from collaterals are frequently used as a comparative measure because of the ease and low cost of obtaining them (Maisto and Connors, 1992).

A comprehensive review of the literature has concluded that, when collaterals are used to confirm alcohol abusers' self-reports, "the data consistently suggest that subjects give accurate reports about their drinking" (Maisto and Connors, 1992). When alcohol abusers' self-reports do differ from reports by their collaterals, it is usually because the alcohol abusers describe themselves more negatively (Maisto and Connors, 1992; O'Farrell and Maisto, 1987; Sobell and Sobell, 1986). Similar results have also been reported in general population surveys (Room, 1989). Thus, despite their frequent use, collaterals' reports are not "gold standards."

An assumption implicit in using collaterals to verify subjects' self-reports is that they have knowledge of the subjects' behavior. For example, in alcohol treatment outcome studies collaterals are often asked to recall the subject's drinking over various intervals (e.g., 1 month to several years). In such studies, collaterals are seldom, if ever, asked if they are aware of the behaviors they are being asked to verify. In other fields, concern about what has been termed "knowability" (i.e., whether events are likely to be known by collaterals) has been addressed when calculating intrapair agreement by excluding events reported by collaterals as unknown (Kessler and Wethington, 1991; Neugebauer, 1983; Yager et al., 1981).

Several explanations have been offered for why discrepancies between subjects' and collaterals' reports might occur. Some studies have found that the way questions are worded can affect subject-collateral agreement (Blair et al., 1977); Bradburn and Sudman, 1979; Kessler and Wethington, 1991; Sobell and Sobell, 1981; Yager et al., 1981). For

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example, one study found that subjects and collaterals more consistently recalled clearly worded or salient events than vaguely worded items (Yager et al., 1981). Several other studies have found that the type of life event can affect agreement. Specifically, subjects more reliably recall objective (verifiable) than subjective (vague, amenable to interpretation) events (Sobell et al., 1990; Toneatto et al., 1992), something that could also affect subject-collateral agreement.

In the alcohol field, little research has been conducted to identify factors that influence the degree of agreement between collaterals' and alcohol abusers' reports (Maisto and Connors, 1992; Room, 1989). Using data from subjects and their collaterals who participated in a study of natural recoveries from alcohol-related problems (Sobell et al., 1992a, 1993), the present study examined components of the reporting process to determine factors that contribute to inconsistencies between subject and collateral reports. The study had three objectives: (1) to examine how collaterals' reported awareness of the subjects' behavior affected agreement between subject and collateral reports; (2) to examine how collaterals' confidence ratings about the accuracy of their reports of the subjects' behavior affected agreement between the two sources; and (3) to determine what types of collaterals (e.g., spouse, friend) would result in the best agreement between reports.

Method

Subjects

Subjects in this study were part of a larger study that was approved by the Addiction Research Foundation/University of Toronto Ethics Committee. Subjects were recruited through media advertisements and signed informed consents. Advertisements for subjects asked for individuals who had "successfully overcome a drinking problem without formal treatment." Subjects eligible for the study had to provide the name of, at least one and preferably two, collateral informants who could corroborate the subject's problem-drinking history, problem resolution, absence of subsequent problems and other aspects of the drinking history. Although the study included interviews with both recovered and nonrecovered subjects, only data from the 120 recovered subjects are included in this article; 40% (48/120) of whom provided the name of two possible collaterals.

To aid research staff in contacting their collaterals, subjects signed introductory letters explaining their (i.e., the subjects') participation in the study. The collaterals were sent this letter before they were contacted by the interviewer. Collaterals also signed informed consents. If a collateral refused to be interviewed and no other collateral was available, the respondent was not included in the study. Seven potential subjects who volunteered and were interviewed for the study were subsequently excluded because all their named collaterals refused to be interviewed.

