# 5 Natural Recovery from Alcohol and Drug Problems: A Methodological Review of the Literature from 1999 through 2005

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### Introduction

Recognition of the importance of the self-change or natural recovery phenomenon with addictive behaviors has led to a considerable increase in research in recent years. The first major review article on this topic, published in 2000 by Sobell, Ellingstad, and Sobell, reviewed 38 studies of natural recovery that covered almost 40 years of research.

The review by Sobell et al. (2000) discussed a significant number of methodological limitations in addition to future directions for research. The studies, reviewed through 1998, contain the following methodological problems: (a) a lack of demographic data and a family history of substance use, (b) insufficient information about the severity and patterns of addictive behaviors prior to recovery, (c) minimal information on maintenance factors related to the recovery process, (d) limited research on the validity of participants' self-reports, (e) fewer drug (e.g., cocaine, marijuana, polysubstance) than alcohol studies, (f) little information on the stability and patterns of behavioral change associated with natural recovery, and (g) a dearth of cross-cultural studies evaluating cultural determinants of self-change.

Despite the continuing number of published studies documenting the process of self-change with substance abusers (Cohen, Feinn, Arias, & Kranzler, 2007; Dawson et al., 2005; Sobell et al., 2000), there are some who still express doubts about the reliability and stability of recovery for those who report low-risk drinking (Vaillant, 2005).

The intent of this chapter is to review the natural recovery literature from the time of the last major review (Sobell et al., 2000). This chapter reviews studies

related to natural recovery of addictive behaviors from 1999 through 2005. As in the previous review, this chapter focuses on the methodology of these articles and the extent to which recent research has addressed the recommendations made by Sobell and her colleagues. Lastly, this chapter will discuss future research directions on natural recovery.

# Method

For purposes of maintaining continuity, this chapter reviews studies published from the time of the last review using similar inclusion criteria and variables for analysis. Drawing on the suggestions from the last review (Sobell et al., 2000), new variables were added to the present review.

Studies were identified by (a) searching the Medline and Psychlit databases, (b) reviewing the reference sections of published natural recovery articles, and (c) contacting key researchers in the field. The search and identification criteria included articles published from 1999 through 2005 (the study by Ellingstad, Sobell, Sobell, Eickleberry, & Golden, published in 2006, was included in this review because it was in press in 2005) that contained the term *natural recovery* and other terms reflecting the same phenomenon (e.g., *self-quitters, self-change, natural recovery, natural resolution, spontaneous recovery, spontaneous remission, untreated remission*) for alcohol and other drugs (excluding nicotine).

Once the initial search was completed, all articles had to meet the following inclusion criteria: (a) English-language publications, (b) published or in press in peer-reviewed journals, (c) contained original results (reviews and articles based on case studies or personal stories were excluded), (d) participants must have had a history of alcohol or other drug abuse, and (e) had to include rates of natural recovery.

Twenty-two studies met the criteria for inclusion in the current review. Although primary reference sources provided the majority of the data for the studies, other articles reporting on the same study were consulted when necessary. Primary and secondary references for the studies reviewed are listed in the Appendix.

The following variables were assessed: (a) *participant characteristics*: sociodemographic characteristics during recovery and at the time of the study (e.g., gender, age, education, employment, marital status) and substance use history variables (e.g., years of consumption, diagnosis, problem severity, use of alcohol and other drugs); (b) *study characteristics*: number of participants recovered without formal treatment or help, recruitment and data-collection methods, type of data obtained (i.e., quantitative, qualitative, or mixed), country, reimbursements for interviews, type of study design, recording of interviews, use of control groups, relapse rates, definition of treatment, use of different recovered groups and types of comparison among these groups, and

recovery length criterion; (c) *variables related to change*: length of recovery, type of recovery (i.e., abstinence or low-risk use), prior use of treatment or self-help programs, reasons for change, maintenance factors supporting the change, and reasons for not entering treatment; and (d) *study limitations*.

The data were analyzed using SPSS 12.0. Statistical analyses were descriptive and included frequencies and percentages of reported variables in the articles. The results, presented in six tables, compare the present findings with those in the previous review by Sobell et al. (2000).

#### Results

Table 5.1 shows the percentage of reviewed articles that assessed a variety of study variables. In the current study, the majority (81.8%) of natural recoveries involved alcohol, followed by cannabis (31.8%) and other drugs (e.g., LSD, methamphetamines, sedatives; 27.3%). In the first review, the majority (75%) of natural recoveries also included alcohol.

