

# Alcohol use and problems among older women and men: A review

## Introduction

Alcohol use and abuse amongst older people is an increasingly important area to understand. In many western societies the proportion of older people has increased profoundly and will continue to increase in the future. Availability of alcoholic beverages has increased (Österberg & Karlsson 2002) and the social acceptability of women's drinking has increased in many societies (Bloomfield et al. 2005). The baby boomer generation (those 55 and older) are drinking more than their mothers in Europe (Bloomfield et al. 1999). Even if the prevalence of problem-drinking remains constant, an increase in the absolute numbers of problem drinkers can be expected. Female predominance in the older no longer limits the extent of alcohol problems.

Researchers in the 1960s and 1970s were convinced that alcohol abuse was rare among older adults in general (Atkinson & Ganzini 1994), and almost nonexistent in older women. Even in the 1990's, some researchers and clinicians alike widely believed that alcohol use disorders among this age group did not merit the attention given to drinking and drug abuse among younger adults (Bucholz et al. 1995). In contrast, others discussed in detail personal, interpersonal and social-environmental factors that could increase older women's risks of problem drinking (Wilsnack et al. 1995).

Relatively little research has been undertaken and our knowledge remains limited. We need to enrich and deepen our knowledge and our understanding of the phenomenon. If

the ageing population and the increasingly wide use of alcohol are two trends clearly set to continue, it is essential that these issues are fully understood, so that future services can be adequately planned.

This paper reviews the existing literature, concentrating on work centred on persons over 55. In the literature search the following data basis were searched: ASSIA, EBSCO, ETOH, PSYCINFO, Social Services Abstracts, Science Direct and Sociological Abstracts<sup>1</sup>. The focus is on the gendered nature of substance use, but as important is to compare the alcohol use patterns between genders and age groups. The paper reviews drinking patterns, the vulnerability of older persons to the effects of alcohol, age-related physiological changes, and also the benefits associated with alcohol use. In addition, suggestions for future research will be made.

### **Drinking patterns among women and men**

Men drink more than women both nationally and globally (Wilsnack & Wilsnack 1997; Wilsnack et al. 2000; Room et al. 2002; Holmila & Raitasalo 2005). A recent review of all the survey-based studies of drinking habits in 15 European countries showed that women's proportion of all alcohol consumed did not exceed 32% in any European country (Simpura & Karlsson 2001).

The European comparative research project entitled the EU BIOMED II programme is based on existing surveys of drinking patterns and problems with an emphasis on women's drinking, and involves nine European countries (Bloomfield et al. 1999). The project examines and analyses gender differences in drinking

patterns with regard to age (Ahlström et al. 2001). The datasets varied in using an age range of 32–43 years to a range as wide as 18–75 years.

Women's levels of alcohol consumption were closely related to those of men in every society. Age was closely related to drinking in every society, but the patterns were different in the different societies. In Finland, Sweden and Switzerland, women's monthly consumption of alcohol decreased with age, but remained stable in The Netherlands, Germany, France and Italy. In most study countries, the women consuming the greatest amount were aged 40–49. No single age group of women consumed more than any age group of men.

Age per se did not predict the drinking patterns of women. Historical effects seemed to be of great importance. In societies in which there has been little or no alcohol control policy, monthly alcohol consumption and heavy drinking increased by age. This is different from the findings for North America, where it has become conventional knowledge that drinking decreases by age (Midanik & Clark 1994; Geenfield & Midanik & Rogers 2000). In study countries where women had grown up in a time characterised by a strong restrictive alcohol control policy, they did not seem to increase their alcohol consumption when getting older, even if the alcohol control policy had been liberalized (as in Finland and Sweden).

In another comparative research project based on existing surveys of gender, culture and alcohol problems (Bloomfield et al. 2005), a comparison was made between the drinking habits and current differences in drinking cultures across 16 different regions and countries (Mäkelä et al. 2005).

Across all different aspects of drinking examined, surprisingly few systematic differences between age groups in gender ratios were found. It seems that even though many aspects of drinking change with age, women's and men's changes occur so that their relative standing remains stable, not strongly or systematically changing either with changing generations or with the life cycle. The only dimension of drinking where a clear age pattern of gender differences was observed was the frequency of heavy episodic drinking. Young men and women seem to be somewhat less different in heavy episodic drinking than older age groups.

