

Trends in older people's drinking habits, Sweden 2004–2017

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Abstract

Aims: To examine if and how the drinking habits of older people aged 60–79 years in Sweden have changed during 2004–2017, with a specific focus on age groups and gender. **Data and measures:** A Swedish, nationally representative, repeated cross-sectional telephone survey covering the years 2004–2017 ($n = 225,134$) was used. Four aspects of alcohol consumption were investigated: proportion of alcohol consumers, frequency of drinking, amount per drinking occasion, and prevalence of heavy episodic drinking. **Results:** Three of the four measures investigated showed increases in alcohol consumption in the older age groups, particularly among women. Proportion of alcohol consumers, frequency of drinking and prevalence of heavy episodic drinking during the past month increased in most older age groups among both women and men, while the average amount per drinking occasion remained stable. Thus, total consumption in older age groups has increased over time, since the proportion of drinkers and the frequency of drinking has increased. Increases were particularly marked among women and in the age groups 70–74 and 75–79 years. In age groups below 60 years, these measures showed either declines or stability. **Conclusions:** There has been a steady increase in alcohol consumption across all the older age groups studied, which implies that the changing drinking habits are not isolated only to certain birth cohorts. Instead there seems to be a continuous shift in older people's drinking habits which can be expected to continue. However, these increases are from very low levels, and older people's drinking is still at modest levels. Public health implications must be studied further.

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Keywords

alcohol, older adults, quantitative, survey, Sweden, trends

As in most other developed countries, the Swedish population is getting older. Life expectancy has increased by 30 years since the early 1900s and the mortality rate among those aged 65 years and above in Sweden has declined by 21% in the last two decades. This has led to a gradual shift in the demographic composition of the population with an increased proportion of older people. At the same time, the birth cohorts now growing old are generally more active, have better health, and more financial resources compared to earlier cohorts (Agahi & Parker, 2005; Batljan et al., 2009; Parker & Agahi, 2013; Waern et al., 2014) – all of which are factors that enable and facilitate alcohol consumption at older ages.

However, researchers have only recently started to take an interest in the drinking habits of older age groups. Older age has previously been associated with steep reductions in drinking, and both the prevalence and volume of drinking have been modest among those aged 65 years and older (Britton et al., 2015). Several studies from the last decade have, however, suggested increased drinking levels among older people in Sweden (Kelfve et al., 2014; Ramstedt & Raninen, 2012), and that the trends in drinking among older people are at odds with those of younger people (Raninen et al., 2013). Among the oldest old (defined as 77+ years in the study by Kelfve et al., 2014), the frequency of alcohol consumption has increased in all subgroups of the population since the 1990s.

The increases in drinking among older people are usually attributed to a generational shift where the birth cohorts now growing old have lower abstinence rates and elevated consumption patterns compared to previous birth cohorts (Ahacic et al., 2012; Harkonen & Makela, 2011; Kraus, Tinghog, et al., 2015; Raninen et al., 2016). More recent cohorts have grown up and grown old in a more liberal

alcohol landscape, especially with regard to norms concerning drinking at older ages (Waern et al., 2014).

Although more recent cohorts of older people have a higher proportion of drinkers and drink more frequently compared to previous cohorts (Kelfve et al., 2014), the age pattern in the population has remained fairly similar. The proportion of drinkers decreases at higher ages (Ahacic et al., 2012), and older age groups have a lower average consumption than younger age groups (Guttormsson & Gröndahl, 2017). Interestingly though, this age pattern is partly due to cohort replacement rather than older age as such (Ahacic et al., 2012). In earlier cohorts, alcohol consumption (measured as proportion of drinkers) was less common than among more recent cohorts, throughout their lives. Therefore, findings from cross-sectional studies that suggest sharp age-related declines are, rather, reflections of differences between older and younger cohorts. In fact, when investigated longitudinally within cohorts, the proportion of Swedish drinkers is rather stable with increasing age, and age-related declines occur past age 75 years in the more recent cohorts (Ahacic et al., 2012).

Older people mainly drink for social reasons and enjoyment (Immonen et al., 2011; Landberg et al., 2018), and continue to do so into very old ages because their generally more active lifestyle, better health and financial status allow them to. Having higher levels of social contact and a greater number of activities in old age is associated with more frequent drinking and the continuation of frequent drinking patterns over time (Agahi et al., 2019).

Research on the implications of these changes in drinking habits, both for the individual drinker and for society, is scarce. We do know that alcohol is a major contributor to the disease burden in society (Griswold et al., 2018;

Table 1. Number of respondents in each age group per year.