Subjects were predominantly male (79.2%) and white (99%), and the majority were employed (74.3%) and married (71.7%) at the time of their resolution. They reported a mean (±SD) of 12.0 ± 2.7 years of education, and at the time of their resolution they had a mean age of 42.6 ± 10.7 years. Almost all subjects (98.3%) met DSM-III-R criteria for alcohol dependence (American Psychiatric Association, 1987). Subjects had a mean Michigan Alcoholism Screening Test (Selzer, 1971) score of 12.8 ± 4.3, reported an average of 13.2 ± 7.8 years of problem drinking and a mean of 8.5 ± 2.7 alcohol-related consequences. In the 6 years prior to their resolution, subjects reported drinking on more than three-quarters (78.8%) of all days, on average, and consumed an average of 14.0 ± 9.1 drinks per drinking day.

Interviews

A brief summary of relevant procedures used in the study is provided below. For a detailed description of the study design, procedures and questionnaires, readers are referred to Sobell et al. (1992a, 1993).

Five trained interviewers conducted the interviews with subjects and collaterals in this phase of the study. All interviews with subjects were conducted in person and tape recorded. Almost all collateral interviews were by telephone (95.8%, 115/120). It was necessary to interview two collaterals for only a few subjects (5.8%, 7/120). Subjects and their collaterals were interviewed separately and, with one exception, were interviewed by different interviewers. Although subjects were not reimbursed for their interviews, collaterals were offered $10 for their time. Interviews with subjects averaged slightly over 2 hours (mean = 2.3 ± 0.7 hours), and interviews with their respective collaterals averaged about 1 hour (mean = 0.9 ± 0.3 hour). Half (50%, 60/120) of the subjects chose to be interviewed at the Addiction Research Foundation (Toronto).

Slightly over half (57.5%, 69/120) of all collaterals were spouses or were living common-law with subjects. At the time of the interview, 71.7% (86/120) of subjects were married and three-quarters of those (76.7%, 66/86) gave their spouse as their collateral. The relationship of the remaining 51 collaterals was: 15.8% friends (n = 19), 12.5% children (n = 15), 6.7% someone at the subject's place of work (n = 8), 4.2% mothers (n = 5), 1.7% siblings (n = 2) and 1.7% others (n = 2). The average time between subject and collateral interviews was about 2 1/3 months (mean = 70.8 ± 65.5 days, median = 49 days, range = 6 to 392 days). As expected, spouses were in contact with subjects significantly more often than were nonspouse collaterals. In the 12 months before and after the subjects' recovery, 92.8% and 95.7%, respectively, of spouses had daily contact with subjects compared to 35.3% and 41.2%, respectively, of nonspouses (12 months before: $\chi^2 = 44.7$, 1 df, $p < .0001$; 12 months after: $\chi^2 = 43.6$, 1 df, $p < .0001$).

Interviews with subjects were intensive, used a variety of data gathering techniques and covered several areas related to the subjects' past drinking and related problems as well as how they recovered without treatment. Because the questionnaires, their administration and their psychometric characteristics have been presented in detail elsewhere (Sobell et al., 1992a, 1993), only aspects of the questionnaires relevant to the present study will be reviewed here: (1) *Drinking data* for resolved subjects were collected for the 6 years prior to their resolution using a modified version of the Lifetime Drinking History (LDH) (Skinner and Sheu, 1982; Sobell et al., 1988). (2) *Life events* occurring in the year prior to the subject's resolution were probed using a standard life events checklist (Recent Life Change Questionnaire) which had 79 life events comprising 6 subscales (Rahe, 1975; Skinner and Sheu, 1982). Structured life events checklists are used by most researchers investigating illness onset (e.g., depression) because they have the advantage of providing all subjects (in the present case, all collaterals) with the same set of items. For all life events reported as occurring, subjects were asked if their collateral(s) would be aware of the event (i.e., yes/no). (3) *Alcohol-related consequences* ($n = 16$) that occurred prior to the resolution were assessed using questions previously asked in a major alcohol treatment study (Polich et al., 1981); 5 of the 16 consequences were dependence-related (shakes, hallucinations, delirium tremens, seizures, morning drinking) and 11 were psychosocial in nature (e.g., legal, work, marital, social). (4) Subjects were asked about 17 *post recovery maintenance factors* (e.g., "During the first year when you resolved your drinking problem, did support from your friends specifically help you avoid a relapse to problem drinking?") used in an earlier study (Tuchfeld, 1981).