The mean number (SD) of respondents in the reviewed studies increased from 140.9 (399.2) in the first review to 383.0 (791.3) in the current review. This increase is attributable to several large survey studies. The present review calculated the mean (SD) number of respondents for each substance: (a) alcohol: 215.2 (532.7), (b) heroin: 28.6 (24.0), (c) cocaine: 151.7 (131.6), (d) cannabis: 456.8 (830.8), and (e) polysubstance use: 3 (0.0) respondents.

In the current review, 59% of all studies were conducted in the United States and 23% in Canada, followed by 18% in European countries. The primary recruitment method (45.5%) was surveys, almost a two-fold increase from the past review.

| Variable  | Current review $(N=22)$ | Sobell et al. review $(N=40)$ |
|---|-------------------------|-------------------------------|
| Substance <sup>a</sup>                                      |                         |                               |
| Alcohol   | 81.8 (18)               | 75.0 (30)                     |
| Heroin  | 22.7 (5)                | 22.5 (9)                      |
| Cocaine   | 22.7 (5)                | 7.5 (3)                       |
| Cannabis  | 31.8 (7)                | 2.5 (1)                       |
| Other drugs   | 27.3 (6)                | 12.5 (5)                      |
| Mean (SD) number of natural recovery respondents $(n = 34)$ | 383.0 (791.3)           | 140.9 (399.2)                 |
| Range   | 12-3177                 | 5-2456                        |
| Mean (SD) number of alcohol respondents $(n = 15)$          | 215.2 (532.7)           |                               |
| Range   | 7–2117                  |                               |
| Mean (SD) number of heroin respondents $(n = 3)$            | 28.6 (24.0)             |                               |
| Range   | 4–52                    |                               |

TABLE 5.1. Percentage (n) of articles that assessed different study variables.

| Variable                           | Current review $(N=22)$ | Sobell et al. review $(N=40)$ |
|------------------------------------|-------------------------|-------------------------------|
| Mean (SD) number of cocaine        | 151.7 (131.6)           |                               |
| respondents $(n=4)$                |                         |                               |
| Range                              | 26–333                  |                               |
| Mean (SD) number of cannabis       | 456.8 (830.8)           |                               |
| respondents $(n=6)$                |                         |                               |
| Range                              | 25-2143                 |                               |
| Mean (SD) number of polydrug       | 3.0 (0.0)               |                               |
| respondents $(n=1)$                |                         |                               |
| Range                              | 3                       |                               |
| Mean (SD) number of other          | 243.2 (305.6)           |                               |
| illicit drug respondents $(n=5)$   |                         |                               |
| Range                              | 21–766                  |                               |
| Method of recruitment <sup>b</sup> |                         |                               |
| Advertisements                     | 40.9 (9)                | 38.5 (15)                     |
| Snowball                           | 9.1 (2)                 | 28.2 (11)                     |
| Surveys                            | 45.5 (10)               | 23.1 (9)                      |
| Other                              | 27.3 (6)                | 17.9 (7)                      |
| Incentives/payments                | 31.8 (7)                | 20.0 (8)                      |
| Method of assessment <sup>c</sup>  |                         |                               |
| Self-report                        | 100.0 (24)              | 100.0 (40)                    |
| Collaterals                        | 18.2 (4)                | 30.0 (12)                     |
| Type of information                |                         |                               |
| Quantitative                       | 72.7 (16)               |                               |
| Mixed (quantitative + qualitative) | 27.3 (6)                |                               |
| Country                            |                         |                               |
| USA                                | 59.1 (13)               | 59.1 (22)                     |
| Canada                             | 22.7 (5)                | 16.2 (6)                      |
| Europe                             | 18.2 (4)                | 18.9 (7)                      |
| Cross-cultural                     | 0.0 (0)                 |                               |
| Definition of treatment            | 68.2 (15)               | 82.5 (33)                     |
| Study design                       |                         |                               |
| Retrospective                      | 77.3 (17)               |                               |
| Longitudinal                       | 22.7 (5)                |                               |
| Interviews recorded                | 18.2 (4)                | 32.5 (13)                     |
| Control groups included            | 18.2 (4)                | 17.5 (7)                      |
| Relapse rates assessed             | 9.1 (2)                 | 5.0 (2)                       |
| Use of multiple recovered groups   | 63.3 (14)               | 57.5 (23)                     |
| Type of recovery comparisons       |                         |                               |
| Intersubstances                    | 22.7 (5)                |                               |
| Treated versus untreated           | 13.6 (3)                |                               |
| Abstinence versus nonabstinence    | 4.5 (1)                 |                               |
| Other                              | 22.7 (5)                |                               |

<sup>a</sup> Some studies assessed several substances.