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Women														
18–59 years	5138	6621	6413	6470	6206	6037	5782	5775	5568	2703	5252	5548	5510	5502
60–64 years	622	926	999	1021	1113	1169	1107	969	956	487	778	819	854	772
65–69 years	479	677	677	809	955	983	1076	1122	1228	629	885	929	963	1004
70–74 years	376	566	602	603	622	713	750	756	846	514	668	699	761	723
75–79 years	332	461	507	480	505	515	614	618	656	372	467	526	554	543
Men														
18–59 years	4638	6096	5843	5596	5395	5226	5051	5113	5104	2472	4782	5427	5361	5328
60–64 years	545	786	818	883	897	906	792	712	822	379	629	708	745	666
65–69 years	374	547	637	693	735	875	869	914	926	474	732	834	886	883
70–74 years	291	437	444	410	517	554	614	603	693	407	629	689	727	771
75–79 years	206	295	345	343	348	379	413	387	428	242	410	527	493	551

Wood et al., 2018) and that older people are more susceptible to the effects of alcohol (Anderson et al., 2012). The increased number of older people and the increased alcohol consumption in this group entails a potentially large-scale public health issue (Hallgren et al., 2010) and has, due to the scarce amount of research on the topic, been dubbed “a silent epidemic” (Wang & Andrade, 2013).

Because of the potential consequences of the increased drinking habits of the older population, and the lower abstinence rates in the cohorts born during the early 1900s and onwards, it is important to continue to monitor the drinking habits of older adults. This article aims to examine how the drinking habits of older people in Sweden have changed between 2004 and 2017. We will include several dimensions of drinking to examine whether and how the level and patterns of drinking have changed. To further our understanding of the drinking habits of older people, a specific focus will also be on disentangling the group of older people aged 60–79 years to investigate whether certain subgroups have changed more than others.

Data and method

The study is based on data from a telephone survey, conducted monthly between 2004 and 2017, with questions on self-reported drinking

habits (Raninen, 2015). A random sample of the general Swedish population aged 16–80 years (17–84 years since July 2012) was used. An organisation specialised in performing telephone surveys was contracted to perform the interviews and sampling. The sampling procedure was performed in two stages: first, a sample was drawn from official Swedish registers, and then the names were matched with telephone numbers. Interviews were then conducted until 1,500 respondents had been interviewed each month, resulting in a repeated cross-sectional sample of approximately 18,000 respondents each year. The response rate has been between 25% and 60%, tending to decrease over time (Raninen, 2015). The response rate was somewhat lower for men and the younger age groups and therefore, a post-stratification weight based on sex, age and geographical location was used.

To get comparable estimates for the present study, we only included respondents who were 18 to 79 years of age. Some cases were excluded from the analyses due to missing values on the consumption questions, sex or age (see Table 1 for total number of respondents each year). The final sample consisted of 225,134 respondents. In addition to the figures all results are also presented in more detailed tables in an online appendix (see online supplementary material).

Drinking measurements

The measures on drinking habits were derived from self-reported information. Possible effects of the use of self-reported information should be the same for each year, since the questions and the mode of collection were the same during the study period. The coverage rate of consumption when compared with overall per capita consumption has also remained stable, at approximately 40% (Raninen, 2015). The specific variables used here are described below.

Proportion alcohol consumers. The respondents were asked an initial question on how often they, during the past 30 days, have had a drink containing alcohol. The response alternatives are a gradient with a range from “more or less every day”, “4–5 times a week”, “2–3 times a week”, “once a week”, “about 2–3 times”, “about once” to “never”. A respondent was classified as a consumer if they had answered “about once” or any of the more frequent response options.

Frequency of drinking

The frequency of drinking measure was also derived from the initial question on consumption during the past 30 days. Here we dichotomised drinking frequency in order to differentiate between those who drank twice a week or more often and those who drank less frequently than that.

Amount per drinking occasion

The consumption estimate was calculated from a beverage-specific quantity and frequency scale with a reference period of the past 30 days. This measure combined questions on how often spirits, wine, fortified wine, beer and cider had been consumed during the past 30 days and the typical amount consumed on one occasion. The frequency questions were formulated in the same way for all types of beverages: “How often have you consumed spirits/wine/

beer during the past 30 days?”. The response alternatives are a gradient with a range from “more or less every day”, “4–5 times a week”, “2–3 times a week”, “once a week”, “about 2–3 times”, “about once” to “never”. The response alternatives for the quantity questions were specific to each beverage and were customised to correspond to the different standard containers in which the beverages are sold. The answers were then summarised into a measure of overall drinking during the past 30 days. To obtain a measure of litres of pure alcohol, the volume measure was multiplied by the average alcohol content of the beverages. The information on average alcohol content per beverage category was obtained annually and derived from sales data provided by the Swedish alcohol monopoly.