Collateral interviews paralleled the subjects' interviews, but were less intense. Collaterals were asked to confirm information related to five aspects of the subjects' drinking history and recovery. Areas of collateral inquiry relevant to the present study and the time frame over which collaterals were asked questions were: (1) date (year and month) of the subject's alcohol problem recovery; (2) out of 16 possible alcohol-related consequences, how many the subject experienced prior to his/her recovery; (3) average number of drinks per month and average number of drinking days per month in the 6 years preceding the subject's recovery; (4) out of 17 possible events or situations, how many helped the subject avoid a relapse (i.e., maintain his/her recovery) within the first 12 months; and (5) total number of years the subject had had an alcohol problem. Collaterals were also asked to indicate whether the subjects experienced any of 79 possible life events in the year prior to their recovery. Collaterals' answers to life events were recorded as yes, no, or don't know. At the end of their interview, collaterals were asked to use a 4-point scale (no idea, largely guessing, only a general sense of what was happening, and fairly sure) to indicate how confident they were about the different types of information they had provided (e.g., drinking prior to the resolution, length of drinking problem, consequences). They were also asked how frequently they had been in contact with the subject during the different time periods over which information was sought (e.g., 6 years preceding the resolution; 1 year before the resolution; 3 years after the resolution). Frequency of collateral contact was coded on a monthly basis as daily or almost daily, less than daily but at least once a week, one to two times per month, less than once a month, and no contact.

Clinical study

Because the present results do not derive from alcohol abusers in treatment, results from a recent clinical study are included for comparison. The clinical study was an evaluation of the effectiveness of guided self-change treatment (Sobell and Sobell, 1993) delivered in a group versus individual format (Sobell and Sobell, 1995). Based on the findings from the present study, the clinical trial included the procedure of asking collaterals to rate their confidence in the outcome data they provided. Only the results from the clinical study that are related to the findings of collateral confidence ratings are reported here. Although the clinical study included both alcohol and drug abusers, for comparison purposes only results from the alcohol abusers are included. Subjects and collaterals were followed up at 6 months posttreatment. Questions that were asked of subjects and collaterals and for which the collaterals gave a confidence rating were posttreatment alcohol-related consequences, posttreatment drinking (Sobell and Sobell, 1992) and a subjective evaluation of the subjects' current alcohol problem (i.e., no problem, very minor, minor, major, or very major problem). As in the present study with recovered alcohol abusers, after collaterals provided information about the subjects' functioning, they were asked to evaluate their confidence in the information they reported using a 3-point scale (1: I am confident that what I reported is mostly correct; 2: I am confident that some of what I reported is correct, but there are some things that I am not sure of; 3: I have no idea whether what I reported is correct; I basically was guessing.

An important point regarding the present clinical findings is that, as a result of the study described in this article, our subsequent clinical studies have asked subjects to provide names of collaterals who they felt would have the *best* knowledge of their posttreatment functioning. Consequently, almost all of the collaterals in the clinical study reported being confident that most of what they reported was correct: *Drinking data*, 94.9% (148/156) of the collaterals said that the information they reported was "mostly correct" (only 8 collaterals—2 spouses and 6 nonspouses—indicated that "some" of their information was correct); *alcohol consequences and alcohol problem evaluation*, 93.7% (177/189) of the collaterals said that the information they reported was "mostly correct" (only 12 collaterals—2 spouses and 10 nonspouses—indicated that "some" of the information they

reported was correct). No collateral reported having "no idea" about the information he/she provided. Because there were insufficient numbers to analyze the data by confidence ratings, agreement between subject-collateral pairs for this clinical sample was limited to looking at spouses versus nonspouses.