Breslow, Faden and Smothers (2003) have estimated the gender-specific prevalence of alcohol consumption in Americans aged 65 and older in 5-year age categories up to the age of 85 using data from three nationally representative cross-sectional surveys. Their results were consistent with previous studies showing strong gender differences in alcohol consumption by older persons. In the increasingly older age groupings of women, moderate drinking decreased, while heavier drinking remained stable. Conversely, in the increasingly older age groupings of men, moderate drinking remained stable, while heavier drinking decreased. The authors speculated that a gender differential in survival may partially explain the result. Moderate drinking was connected to social life. Change in the social status (widowhood) decreased moderate drinking.

The major strength of the comparison of the three surveys was that all were nationally representative covering essentially the same population. The survey assessing drinking during one year was more

likely to identify infrequent and occasional drinking and potentially produce higher estimates of drinking prevalence than that which assessed drinking during 30 days, but only in women. Moderate drinking may be a relatively sporadic pattern in women and a more stable pattern in men. Therefore among women, surveys capturing drinking in the preceding year may produce more accurate estimates than surveys capturing drinking over a shorter time.

The prevalence of using at least 5 units of alcohol per week increased in all age groups of Finnish older women (aged 59 to 79) from the mid-1980s to the early 2000's (Sulander 2005). The increase was especially significant among the 65 to 74 year-old age group.

In another study, Breslow and Smothers (2004) pooled five years of cross-sectional National Health Interview Survey data in order to estimate by gender and age the quantity and frequency of alcohol consumption among current drinking Americans aged 60 and older. Regarding quantity, there was a cross-sectional shift toward lower volume consumption, while in respect of frequency; there were cross-sectional shifts to both less frequent and more frequent drinking. There was little correlation between quantity and frequency. Heavy episodic drinking decreased among increasingly older age groups of current drinkers. The findings emphasise the importance of considering drinking quantity and frequency independently in studies of alcohol consumption by older people.

Wiscott, Kopera-Frye and Begovic (2002) have studied binge drinking in later life, comparing young-old (aged 65–74) and old-old (aged 75 and older) Ameri-

cans. There were no differences between young-old and old-old adults in weekly alcohol consumption or reported alcohol-related consequences. However, older men and women did differ in the likelihood of engaging in binge drinking episodes (5+ drinks at any time during the past 3 months). Older men, regardless of age, reported more binge episodes within the preceding three months (33% of the men in the sample reported a recent binge episode) than older women (11%). Women were 19.7 times less likely to engage in binge drinking than men, while old-old adults were 15.7 times less likely to engage in binge drinking relative to young-old adults.

Ganry et al. (2001) have assessed the prevalence of alcohol consumption by non-institutionalised older (75 years or older) French women. The prevalence of moderate drinkers was 12% (11–29g/day=1–3 drinks) and heavy drinkers 2.5% (3+ drinks). The sample did not include alcoholic women. They found very significant associations between higher alcohol use and higher educational level and higher family income. According to their findings women with the heaviest alcohol consumption were significantly taller, heavier, tended to be smokers and to have more physical activity and a better health status. The proportion of widows decreased significantly with increasing levels of drinking.

Graham et al. (1996) have studied the addictive behaviour of Canadian adults aged 65 and older. Those women younger than 75 compared to those older than 75 were more likely to drink, consumed more drinks per drinking day and consumed 5+ drinks more often during the preceding 12 months. In addition, the use of de-

pressant medication was higher in the 75+ group than among those younger than 75. However, depressant medication was not used *instead* of alcohol and drinkers were not less likely to use depressant medications. Using alcohol and using depressant medications did not follow an either-or pattern. Those who used both alcohol and depressant medications were more likely to engage in addictive styles of alcohol use. Current use of tranquilizers and sleeping pills was related to self-reported alcohol problems, despite no relationship between the use of tranquilizers and/or sleeping pills and the quantity or frequency of drinking.

## Vulnerability of older persons to the effects of alcohol

### ■ Psycho-social changes

A recent study of moderate and heavy drinking among older adults found that study participants reported poorer psychosocial functioning with increasing daily alcohol consumption (Graham & Schmidt 1999).

Anttila et al. (2004) have investigated alcohol drinking, subsequent risk of mild cognitive impairment, and dementia among the Finnish population aged 65–78, using a longitudinal study design. Alcohol drinking showed a U-shaped relation with the risk of mild cognitive impairment and dementia in old age: both non-drinkers and frequent drinkers having a higher risk than infrequent drinkers. Risk of dementia increased with increasing alcohol consumption only in those individuals carrying the apolipoprotein e4allele. The authors conclude that cognitive status is the result of both genetic and environmental factors.