<sup>b</sup> Some studies used several methods.

<sup>c</sup> Some studies used several methods.

In addition, advertisements were used for participant recruitment in 40.9% of all studies. The "snowball" technique seems to have lost its popularity since the last review (9.1% in the current study compared to 28.2% in the 2000 review).

There was an increase in the percentage of participants who were paid or given incentives for participating in the studies, rising from 20% in the first review to 31.8% in the present review. In spite of some of the criticisms associated with paying respondents (e.g., validity of the information), this has proven to be an effective recruitment method. Self-report continues to be the main method of data collection for both pre- and post-recovery information. In this regard, several studies have shown that naturally recovered substance abusers provide accurate self-report (Secades-Villa & Fernández-Hermida, 2003; Sobell, Agrawal, & Sobell, 1997; Sobell et al., 2000). The percentage of studies using collaterals' reports to check or verify participants' responses has decreased from 30% to 18%.

In the current review, most researchers reported their results using quantitative data (72.7%). There are slight variations between studies regarding the definition of treatment, but in the present review, treatment generally included the following: Alcoholics Anonymous or other self-help groups; psychological or psychiatric treatment; and advice from medical practitioners, hospitals, or detoxification centers. Attendance of two or three self-help group meetings or one treatment session where the respondents felt that it did not help their recovery were not counted as treatment. Fewer recent studies (68.2%) provided a definition of treatment compared with 82.5% in the first review.

In the previous study, 5% of the reports assessed stability of recovery compared with 9.1% in the current review. The retrospective design continues to be widely used (77.3%) in natural recovery studies. There has also been a slight increase from 57.5% to 63.3% regarding the inclusion of multiple recovery groups. In addition, the most common comparison (23%) has been made between different substances. Comparisons between treated and nontreated respondents were reported in 14% of the studies, while comparative evaluations between abstinence and nonabstinence outcomes accounted for 4% of all studies.

Table 5.2 shows the percentage of articles reporting different sociodemographic characteristics for respondents. Gender (86.4%) and age at the time of the interview (72.7%) continue to be the most widely reported sociodemographic variables. However, in the current review, there has been an increase over the previous study in the reporting of the following variables: (a) occupation (54.5%)

| Variable                    | Current review $(N=22)$ | Sobell et al. review $(N=40)$ |
|-----------------------------|-------------------------|-------------------------------|
| Age at recovery             | 27.3 (6)                | 22.5 (9)                      |
| Age at interview            | 72.7 (16)               | 62.5 (25)                     |
| Education at recovery       | 13.6 (3)                | _                             |
| Education at interview      | 63.6 (14)               | 45.0 (18)                     |
| Gender                      | 86.4 (19)               | 75.0 (30)                     |
| Occupation at recovery      | 22.7 (5)                | 10.0 (4)                      |
| Occupation at interview     | 54.5 (12)               | 47.5 (19)                     |
| Marital status at recovery  | 27.3 (6)                | 7.5 (3)                       |
| Marital status at interview | 59.1 (13)               | 45.0 (18)                     |
| Ethnic group                | 59.1 (13)               | 37.5 (15)                     |

TABLE 5.2. Percentage (n) of studies reporting participant sociodemographic characteristics.

versus 47.5%), (b) educational level (63.6% versus 45%), (c) marital status (59.1% versus 45%), and (d) reference to ethnic origin (59.1% versus 37.5%). The percentage of studies reporting sociodemographic variables for respondents when interviewed versus at the time of recovery continues to be much higher in both reviews.

The profile of respondents in the recent natural recovery studies is quite similar to that of the previous review: (a) mean (SD) age of respondents when interviewed was 41.4 (7.5) years versus 40.5 (9.1) in the past review and (b) males comprised the majority in both studies.