Results

For the main study, subjects' and their collaterals' answers to questions about the subjects' drinking histories and recoveries were as follows: Mean (± SD) years drinking problem (n = 108): subjects = 13.4 ± 7.9, collaterals = 11.3 ± 8.1 (t = 2.60, 107 df, $p < .05$); mean drinks/drinking day in the 6 years prior to the recovery (n = 99): subjects = 13.9 ± 9.2, collaterals = 11.7 ± 7.0 (t = 2.73, 98 df, p = .008); mean percent days drinking prerecovery (n = 99): subjects = 78.5 ± 25.0, collaterals = 75.9 ± 29.4 (t = 1.11, 98 df, $p > .05$); mean number of prerecovery alcohol-related consequences (n = 120): subjects = 8.5 ± 2.7, collaterals = 6.5 ± 3.1 (t = 7.23, 119 df, $p < .001$); mean number of postrecovery maintenance factors (n = 120): subjects = 5.5 ± 3.2, collaterals = 5.1 ± 2.7 (t = 1.09, 119 df, $p > .05$). Thus, for all variables the subjects reported a slightly worse picture (i.e., more of a drinking problem) of their behavior than did their respective collaterals. For three of the five variables, t tests revealed that subjects' reports differed significantly from their collaterals' reports.

Table 1 displays collaterals' confidence ratings for the reports they provided about different aspects of the subjects' drinking and related behaviors. The collaterals were asked to make these ratings after they had provided the information about the subjects' behavior. As can be seen, most collaterals reported being fairly sure about the subjects' recovery maintenance factors, alcohol problem recovery date and prerecovery alcohol-related consequences. However, when collaterals were asked about more specific drinking-related information such as when the subject's drinking problem began and the amount and frequency of the subject's drinking prior to the resolution they displayed less certainty. Close to a fifth of all collaterals who reported the number of years the subject had a drinking problem (19.6%) and the amount of alcohol the subject consumed per day (18.2%) later said they either had "no idea" or were "largely guessing" about the information they had provided.

For the recovered group, outliers identified at the 99.9% confidence level through the method specified by Bowerman and O'Connell (1990) were removed from the data set. This affected only two variables—year drinking problem started (n = 2, fairly sure spouse-subject pairs), and drinks per drinking day (n = 1, fairly sure nonspouse-subject pair). When the outliers were excluded the correlations increased as follows: years drinking problem started: from .59 to .76 for spouse collaterals and from .77 to .89 for fairly sure collaterals; mean drinks per drinking day: from .25 to .29 for nonspouse collaterals and from .59 to .66 for fairly sure collaterals. The outliers for these two variables were excluded from subsequent analyses.

Figure 1 reflects agreement between subject and collateral reports by collateral confidence ratings for six drinking variables. Depending on the nature of the variable, percentage exact item agreement or Pearson correlation coefficients were used to compare subjects' and collaterals' reports. Exact item agreement was used to compare subject and collateral reports for variables that contained multiple items as correlations can be artificially inflated by consistency between total number of events, even though the specific events reported could differ (i.e., if a subject reported two events and the collateral reported two entirely different events, a correlation would result in perfect agreement whereas exact item agreement would be 0%). For five of the six variables in Figure 1, better agreement occurred between subjects and their collaterals who said they were fairly sure of the information they provided compared to subjects and their collaterals who said they were unsure or less certain of the information they provided. For three of the six variables this difference was statistically significant (year drinking problem started: z = 4.03, $p < .001$; alcohol-related consequences: t =3.3, 118 df, p = .001; confirmed recovery date: t = 2.5, 118 df, $p < .03$).

Although findings for the clinical sample could not be analyzed in terms of collaterals' confidence ratings (see Method section), they were amenable to analyses comparing collateral types. Figure 2 displays agreement between subject and collateral reports for spouses and for nonspouses for both the recovered group and the clinical sample for differ-

TABLE 1. Collaterals' confidence ratings for information they provided about the subjects' drinking history and recovery data, in percent

	Collateral confidence rating		
Variable (N)	Fairly sure (n)	Only a general sense of what was happening (n)	No idea/ largely guessing (n)
Recovery maintenance factors (120)	87.5 (105)	5.8 (7)	6.7 (8)
Alcohol problem recovery date (120)	85.8 (103)	10.8 (13)	3.3 (4)
Prerecovery alcohol-related consequences (120)	74.2 (89)	15.8 (19)	10.0 (12)
Number of years had drinking problem (107)[a]	55.1 (59)	25.2 (27)	19.6 (21)
Prerecovery drinks/drinking day (99)	45.4 (45)	36.4 (36)	18.2 (18)

[a]One collateral failed to provide a confidence rating for this variable.