Brennan, Schutte and Moos (1999) have studied reciprocal relations between stres-

sors and drinking behaviour in a three-wave panel study of Americans between the ages of 55 and 65. Among women, increased chronic health stressors (such as cancer, diabetes, high blood pressure) and increased physical ailments diagnosed by a doctor more than a year ago (such as difficulty with breathing, back pain) predicted a decrease of alcohol consumption. Among men, increased financial stressors decreased alcohol consumption. In addition, among women, an increase in negative life events and heightened financial stressors foreshadow later drinking problems. The authors concluded that there appears to be a benign feedback cycle in which moderate consumption and stressors tend to reduce each other.

Epidemiological studies have clearly demonstrated that comorbidity between alcohol use and psychiatric symptoms is common in younger age groups. Less is known about comorbidity between alcohol use and psychiatric illness in later life. A few studies have indicated that a combined diagnosis with alcoholism is an important negative predictor of outcomes among the older.

#### ■ Age-related physiological changes

Age-related physiological changes make the older vulnerable to alcohol-related problems. Women of all ages have less lean muscle mass than men, making them more susceptible to the effects of alcohol. In addition, there is an age-related decrease in lean body mass versus total volume of fat, and the resultant decrease in total body mass increases the total distribution of alcohol and other mood-altering chemicals in the body (Blow & Barry 2002).

Liver enzymes that metabolize alcohol

become less efficient with age and central nervous system sensitivity increases with age for both genders. In sum, compared with younger adults, and with older men, older women have an increased sensitivity to alcohol (Blow & Barry 2002).

### Benefits associated with alcohol

There is growing evidence that, among otherwise healthy adults, especially middle-aged adults, moderate alcohol use may reduce risks of cardiovascular disease, some dementing illnesses and some cancers. In addition, it has been demonstrated that older people living in the community (not in institutions) who consume moderate amounts of alcohol have fewer falls, greater mobility, and improved physical functioning when compared with non-drinkers (Blow & Barry 2002).

Moderate drinking (from 1 to 14 drinks per week) in older men and women has been shown to be associated with decreased mortality. Two drinks per day have increased high-density lipoprotein (HDL) cholesterol levels, translating to a 16.8 per cent decreased risk of coronary heart disease. Additionally, a study of women with coronary heart disease found that older age, alcohol consumption, and prior estrogen use were all independently associated with higher HDL cholesterol (Blow & Barry 2002). An American study using national survey data from a subsample of women aged 55–90 found that women drinkers reported better general health than did abstainers (Vogeltanz et al. 1999).

In an Italian 3-year follow-up study of a large population of older people aged 70–75 and living at home showed that lack of social activities and ties influenced

mortality regardless of self-reported health and habits, e.g. alcohol consumption (Rozzini et al. 1991). Lack of social contacts and supports may lead to disease and mortality by altering known biological risk factors, e.g., blood pressure, serum cholesterol and by influencing health behaviour, e.g., alcohol consumption.

Among older persons, abstinence may often be related to various health problems. The links between moderate alcohol use and health must thus be interpreted with particular carefulness.

### **Future research needs**

Older people are not a homogenous group. Therefore it is of great importance to investigate different age groups of older people. In different societies there are age cohorts that are especially interesting, due for example to changes in alcohol control policies. There is a need for a greater understanding of cohort differences.

There are methodological issues that are of great importance. For instance, Breslows' and Smother's (2004) results showed how important it is to study alcohol consumption of older people separately by frequency and quantity. Another study (Breslow et al. 2003) showed how important it is to survey the preceding year's drinking rather than a shorter period when investigating women in order to get accurate estimates. In addition, there are no studies which would allow us to differentiate the impact of ageing from that of cohort. This would require a longitudinal study design.

Investigating substance use among older people, especially among women should include prescribed drugs as well, preferably all medication in use. Changes in the

body that occur with age, coupled with the high number of prescription medications taken by elders, demands more research on social and heavy drinking in later life. Very little has been done, but there are some detailed analysis. For instance, Graham and Wilsnack have (2000) suggested that the link between alcohol problems and use of tranquilizing drugs needs to be investigated further. We need to know whether people adjust their drinking patterns to fit changing metabolic and health needs when they age.

