

Measuring Alcohol Consumption in the United States

Methods and Rationales

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1. INTRODUCTION

This chapter lays out the methods of measuring alcohol consumption that have been used in survey studies of the general population of the United States and discusses their development and rationales. As was already clear by 1970 (Room, 1970*b*), there are two major strategies for asking respondents about their current pattern of drinking: (1) asking them to list all recent drinking occasions; and (2) asking them to summarize their current patterns. In general terms, British and Scandinavian researchers have followed the first strategy, while North American researchers have followed the second (see Room, 1977, and Auth and Warheit, 1982/83, on U.S. traditions). Recently, some European researchers have challenged U.S. traditions of measuring drinking patterns, arguing in favor of the "recent occasions" approach (Duffy, 1982, 1984; Alanko, 1984). On the other hand, a recent empirical analysis of Finnish data concluded that "for most descriptive purposes" on a population level, "the choice of measurement procedure is irrelevant," and furthermore that an approach in the U.S. tradition may least underestimate consumption among the heaviest drinkers (Simpura, 1987). These discussions and analyses, along with recent discussions by U.S. researchers (e.g., Greenfield, 1986; Knupfer, 1987*a*, 1987*b*), do remind us of "the extremely complicated structure of the concept of alcohol consumption" (Alanko, 1984, p. 209) and of the need for new developmental work taking account of the different national traditions. As Alanko concludes, our "awareness of the problems" in existing approaches "should stimulate further research leading to improved methodology" (p. 224).

In sketching the history and development of measurements of the amount of drinking in North American surveys, this chapter focuses on surveys of the general adult

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population, although, as noted below, two other quantitative research traditions—studies of teenage drinking and studies of amount of drinking among clinical alcoholics—have intersected with the tradition of adult drinking practices surveys. Our attention is on the logic and procedures of measurement and of aggregation for reporting; readers are referred elsewhere for general reviews on the validity of measures of alcohol consumption (Pernanen, 1974, Midanik, 1982).

2. NORTH AMERICAN APPROACHES TO MEASURING AMOUNT OF DRINKING

Methodological discussions of the best way to measure drinking patterns and problems date back at least to Pearl's discussion (1926, pp. 69–92) of the importance of separating steady daily drinkers from occasional heavy drinkers. Until the 1950s, however, surveys of the general population confined themselves to simple distinctions between drinking and abstaining (e.g., Gallup, 1972; Billings, 1903) or by frequency of drinking (Riley and Marden, 1947). The crucial step in moving to a fuller measurement of alcohol consumption was to start asking also about amount of drinking on an occasion or in a given period of time.

In this sense, the modern North American tradition of questions on amount of drinking starts with Straus and Bacon's path-breaking study (1953) of *Drinking in College*. Straus and Bacon's approach to measuring patterns of drinking was to ask, for each type of beverage (wine, beer, and spirits), the frequency of drinking and the average amount ordinarily consumed at a sitting (see Fig. 1). A similar method was adopted in the Iowa general-population studies of Mulford and associates, starting in the late 1950s (Fitzgerald and Mulford, 1982; their 1979 survey specified the time period covered to the last 30 days). Variations on this method have been widely used (Fig. 2).

Meanwhile, a separate tradition, starting with the San Francisco Bay Area studies of the California Drinking Practices Study in the early 1960s (Knupfer et al., 1963; Knupfer and Room, 1964), asked, for each beverage type, the frequency of drinking and then the proportion of drinking occasions on which one or two drinks, three or four

Now I'd like to ask you about your use of alcoholic beverages in just *the past month*.

About how often did you drink any wine in the past month?

More often than every day/every day/5 or 6 days a week/3 or 4 days a week/1 or 2 days a week/less often than weekly/did not drink any/can't remember.

(If at all in last month): Think of all the times you had wine in the past month. When you drank wine, how much did you usually have *at one time, on the average*, during this past month? ____ glasses (PROBE IF NECESSARY: If you're not sure, just your best guess will do)/can't remember.

(Same question sequence repeated for "beer" and for "gin, whiskey, vodka, mixed drinks, things like that" — then abbreviated to "liquor.")

Figure 1. The Straus and Bacon "usual quantity" questions: 1986 National 6 version. This version, like many versions coming in the wake of NIAAA's treatment evaluation studies (Polich and Orvis, 1979; Armor and Polich, 1982), uses a 1-month time base. The original Straus and Bacon and Mulford and Miller studies used an implicit 1-year time base.