In the present study we then divided this measure of overall drinking by the number of drinking occasions to get a measure on the average amount per drinking occasion.

Heavy episodic drinking. Heavy episodic drinking was defined as having consumed five or more standard drinks in one drinking occasion at least once during the past 30 days. This was measured by one question in the survey: “How often have you during the past 30 days in one occasion consumed [a bottle of wine/4 cans of strong beer/6 cans of medium strength beer/5 drinks of spirits]”. The response alternatives were “more or less every day”, “4–5 times a week”, “2–3 times a week”, “once a week”, “about 2–3 times”, “about once” to “never”. Those who answered “about once” or any of the more frequent response options were defined as heavy episodic drinkers.

Results

Figure 1 presents the prevalence of alcohol consumption during the past 30 days in different age groups. For both women and men, we can see that with increasing age there is a decrease in prevalence of alcohol consumption. During the period 2004–2017 there has been an

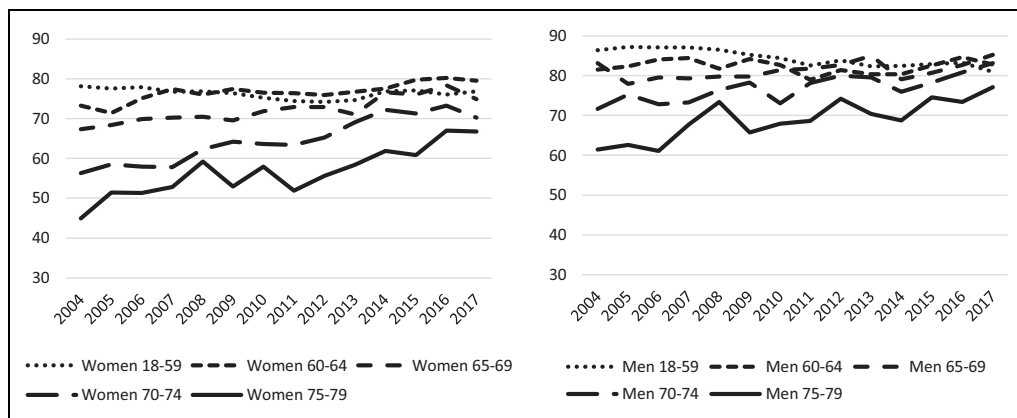


Figure 1. Proportion of alcohol consumers during the past 30 days by sex and age group, Sweden 2004–2017.

increase in the prevalence of alcohol consumption among older people in Sweden. The increase is most pronounced in the oldest age group (75–79 years of age) both for women and men. In 2004, less than half of the women and 61% of men in this age group had been drinking during the past 30 days. In 2017, the corresponding figures were 67% for women and 77% for men. In the reference group (18–59 years of age) the prevalence of alcohol consumption during the past 30 days was stable at around 75% for women and somewhat declining for men from 87% to 81%.

The proportion that reports drinking alcohol twice a week or more often during the past 30 days has also increased in the four older age groups among women, whilst it has remained unchanged among younger women. In 2004, 13% report drinking twice a week or more often in the 75–79-year age group among women. This had increased to 20% in 2017. In 2017, similar proportions in the youngest (18–59 years) and the oldest (75–79 years) age groups among women report frequent drinking. Among men the proportion that reported drinking alcohol twice a week or more often increased in the two oldest age groups. In the 65–69-year age group the proportion was stable and in the age groups 60–64 years and 18–59 years a declining trend was seen in the

proportion reporting frequent drinking. In all age groups and across all years studied men reported more frequent drinking than women during the past 30 days (see Figure 2).

The trends in average amount of alcohol per drinking occasion are depicted in Figure 3. The highest average consumption per drinking occasion is found in the age group 18–59 years for both women and men. For both women and men, the general pattern is that older age groups consume lower amounts per drinking occasion than younger age groups. Women in the age group 18–59 years consumed an average of 5.29 centilitres of pure alcohol per drinking occasion in 2017, men in the same age group consumed an average of 8.23 centilitres of pure alcohol. In the age group 75–79 years, women consumed an average of 3.63 centilitres of pure alcohol per drinking occasion in 2017 whilst the corresponding figure for men was 5.64 centilitres. For both women and men, the trends are rather stable in the four older age groups, whilst in the younger age groups the average amount per drinking occasion is declining. The average amount consumed per drinking occasion for women is roughly two thirds of the average amount consumed per drinking occasion for men. This is consistent across all age groups and survey years.