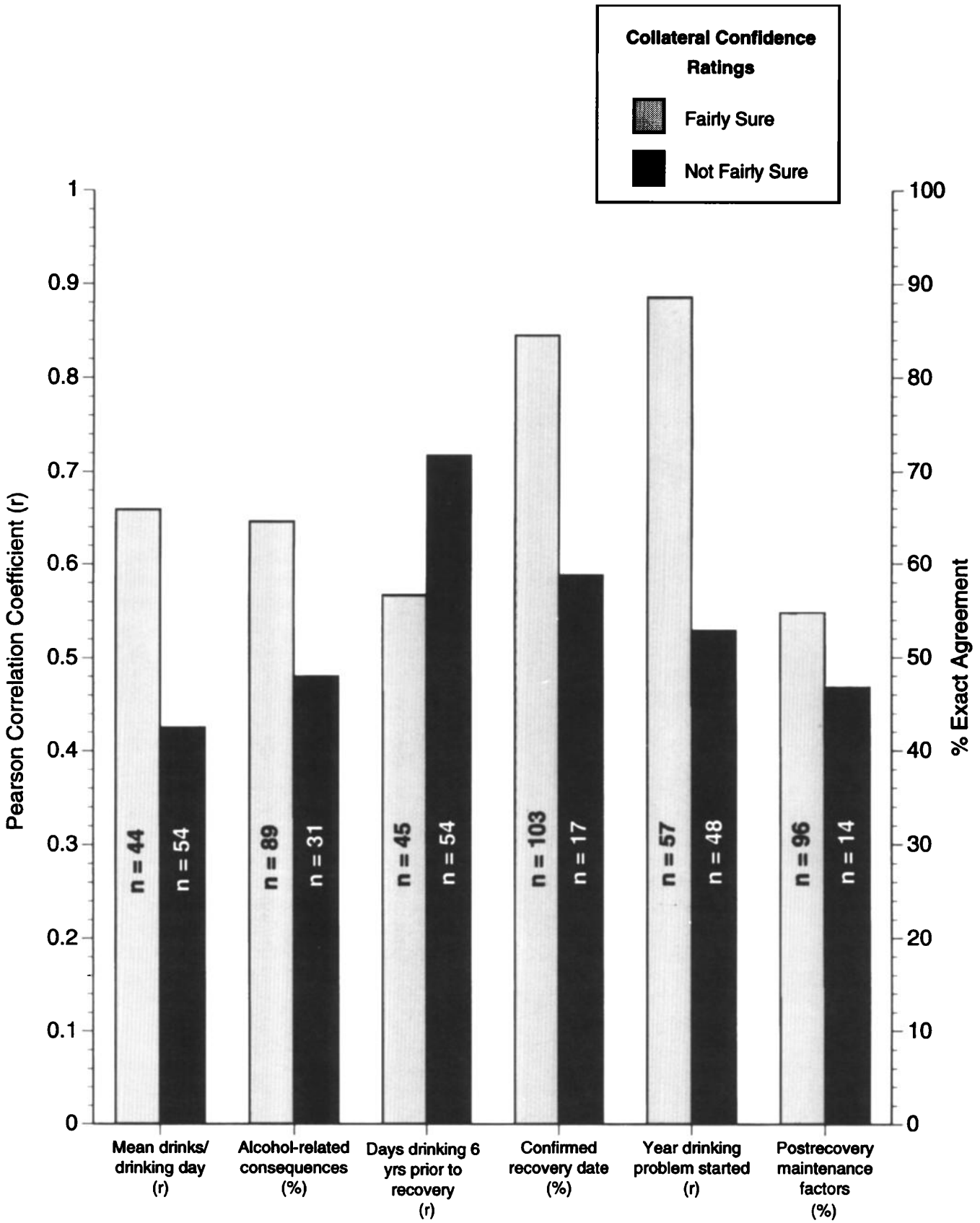

FIGURE 1. Agreement between subject and collateral reports by collateral confidence ratings for recovered subjects for six alcohol-related variables