Table 5.3 shows the percentages of studies that report data for substance use history and recovery variables. In the current review, almost 78% of the studies reported problem severity and more than 85% reported a history of use compared with 60% and 47.5%, respectively, in the first review. Reporting the length of respondents' substance use history prior to recovery increased from 45% to 68.2%. Multiple drug use, including nicotine, was reported in 72.7% of all studies. In the majority of these reports, the second drug was nicotine. In both reviews, abstinence recoveries were provided in all studies. The reporting of low-risk drinking increased from 78.6% to 86.6% for all studies.

Table 5.4 presents descriptive statistics for problem recovery length and substance use characteristics for the studies in the two reviews. The data in Table 5.4 are similar for both reviews. For example, the mean (SD) number of years respondents had a problem prior to their recovery was 12.8 (4.9) years in the current study and 10.9 (4.0) years in the first review. The mean minimum required recovery length for studies in both reviews was similar, averaging 1.2 years in the present review and 1.4 in the previous review. The mean (SD) length of recovery among respondents was 8.0 (2.7) years in the current review and 6.3 (2.3) years in the first review. Both reviews suggest that respondents' recoveries are very stable and enduring. The percentages of studies reporting abstinent and low-risk recoveries in both reviews were very similar.

Table 5.5 shows the percentage of studies reporting reasons for change, maintenance factors, and barriers to treatment for the two reviews. Reasons for recovery

| Variable                                | Current review ( $N=22$ ) | Sobell et al. review $(N=40)$ |
|---|---------------------------|-------------------------------|
| Problem length prior to recovery        | 68.2 (15)                 | 45.0 (18)                     |
| Problem severity or consequences        | 77.3 (17)                 | 60.0 (24)                     |
| Prerecovery substance use               | 86.4 (19)                 | 47.5 (19)                     |
| Minimum recovery length required        | 77.3 (17)                 | 80.0 (32)                     |
| Recovery length                         | 36.4 (8)                  | 60 (24)                       |
| Type of alcohol recovery <sup>a</sup>   |                           |                               |
| Abstinence                              | 100.0 (18)                | 100.0 (28)                    |
| Low-risk drinking                       | 86.6 (13)                 | 78.6 (22)                     |
| Prior treatment or self-help attendance | 100.0 (22)                | 90.0 (36)                     |
| Use of multiple drugs                   | 72.7 (16)                 | _                             |

TABLE 5.3. Percentage (n) of studies reporting substance use history and recovery variables.

<sup>a</sup> Alcohol studies only; current review, n = 15; Sobell et al. review, n = 28.

| Variable  | Current review     | Sobell et al. 2000 review |
|---|--------------------|---------------------------|
| Mean (SD) problem length prior to<br>recovery (years) | 12.8 (4.9)         | 10.9 (4.0)                |
| Range   | 6.0–19.7           | 5.0-17.0                  |
| Mean (SD) minimum recovery length required (years)    | 1.2 (0.7)          | 1.4 (0.8)                 |
| Range   | 0.2–3.0            | 0.5-3.3                   |
| Mean (SD) recovery length (years)                     | 8.0 (2.7)          | 6.3 (2.3)                 |
| Range   | 3.0-11.5           | 0.4–11.7                  |
| Type of alcohol recovery <sup>a</sup>                 |                    |                           |
| Abstinence (range)                                    | 56.6% (29.9%-100%) | 59.7% (3.0%-100.0%)       |
| Low risk drinking (range)                             | 43.4% (0.0%-70.1%) | 40.3% (0.0%-97.0%)        |

TABLE 5.4. Problem recovery length and substance use characteristics for studies in the two reviews.

<sup>a</sup> Alcohol studies only; current review, n = 15; Sobell et al. review, n = 28.

were reported for close to two thirds of all respondents in both reviews (current review, 63.6%; past review, 62.5%). Overall, while similar reasons for change were reported in both reviews, the percentage of studies reporting these reasons were different. In the review by Sobell et al. (2000), health was the most frequently reported reason for change (42.5%), while in the present review the most frequently reported reason was family-related (54.5%), followed closely by health (50%) and financial matters (50%).

In the current review, maintenance factors were reported by close to two-thirds (59.1%) of all studies, whereas in the first review, they were reported in only 45% of the studies. In the current study, the two most widely mentioned factors contributing to maintenance continue to be social support and family support, with 54.5% and 45.5%, respectively. These two factors were also the highest in the first review. The current studies also found avoidance of substance-use situations reported by over one third of all respondents (36.4%), followed closely by self-control (31.8%) and religion (34.6%) as important factors influencing maintenance.