The prevalence of heavy episodic drinking during the past 30 days has increased sharply in



Figure 2. Proportion that has used alcohol twice a week or more often during the past 30 days, by sex and age group, Sweden 2004–2017.

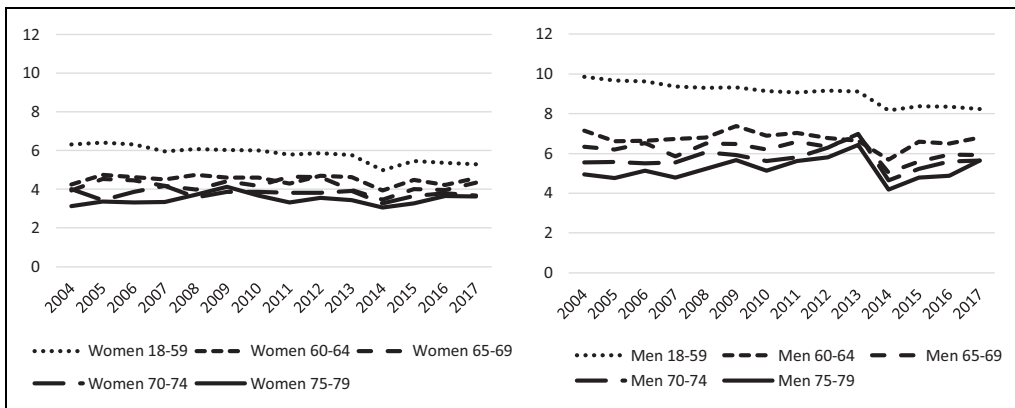


Figure 3. Amount per drinking occasion in centilitres of 100% alcohol, by sex and age group, Sweden 2004–2017.

the four older age groups for both women and men (see Figure 4). In 2004, less than 1% of women in the age groups 70–74 and 75–79 years reported heavy episodic drinking during the past 30 days. In 2017, the prevalence of heavy episodic drinking in these age groups had increased to 4.2% and 2.6% respectively. Similarly, among men in the two oldest age groups 7.7% and 4.0% reported monthly heavy episodic drinking in 2004, while in 2017 these numbers had increased to 14.4% and 11.7% respectively. The prevalence of heavy episodic drinking was much higher in the younger age group (24% among younger women and 45%

among younger men in 2017), but the trend has been stable for younger women and declining for younger men (see Table 5 in the online supplementary material).

Discussion

There is a paucity of research on the drinking habits of older people and our knowledge of how older people drink and how their drinking habits have changed over time is therefore limited. The present study set out to examine the drinking habits of older people in Sweden in more detail and also examine if there had been



Figure 4. Prevalence of heavy episodic drinking at least once during the past 30 days by sex and age group, Sweden 2004–2017.

any changes in the drinking habits of older people between 2004 and 2017. The results presented in this study paint a pretty consistent picture: drinking among older people in Sweden has increased between 2004 and 2017. Three of the four measures examined in this study display increases. The proportion of alcohol consumers in the population aged 65–79 years has increased, particularly among women and the oldest age groups, 70–74 and 75–79 years. Women and the two oldest age groups (both women and men) also show increases in drinking frequency, while heavy episodic drinking at least once a month has increased among women and men in all age groups above 60 years. This is in line with a previous study demonstrating increases in drinking frequency among the oldest old in Sweden (Kelfve et al., 2014). That study only included the frequency of alcohol consumption, but displayed a clear increase in weekly drinking between 1992 and 2011 among people aged 77+.

For amount of drinking per drinking occasion, the trends were rather stable. However, although the average amount of consumption per drinking occasion is stable over time, the increase in the proportion of drinkers, drinking frequency and heavy episodic drinking means that there has been an increase in the total amount of alcohol consumed by older people,

both on the individual level and on the population level.

The results thus show that there have been changes both in the level and pattern of drinking with increases seen both in the frequency of drinking (mainly among women and the oldest age groups, 70–74 and 75–79 years) and the prevalence of heavy episodic drinking. The results are also consistent in that the largest changes are displayed in the oldest age groups. However large these changes are, they are from low levels and it is worth pointing out that the older age groups still have the lowest amount per drinking occasion and prevalence of heavy episodic drinking. The frequency of drinking in the older population is, however, higher than in the younger population.