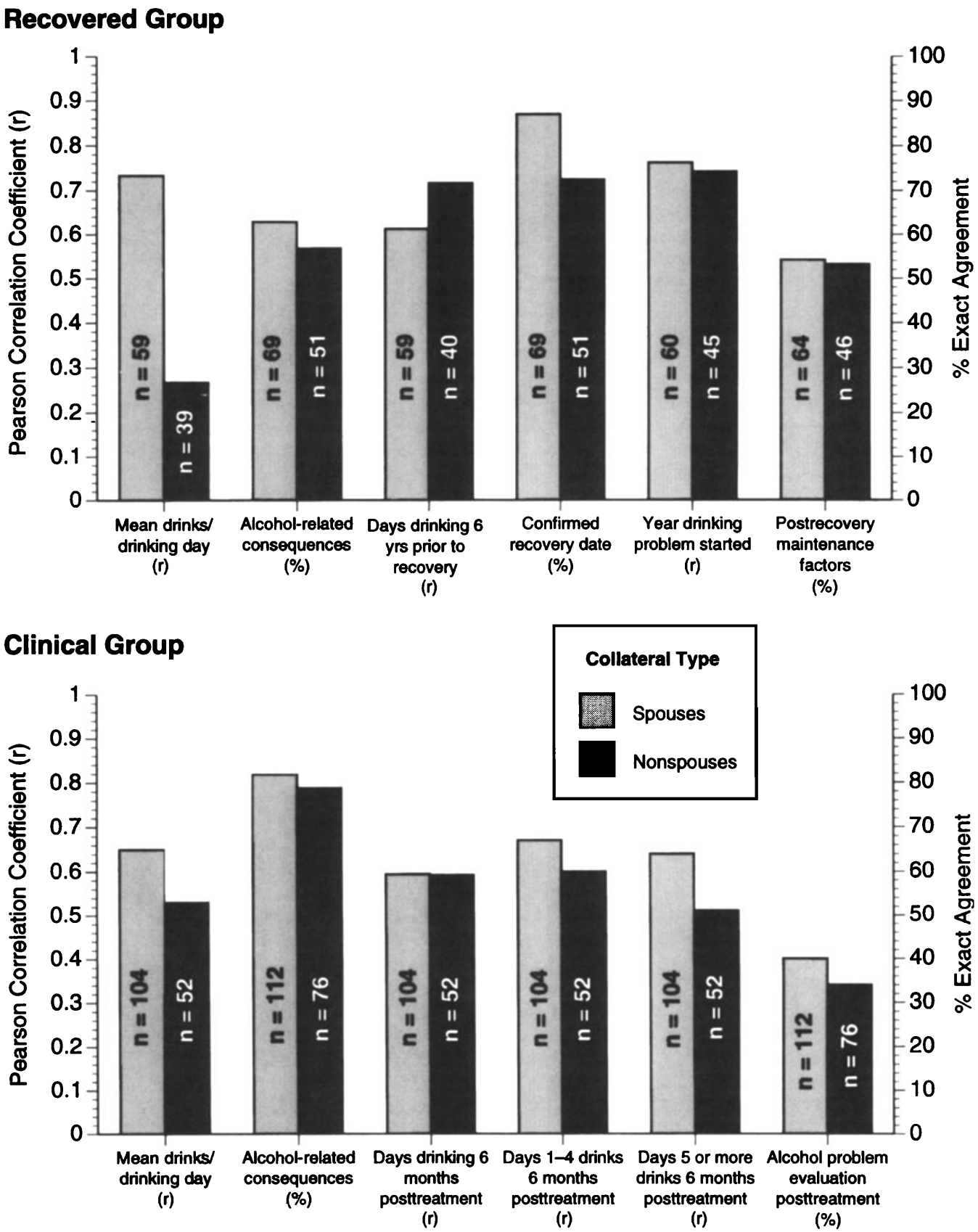

FIGURE 2. Agreement between subject and collateral reports by collateral type for two groups of subjects for different alcohol-related variables

TABLE 2. Agreement between subjects and different collateral types for the subjects' drinking history and recovery data