Finally, in terms of barriers to treatment, a low percentage of studies reported similar difficulties in both reviews (current, 13.6%; past, 22.5%). The barrier most frequently reported in the current review was the belief that treatment was unnecessary or that the substance use problem was not very serious (13.6%), followed by 9.1% for all other barriers.

In the first review, although Sobell et al. (2000) discussed several study limitations, they did not assess whether studies actually reported any limitations. The current review examined articles for limitations reported by authors (see Table 5.6). A large number (95.5%) of the studies reported at least one limitation. The two most common limitations (54.5%) concerned retrospective designs (e.g., reliability of information, difficulties in distinguishing cause and effect) and the generalization of results to addictive behaviors and extrapolation of results to substance abuse treatment. Close to one quarter (27.3%) of the studies reported concerns about bias when recruiting respondents through advertisements.

| Variable                                  | Current review ( $N=22$ ) | Sobell et al. review $(N=40)$ |
|---|---------------------------|-------------------------------|
| Reasons for recovery                      | 63.6 (14)                 | 62.5 (25)                     |
| Family-related                            | 54.5 (12)                 | 22.5 (9)                      |
| Health-related                            | 50.0 (11)                 | 42.5 (17)                     |
| Finance-related                           | 50.0 (11)                 | 30.0 (12)                     |
| Negative personal effects                 | 45.5 (10)                 | 30.0 (12)                     |
| Related to significant other              | 45.5 (10)                 | 25.0 (10)                     |
| Social-related                            | 45.5 (10)                 | 20.0 (8)                      |
| Legal issues                              | 40.9 (9)                  | 20.0 (8)                      |
| Religious reasons                         | 40.9 (9)                  | 17.5 (7)                      |
| Viewed substance use differently          | 36.4 (8)                  | 27.5 (11)                     |
| Work-related                              | 31.8 (7)                  | 15.0 (6)                      |
| Fear of consequences                      | 22.7 (5)                  | 12.5 (5)                      |
| Lifestyle changes                         | 18.2 (4)                  | 15.0 (6)                      |
| Change in living arrangements             | 13.6 (3)                  | 15.0 (6)                      |
| Seeing negative effects of use on others  | 13.6 (3)                  | 10.0 (4)                      |
| Maintenance factors                       | 59.1 (13)                 | 45.0 (18)                     |
| Social support/change in social group     | 54.5 (12)                 | 32.5 (13)                     |
| Significant other/family                  | 45.5 (10)                 | 27.5 (11)                     |
| Avoidance of substance use situations     | 36.4 (8)                  | 17.5 (7)                      |
| Religion                                  | 36.4 (8)                  | 15.0 (6)                      |
| Self-control or will power                | 31.8 (7)                  | 15.0 (6)                      |
| Positive personal attributes              | 31.8 (7)                  | 12.5 (5)                      |
| Development of non substance-             | 27.3 (6)                  | 20.0 (8)                      |
| related interests                         |                           |                               |
| Work-related                              | 27.3 (6)                  | 17.5 (7)                      |
| Health                                    | 22.7 (5)                  | 12.5 (5)                      |
| Lifestyle change                          | 22.7 (5)                  | 17.5 (7)                      |
| Finances                                  | 22.7 (5)                  | 12.5 (5)                      |
| Change in living arrangements             | 13.6 (3)                  | 15.0 (6)                      |
| Barriers to treatment                     | 13.6 (3)                  | 22.5 (9)                      |
| Belief that treatment is not necessary    | 13.6 (3)                  | 12.5 (6)                      |
| or problem not severe enough              |                           |                               |
| Stigma-labeling associated with treatment | t 9.1 (2)                 | 20.5 (8)                      |
| Negative beliefs or experiences in        | 9.1 (2)                   | 15.0 (6)                      |
| relation to treatment                     |                           |                               |
| Privacy, not wanting to share problems    | 9.1 (2)                   | 10.0 (4)                      |
| Financial costs                           | 9.1 (2)                   | 5.0 (2)                       |
| Inconvenience                             | 9.1 (2)                   | 5.0 (2)                       |

TABLE 5.5. Percentage (n) of studies reporting reasons for change, maintenance factors, and barriers to treatment.