In addition, we need to better understand how social activities and ties influence older people's drinking patterns and problems. Is alcohol the direct cause of the observed cardioprotective effects or is it due to some other social and lifestyle factors that co-associate with certain drinking habits? Social activities and ties may act, directly and indirectly, as protective factors. And is the mechanism independent of the gender?

Why is the link between stressors and drinking behaviour not identical for women and men? In addition, we need to clarify the mechanism by which moderate alcohol drinking could preserve cognitive function.

There is a further need for randomized trials with large sample sizes to obtain a complete picture of the most effective education and prevention methods. Which are the most effective short interventions and treatment venues (e.g. primary care, in-home, senior centre, senior housing)?

Future research on the treatment of alcohol problems in older women need to investigate the feasibility and development/integration of gender-specific alcohol services for older women and men

and alternative care models and to develop age- and gender-appropriate assessment and outcome measures (Blow 2000). Until now, treatment services are accustomed to deal mainly with young and middle aged populations. They will increasingly have to adopt to meet the needs of the older population as well.

There is an important need for more epidemiologic information on alcohol consumption by older women and men: pat-

terns, risks, benefits, predictors and interactions with chronic diseases of aging and their treatment. Cross-sectional studies are needed, but they should be complemented with longitudinal studies as well as qualitative research.

**Salme Ahlström**, senior researcher  
Alcohol and Drug Research Group  
Stakes  
P.O.BOX 220  
FIN-00531 Helsinki  
E-mail: salme.ahlstrom@stakes.fi

## NOTE

- 1) The search was done with the following basic profile: ((elderly OR older adult\* OR senior citizen\* OR retired) AND (alcohol consumption OR alcohol use OR alcohol abuse OR substance use OR substance abuse) AND (wom?n OR female\*)) NOT (treatment\* OR therap\*)

## REFERENCES

- Ahlström, S. & Bloomfield, K. & Knibbe, R. (2001): *Gender Differences in Drinking Patterns in Nine European Countries: Descriptive Findings*. *Substance Abuse* 22 (1): 69–85
- Anttila, T. & Helkala, E.-L. & Viitanen, M. & Käreholt, I. & Fratiglioni, L. & Winblad, B. & Soininen, H. & Tuomilehto, J. & Nissinen, A. & Kivipelto, M. (2004): Alcohol drinking in middle age and subsequent risk of mild cognitive impairment and dementia in old age: a prospective population based study. *British Medical Journal* 329 (4): 539–542
- Atkinson, R.M. & Ganzini, L. (1994): Substance abuse. In: Coffey, C.E. & Cummings, J.L. (eds.): *Textbook of Geriatric Neuropsychiatry*. Washington DC: American Psychiatric Press
- Bloomfield, K. & Ahlström, S. & Allaman, A. & Beck, F. & Helmerson-BermarkK, K. & Csemy, L. et al.: *Gender, Culture and Alcohol Problems: A Multi-National Study*. Project Final Report. Berlin, 2005
- Bloomfield, K. & Ahlström, S. & Allaman, A. & Choquet, M. et al: *Alcohol consumption and Alcohol problems among women in European countries*. Project final report. Berlin: Institute for Medical Informatics, Biostatistics & Epidemiology, Free University of Berlin, 1999
- Blow, F.C. (2000): *Treatment of Older Women With Alcohol Problems: Meeting the Challenge for a Special Population*. *Alcoholism: Clinical and Experimental Research* 24 (8): 1257–1266
- Blow, F.C. & Barry, K.L. (2002): *Use and Misuse of Alcohol Among Older Women*. *Alcohol Research & Health* 26 (4): 308–315
- Brennan, P. L. & Schutte, K.K. & Moos, R.H. (1999): *Reciprocal relations between stressors and drinking behaviour: a three-wave panel study of late middle-aged and older women and men*. *Addiction* 94 (5): 737–749
- Breslow, R.A. & Smothers, B. (2004): *Drinking Patterns of Older Americans: National Health Interview Surveys, 1997–2001*. *Journal of Studies on Alcohol* (March): 232–240
- Breslow, R.A. & Faden, V.B. & Smothers, B. (2003): *Alcohol Consumption by Elderly Americans*. *Journal of Studies on Alcohol*