Variables	All collaterals		Fairly sure spouses		Other collaterals		
	% Exact agreement or *r*	*N*	% Exact agreement or *r*	*N*	% Exact agreement or *r*	*N*	*p* values[a]
Alcohol problem recovery date	80.8	120	88.7	62	72.4	58	=.025[b]
Recovery maintenance factors	53.7	110[c]	55.0	59	52.3	51	NS
Prerecovery alcohol-related consequences	60.3	120	66.4	55	55.1	65	=.013[d]
Days drinking	.65	99	.56	30	.69	69	NS
Number of years had drinking problem[e]	.75[f]	105	.83[f]	37	.72	68	NS
Prerecovery mean drinks/drinking day	.54	98	.85	30	.40	68	<.001[g]

[a]NS = not significant.
[b]t = 2.27, 118 df.
[c]Because 10 subjects reported no maintenance factors, agreement with collaterals could not be calculated.
[d]t = 2.52, 118 df.
[e]One collateral failed to provide a confidence rating for this variable.
[f]Through the approach specified by Bowerman and O'Connell (1990), two outliers were identified at the 99.9% confidence level. When the two fairly sure spouse outliers were excluded the *r* increased from .61 to .83 for the fairly sure spouses and from .68 to .75 for all collaterals.
[g]z = 3.64.

ent drinking variables. As with Figure 1, agreement is shown as either percentage exact item agreement or Pearson correlation coefficients. All but one of the graphs in Figure 2 show a similar pattern of results. There was greater agreement between reports of subjects and spouse collaterals than between reports of subjects and nonspouse collaterals. For the recovered group this difference was statistically significant for two of the six variables (mean drinks per drinking day: z = 3.01, p = .003; confirmed recovery date: t = 2.0, 118 df, p = .046).

Based on data in Figures 1 and 2 an attempt was made to determine what types of collaterals would yield the best agreement with the subjects' reports. Table 2 displays agreement between subjects and three different collateral types: all collaterals, spouse collaterals who were fairly sure of the information they provided, and other collaterals. As reflected in Table 2, the highest agreement between subject and collateral reports for all variables occurred for spouses who were fairly sure of the information they provided, and this difference between sources was statistically significant for three of the six variables.

Life events: A nondrinking variable

For all life events (LEs) occurring in the year prior to the subjects' recovery, subjects reported that their collaterals would not be aware of 10.9% (134/1,234) of the events the subjects reported experiencing, and collaterals reported that they did not know about 6.3% (78/1,234) of the events they were being asked about. For the current analysis, life events were separated into two categories based on classifications from a previous study (Toneatto et al., 1992): (1) Objective: events that are amenable to verification or are clearly defined (e.g., Did you get married? Did a relative move in with you? Did you receive a promotion at work?), and (2) Subjective: events that are not amenable to verification or are not clearly defined (e.g., Did you experience trouble at work with your boss? Did you experience a change in arguments with your spouse?). When concordance between subject (S) and collateral (C) reports was calculated based on life events (LEs) that should be known to collaterals (i.e., LEs reported known by C and LEs S said C would know about), a significantly (χ^2 = 6.4, 1 df, $p < .05$) greater percentage of objective events (58.1%) than subjective events (40.6%) were reported by both the subjects and their collaterals. Although not significant ($p > .05$), when all events were included, the percentage of events consistently recalled between subjects and collaterals was still higher for objective (47.5%) than subjective (36.1%) events.

Discussion

This study found that collaterals' certainty ratings about the information they provided about the subjects' behavior greatly affected the agreement between the two reporting sources. Agreement between subject and collateral reports was less for collaterals who were not sure of the information they had provided. Generally, the nature of the relationship between subjects and collaterals also influenced agreement between the two sources. The best agreement occurred for spouses who reported being fairly sure of the information they reported. This finding is consistent with reports from alcohol abusers who believe that their spouses provide more accurate reports than most other collaterals (Sobell et al., 1992b). Although the difference between spouse and nonspouse collaterals was statistically significant in only two cases, the fact that the agreement between subjects and spouse collaterals was equal to or exceeded agreement between subject and nonspouse collaterals in 11 of 12 cases (Figure 2) strongly suggests that spouses should be the preferred collateral when available. This finding takes on further significance as it derives from studies of both nontreated recovered alcohol abusers and alcohol abusers currently in treatment.