A similar pattern can be seen with regard to the gender differences in drinking; the largest relative increases are observed for women, whilst they still drink at lower levels than men. The differences between Swedish women and men have remained remarkably stable despite the changes that have occurred in drinking, i.e., the changes in drinking are of a similar magnitude for both women and men, and also seem to be fairly synchronised across time.

A further aim of this study was to disentangle the results for several age groups of older people. Older people are often bunched

together into a single age category of 65+ which possibly masks important patterns. What can be seen in these results is that the variation across age groups has decreased over time. The drinking patterns in the various age groups have become more similar over time, especially with regard to proportion of drinkers and average amount of drinking.

The results reported here pertain mostly to the generations born in the 1940s and 1950s. One plausible explanation for the higher prevalence and frequency of drinking in these cohorts is that they experienced the abolition of the rationing system in Sweden in 1955. This change in alcohol policy caused both increases in population drinking and a redistribution of drinking in the population (Norstrom, 1987). One of the notable changes was that now all women were allowed to purchase alcohol. This is consistent with the results observed here, where the increases in prevalence of drinking among women are more prominent than among men. Our results are also in line with previous research reporting elevated rates of drinking and alcohol-related mortality in these cohorts (Kraus, Osthus, et al., 2015; Kraus, Tinghog, et al., 2015; Raninen et al., 2016; Rosen & Haglund, 2006). It should, however, be stressed that our results display a steady increase in drinking in almost all age groups of older people across the years studied. This implies that the changing drinking habits of older people are not isolated to certain cohorts. The results instead indicate that there has been a continuous shift in older people's drinking habits and that we can expect this to continue also with younger birth cohorts growing old in Sweden. The only older age group, of the ones studied here, that showed a different trend was men aged 60–64 years. This group had a slightly declining drinking frequency and average amount per drinking occasion, but nevertheless an increase in monthly binge drinking.

When interpreting the results of this study, some limitations should be kept in mind. The results are based on self-reported survey information. Self-reports of alcohol consumption are

usually underestimated (Stockwell et al., 2004). The survey used here has a coverage rate of roughly half of registered sales (Raninen, 2015), indicating that underreporting is present. This rate has, however, been stable over the years (Raninen, 2015), which should allow for comparisons between years. Our focus on changes, rather than actual levels of consumption, over the studied time period in subgroups of the population should also make the problems of underestimation less salient. Another more stressing limitation is the response rates of the survey. The response rate has dropped during the study period. The participation of older people has, however, increased (see Table 1). This increases the representativeness for older age groups in the data but warrants caution in the comparisons between younger and older age groups. The data are weighted in order to limit the problems of differential response rates. Furthermore, the survey's age ceiling of 79 years, which has now been raised to 84 years, also limits the study of drinking habits in the oldest age groups where we know from previous studies that drinking has increased (Kelfve et al., 2014).

The major strength of the study is the large dataset at hand with comparable measures of alcohol consumption over time. The large number of respondents allows for examination of the consumption development in smaller subgroups of older people while still maintaining a sufficient number of respondents in each group. The detailed consumption questions further allowed us to examine several aspects of drinking habits, which provides valuable information on how the drinking habits of older people have changed beyond the crude measure of average consumption or drinking frequency.

Our results indicate that drinking among older people in Sweden is increasing. It is, however, not clear what implications this has for public health. The increases are from very low levels and even with the large increases displayed here, the levels of drinking among older people are still on modest levels. Older people still have the lowest amount consumed per

drinking occasion and the lowest prevalence of binge drinking. Still, with the higher prevalence of chronic diseases and medication use at older ages, and the decrease in the body's metabolism and tolerance of alcohol, older people are more vulnerable to consequences of alcohol consumption. Future research needs to examine whether these changes in drinking have also lead to increases in rates of harm and whether there are any associations between the per capita alcohol consumption and rates of harm among older people.

Furthermore, our study was focused on changes in the levels and patterns of drinking and therefore gives no clues on where and with whom drinking takes place. Future studies on the drinking context and motives for drinking among older people are warranted to examine whether older people are predominantly drinking at home or in licensed premises, and whether they are drinking alone or in the company of others.

Taken together with the increasing number of older people in the population, the trends reported here warrant some caution. The possible social and health consequences could have implications for public health with increases in alcohol-related harm which would strain healthcare and geriatric services. There is thus a need to closely monitor the development and for more research on the drinking habits of older people.


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Supplementary material

The supplementary material is available online with the article.

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