TABLE 5.6. Percentage (n) of the 22 studies in the current review that reported limitations.

| Variable   |           |
|--|-----------|
| Reported at least one limitation                                 | 95.5 (21) |
| Limitations of retrospective reports                             | 54.5 (12) |
| Generalization and extrapolation of the findings                 | 54.5 (12) |
| Recruitment bias   | 27.3 (6)  |
| Superficiality of analyses                                       | 18.2 (4)  |
| Scarcity of information on drug use history and problem severity | 18.2 (4)  |
| Sample size  | 9.1 (2)   |

In this regard, one study (Rumpf, Bischof, Hapke, Meyer, & John, 2000) found differences in dependence and recovery length between respondents recruited through advertisements and those recruited in general population surveys.

#### **Discussion and Conclusions**

Since the last major review, there has been a substantial increase in the number of published studies of naturally recovered substance abusers. Over 7 years (1999–2005), 22 studies met the same criteria used in the first review (Sobell et al., 2000), where 38 articles were published during 38 years (1960–1997). Changes from the 2000 review to the current are not very significant, except for the substantial increase in the number of studies on natural recovery, as well as the increase in number of studies examining drugs other than alcohol.

One of the central aspects of research in the natural recovery field is the analysis of the reasons for change and factors influencing maintenance of change. Notable among the reasons for change is a concept referred to as a "cognitive appraisal" of the "pros and cons" of continuing to use versus stopping or changing one's use (Klingemann et al., 2001; Sobell et al., 2001). Recovery is thought to occur when people who have engaged in a cognitive evaluation of their substance use see the "cons" outweighing the "pros." Unfortunately, at this time, it is unclear why this occurs at a particular moment in a person's life.

In the present review, family-related reasons were the most frequently reported reasons for changing compared with health in the first review. The decrease in the number of studies providing health-related reasons for change from the first to the current review may relate to the increase in the number of drug studies.

One of the objectives of this review was to evaluate the extent to which the changes proposed by Sobell et al. (2000) for natural recovery studies have been implemented. With respect to sociodemographic characteristics at the time of recovery, there has been a slight increase in the percentage of studies reporting such variables, but this is still very small compared with the percentage reporting these variables at the time of the interview. This needs to change as variables such as age, occupation, and educational level may be crucial to the initiation of the self-change process. In past studies, now classic in the substance abuse field (Cahalan, 1970), age has played an important role in natural recoveries. Specifically, age and age-related responsibilities (e.g., starting a job, having children) have provided explanations for self-change (i.e., maturation of the individual; Drew, 1968; Winick, 1962). With respect to gender, natural recoveries are still higher among males, which is not surprising given the higher percentage of males with substance abuse problems. In a recent natural recovery study (Bischof, Rumpf, Hapke, Meyer, & John, 2000), it was reported that while no significant differences were found, women tended to report keeping their alcohol problem hidden more as compared with men. The women also perceived less pressure and social support for stopping drinking. For these reasons, gender cannot be overlooked as an important variable in the recovery process (Bischof et al., 2000).

There has also been an increase in the reporting of past substance use, in addition to studies evaluating natural recovery from drugs other than alcohol. The exploration of recovery from multiple substances, including nicotine, may serve to improve knowledge of this phenomenon (Sobell, Sobell, & Agrawal, 2002). While several studies have examined the prevalence of natural recovery from illicit drugs (Cunningham, 1999; Price, Risk, & Spitznagel, 2001), they have not examined patterns of multiple drug use and recovery. Information about whether recovery from multiple substances occurs at the same time, or whether recovery from one substance predicts cessation or continued use of other substances is currently lacking. Studies in this area are sorely needed.

This review demonstrates, as have almost all natural recovery studies of alcohol and drug abusers, that people who recover naturally have less serious substance abuse histories compared with those who seek treatment (Bischof, Rumpf, Hapke, Meyer, & John, 2002; Carballo et al., under review; Chitwood & Morningstar, 1985; Cunningham, Lin, Ross, & Walsh, 2000; Sobell, Cunningham, & Sobell, 1996; Sobell et al., 2000, 2001; Weisner, Matzger, & Kaskutas, 2003). In addition, the consequences of substance abuse and the deterioration produced by alcohol and drug use appear to occur less in naturally recovered individuals than in those participating in treatment studies. This, however, does not imply that the severity profiles for those who change on their own are the same. For example, in a recent study severity of addiction has been used as one of the variables for establishing types of natural recovery from alcohol abuse (Bischof, Rumpf, Hapke, Meyer, & John, 2003). In this study, types of natural recovery were established on the basis of a cluster analysis. The first type corresponded to cases of low dependence, few alcohol-related problems, and little social support. The second was characterized by high dependence, many alcohol-related problems, and moderate social support. The third was defined by high social support, low dependence, and few alcoholrelated problems. This group was also characterized by late alcohol problem onset (Bischof et al., 2003).