While agreement between spouse/collaterals was higher than for nonspouse/collaterals, this relationship varied

depending on the nature of the information sought. For example, mean drinks per drinking day evidenced the greatest difference between spouse and nonspouse collaterals (nonspouses and recovered alcohol abusers: $r = .29$; spouses and recovered alcohol abusers: $r = .73$), whereas for other variables (e.g., number of alcohol-related consequences, maintenance factors) the agreement between spouse/subject was only slightly better than between nonspouse/subject pairings. For the recovered group, for one variable, drinking days, the pattern of results was counter to that observed for all other variables. For this variable, nonspouse collaterals (Figure 2) and collaterals who were not fairly sure (Figure 1) showed better agreement with their respective subjects than did collaterals who were spouses and collaterals who were fairly sure of the information they provided. This pattern appears to be a result of seven subject-collateral pairs whose data were so discrepant (this determination was made using the more liberal 95% confidence level based on the method specified by Bowerman and O'Connell, 1990) that when they were removed the correlations increased greatly, particularly for spouse and fairly sure collaterals (spouses: from .61 to .76; nonspouses: from .72 to .77; fairly sure: from .57 to .80; not fairly sure: from .72 to .75).

Consistent with other studies in the alcohol field (Maisto and Connors, 1992), alcohol abusers in this study reported a slightly worse picture of their drinking and related behaviors than their respective collaterals. Inspection of both data sets (see Table 1), however, clearly shows that both the subjects and collaterals were reporting that the subjects once had a significant alcohol problem and then recovered.

The life events results parallel earlier studies showing that, when collaterals are unaware of some proportion of the events reported by subjects, their reports are less likely to agree with those of the subjects (Neugebauer, 1983; Yager et al., 1981). Also consistent with several other studies is the fact that agreement between subject and collateral reports was higher for objective than subjective events (Funch and Marshall, 1984; Neugebauer, 1983; Sobell et al., 1990; Toneatto et al., 1992). When life events reported as not known by collaterals were excluded, agreement for both objective and subjective events increased and further increased when events that subjects said their collaterals would not know about were removed. These findings suggest that, when collaterals are asked about life events in alcohol abusers' lives, they should be given the option of saying "yes," "no" or "not aware." In the present study, this procedure resulted in 10.6% and 4.5% better agreement between subjects and collaterals for objective and subjective events, respectively. Subjects also reported that collaterals would be unaware of 13% of the life events they (i.e., the subjects) experienced, a figure twice as high as that reported by psychiatric patients and their collaterals (Neugebauer, 1983).

Although agreement statistics were generally lower for reports of life events than for many of the drinking-related measures, this was not unexpected for two reasons. First, collaterals were asked about 79 possible life events compared to, for example, 16 types of consequences or 17 maintenance factors. Thus, the sheer volume of events to be compared was considerably greater. Second, the fact that agreement for nonalcohol-related questions (i.e., life events) was lower than for alcohol-related questions parallels findings from an earlier study with alcohol abusers in treatment (Sobell and Sobell, 1981). One possible reason that subject-collateral agreement is higher for alcohol-related events than for nonalcohol events is because of the importance or salience of such events to the collateral.

Lastly, some collaterals in this study appeared to be responding to demand characteristics of the interview. For two variables, close to one-fifth of the collaterals provided specific information to the interviewer, and later, when asked how confident they were about this information, they said they either had "no idea" or were "largely guessing." These results support the suggestion that subject and collateral reports of the subject's drinking should be considered as "two independent estimates of a variable that may have no flawless measure" (Maisto and Connors, 1992).

In summary, although most would agree that collateral reports are useful and easy to obtain (Maisto and Connors, 1992), this study clearly demonstrated that some collaterals are more certain than others in what they report and consequently their reports show better agreement with subjects' reports. Based on the results of this study, spouses of both recovered alcohol abusers and alcohol abusers in treatment appear to be at least as good as other collaterals for corroborating alcohol abusers' self-reports. Thus, it makes sense that the first choice as collaterals should be spouses who report being fairly sure of the information they provide. Also, it is recommended that, when collateral reports are used to confirm alcohol abusers' self-reports, collaterals should be asked to rate their confidence in the information they provide. Reports by collaterals who say they are "uncertain" or "don't know" about the information they provide should be excluded from analyses of subject-collateral agreement.

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