- (November): 884–892
- Bucholz, K.K. & Sheline, Y. & Helzer, J.E. (1995): The epidemiology of alcohol use, problems, and dependence in elders. A review. In: Beresford, T.P. & Gomberg, E. (eds.): *Alcohol and Aging*. New York: Oxford University Press
- Ganry, O. & Baudoin, C. & Fardellone, P. & Dubreuil, A. & the EPIDOS GROUP (2001): Alcohol consumption by non-institutionalised elderly women: The EPIDOS Study. *Public Health* 115: 186–191
- Graham, K. & Schmidt, G. (1999): Alcohol use and psychosocial well-being among older adults. *Journal of Studies on Alcohol* 60: 345–351
- Graham, K. & Clarke, D. & Bois, C. & Carver, V. & Dolinki, L. & Smythe, C. & Harrison, S. (1996): Addictive behaviour of older adults. *Addictive Behaviours* 21 (3): 331–348
- Greenfield, T.K. & Midanik, L.T. & Rogers, J.D. (2000): A 10-Year National Trend Study of Alcohol Consumption, 1984–1995: Is the Period of Declining Drinking over? *American Journal of Public Health* 90 (1): 47–52
- Holmila, M. & Raitasalo, K. (2005): Gender differences in drinking: why do they still exist? *Addiction* 100: 1763–1769
- Midanik, L. & Clark, W. (1994): The demographic distribution of US drinking patterns in 1990: Description and trends from 1984. *American Journal of Public Health* 84: 1218–1222
- Mäkelä, P. & Gmel, G. & Grittner, U. & Kenedig, H. & Kunstche, S. & Bloomfield, K. & Room, R. (2005): Drinking and gender differences in drinking in Europe: A comparison of drinking patterns in European countries. In: Bloomfield, K. & Ahlström, S. & Allaman, A. & Beck, F. & Helmerson-Bermark, K. & Csemy, L. et al.: *Gender, Culture and Alcohol Problems: A Multi-National Study*. Project Final Report. Berlin
- Room, R. & Jernigan, D. & Carlini-Marlatt, B. & Gureje, O. & Mäkelä, K. & Marshall, M. & Medina-Mora, M.E. & Monteiro, M. & Parry, C. & Partanen, J. & Riley, L. Saxena, S. (2002): *Alcohol in developing societies: A public health approach*. Finnish Foundation for Alcohol Studies volume 26. Helsinki
- Rozzini, R. & Bianchetti, A. & Franzoni, S. & Zanetti, O. & Trabucchi, M. (1991): Social, functional and health status influences on mortality: consideration of a multidimensional inquiry in a large elderly population. *Journal of Cross-Cultural Gerontology* (6): 83–90
- Simpura, J. & Karlsson, T. (eds.) (2001): *Trends in Drinking Patterns in Fifteen European Countries, 1950 to 2000*. Helsinki: Stakes
- Sulander, T. (2005): *Functional ability and health behaviours: Trends and associations among elderly people, 1985–2003*. Publications of the National Public Health Institute A3/2005. Helsinki
- Vogeltanz, N.D. & Wilsnack, S.C. & Vickers, K.S. & Kristianson, A.F. (1999): Sociodemographic Characteristics and Drinking Status as Predictors of Older Women's Health. *The Journal of General Psychology* 126 (2): 135–147
- Wilsnack, S. & Vogeltanz, N. & Diers, L. & Wilsnack, R. (1995): Drinking and problem drinking in older women. In: Beresford T. & Gomberg, E. (eds.): *Alcohol and Aging*. New York, NY: Oxford University Press
- Wilsnack, S.C. (1991): Barriers to treatment for alcoholic women. *Addiction and recovery* 11: 10–12
- Wilsnack, R. W. & Vogeltanz, N.D. & Wilsnack, S.C. & Harris, T.R. (2000): Gender differences in alcohol consumption and adverse drinking consequences: cross-cultural patterns. *Addiction* 95 (2): 251–265
- Wilsnack R.W. & Wilsnack S.C. (1997): Introduction. In: Wilsnack, R.W. & Wilsnack, S.C. (eds.): *Gender and Alcohol: Individual and Social Perspectives*. New Brunswick, NJ, Rutgers Center of Alcohol Studies
- Wiscott, R. & Kopera-Frye, K. & Begovic, A. (2002): Binge Drinking in Later Life: Comparing Young-Old and Old-Old Social Drinkers. *Psychology of Addictive Behaviours* 16 (3): 252–255
- Österberg, E. & Karlsson, T. (2002): Alcohol policies in EU Member States and Norway in the second half of the twentieth century. In: Österberg, E. & Karlsson, T. (eds.): *Alcohol Policies in EU Member States and Norway: A collection of Country Reports*. Helsinki: Stakes.