With regard to the development of more detailed analyses of the processes and determinants of self-change (Sobell et al., 2000), some researchers have recently begun to use novel qualitative types of data analysis. While the majority of studies continue to use quantitative information, more researchers are using computer programs to evaluate qualitative data from taped interviews. Using qualitative data, researchers can assess aspects of natural recovery (e.g., reasons for change, maintenance factors) more thoroughly. However, qualitative analyses are often thought of as complementary to quantitative data analyses (Ellingstad et al., 2006; Hanninen & Koski-Jännes, 1999; Koski-Jännes, 2002; Sobell et al., 2001).

Sobell et al. (2000) also recommended that studies use additional data sources (e.g., official reports or interviews with collaterals) to corroborate respondents' self-reports. The current review found that the percentage of studies presenting such data is still small (less than one third of all studies). The previous review also discussed the importance of asking respondents about maintenance factors related to recovery. The present review reported an increase in the percentage of studies reporting such factors. Especially important among the maintenance factors found

in the current review were those relating to social and family support received by the respondents. In both reviews, this factor was reported most commonly by respondents as helping them maintain their change. In this regard, the increase of social capital and the improvement of social functioning may play important roles in the success of the recovery process (Granfield & Cloud, 2001).

Natural recovery studies with cocaine, cannabis, and polysubstance abusers were identified in the Sobell et al. (2000) review as another area needing to be addressed. While there has been a slight increase in the number of studies focusing on substances other than alcohol, the vast majority still involve alcohol abusers. Additional natural recovery studies are needed to learn about the process of self-change with other drugs and whether the processes and determinants of natural recovery with alcohol abusers are similar for other drugs. As discussed in other chapters of this book, natural recoveries occur in addictive behaviors unrelated to substance use (e.g., pathological gambling, eating disorders). Future research needs to examine rates of these behaviors and what drives this change process (Carballo-Crespo, Secades-Villa, Fernández-Hermida, García-Rodríguez, & Sobell, 2004; Hodgins & el-Guebaly, 2000).

The 2000 review recommended setting a minimum recovery criterion of 5 years because this interval reflects stable recoveries. While the majority of studies in the current review used at least a 1-year recovery criterion, the mean number of years of recovery for respondents was about 7 years. Thus, although the stricter criterion of 5 years was not used, a majority of the respondents would be considered stably recovered. Because the stability of the recovery process has only been assessed in a few studies (Rumpf, Bischof, Hapke, Meyer, & John, 2006; Sobell, Sobell, & Kozlowski, 1995), more longitudinal research is needed. Finally, given the limitations referred to in the studies themselves, future research should: (a) use longitudinal designs to minimize difficulties with retrospective approaches when possible, (b) carry out more in-depth analyses of the interview data using, for example, qualitative data analysis methods, (c) use large sample sizes, (d) minimize recruitment biases through the use of multiple recruitment methods, (e) compare different types of recoveries (e.g., treated versus nontreated) and different substances (e.g., cocaine versus cannabis), and (f) evaluate variables that are thought to be associated with the process of self-change (e.g., age, gender, problem severity). Last, future research needs to include cross-cultural designs that contribute to an understanding of the differences and similarities between natural recoveries in different cultures and countries. Based on this suggestion in the first review, two studies of natural recovery with Spanish-speaking respondents are being conducted in Spain and the United States. These studies are evaluating the processes and determinants that affect self-change, and comparing the findings with those obtained from Anglo-Saxon respondents. As in previous studies, Spanish self-changers have a less severe addiction history than substance abusers who recover through treatment (Carballo et al., under review).

In summary, having analyzed natural recovery studies with alcohol and drug abusers published from 1999 through 2005, and having compared these results with those of Sobell et al. (2000), it is clear that recent natural recovery studies

have not addressed most of the issues raised in the first review and have failed to implement the proposed design changes, with the exception of a few studies. Therefore, it is strongly urged that researchers conducting studies in this area incorporate the proposed recommendations from the current review as well as those discussed in the first review.

*Acknowledgment*. This work was supported by grant MCYT-03-BSO-00732 (Ministerio de Cienciay Tecnología – Ministry of Science and Technology, Spain).

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