

World Conference on Psychology and Sociology 2012

# The Association Between Drinking Behavior, Well-Being and late Life Alcohol use Problems

Yannic van Gils <sup>a \*</sup>, Bart Van Rompaey <sup>b</sup>, Eva Dierckx <sup>a</sup>

<sup>a</sup>*Vrije Universiteit Brussel, Pleinlaan 2, Brussels 1050, Belgium*

<sup>b</sup>*University of Antwerp, Universiteitsplein 2610 Antwerp, Belgium*

---

## Abstract

The percentage of elderly people drinking alcohol will grow over the coming years. This research explores the characteristics of elderly people consuming alcohol, problems use and well-being. We questioned 1004 people over 60. Of the participants, 56.8% drank moderately, 18.7% showed a risky drinking behaviour, and 18.4% reported binge drinking. We found no correlation between different drinking patterns and well-being. There is a correlation between the amount of problem use and different drinking patterns. No correlation was found between the drinking patterns and well-being. Elderly people at risk and binge drinking group experienced more problem use

© 2013 The Authors. Published by Elsevier Ltd.

Selection and peer review under the responsibility of Prof. Dr. Kobus Maree, University of Pretoria, South Africa.

*Keywords:* Elderly People, Drinking, Well-Being, Late Life Alcohol use Problems;

---

## 1. Introduction

Nowadays, the elderly population is growing rapidly. According to figures of the World Health Organization (WHO), there will be over 1.7 billion people over 60 year in the developed countries (What are the public health implications of global ageing, 2011). Despite the presumption that older people do not drink a lot of alcohol, Sulander, Helakorpi, Rahkonen, Nissinen, and Uutela (2004) have pointed out that the percentage of elderly people doing so will grow over the coming years: a growth of 7% for men and 3% for women using alcohol may be expected. In their study, the highest increase in the amount of elderly people using alcohol took place in the age category of 60 to 70 years. In this age category, an increase of 10% for men and 5% for women was found. Consequently, there will be also an increase in the amount of elderly misusing alcohol (Johnsen, 2000). This will become one of the biggest challenges for the mental health care (Sulander et al, 2004) as more elderly will become affected by the negative consequences of alcohol use and misuse. Beside the strain on society and health workers, there will be a weight on all caregivers as well. Alcohol problems do have a major impact on the family

---

\* Corresponding author: Yannic van Gils  
*E-mail address:* [yannic.vangils@vub.ac.be](mailto:yannic.vangils@vub.ac.be)

related caregiver's burden and stress (Sattar et al., 2007) and co-residents (Nadkarni, Acosta, Rodriguez, Prince, & Ferri, 2011).

There are few descriptions of the characteristics of elder people in Europe consuming alcohol. One of the most recent publications concerning gender differences in alcohol (ab)use reported men and women exceeding the criteria of alcohol misuse respectively 20.3% and 1.3% (Halme et al., 2010). In this study, more men than women were characterized as 'at risk drinkers' and more women than men as 'abstinent'.

When exploring the amount of alcohol use, studies reveal that the number of drinks were significant lower in older elderly people (>75 years) compared to younger elderly people ( $\leq 75$  years) (Salunder et al, 2004; Merrick et al., 2008; Blazer et al, 2009). As far as socio-economic status is concerned, prevalence of alcohol use is higher for elderly with a higher income and when living together (Ganry, Baudoin, Fardellone & Dubreuil, 2001; Merrick et al, 2008; Blazer et al, 2009). Moreover, a longitudinal research of Moos, Brennan, Schutte & Moos (2005) indicates that these findings were consistent over time. Even after 10 years, men, younger elderly and married individuals still drink more heavily.

The negative outcomes of drinking alcohol are not to be underestimated. Research has shown that misusing alcohol is related to (1) a lower performance on physical tests (Cauwthon et al., 2007), (2) functional impairment and (3) low self-rated health (John, Montgomery, & Tyas, 2009). There seems to be an association between the numbers of drinks elderly people consumed per day and week in their life course and the amount of late life alcohol use problems. Furthermore, men exceeding the guidelines were more likely to report alcohol use problems than women. Men, even in the at risk category, drank more than women in the same category and therefore showed more late life alcohol related problems (Moos, Brennan, Schutte, & Moos, 2004). These same authors reported results in a more recent study concerning the positive association between heavy drinking and alcohol use problems after 4 and 10 years (Moos et al, 2005). According to John et al. (2009), men exposed to alcohol tend to overdue and additionally are more likely to become problem drinkers than women. This could explain the difference in the amount of late life alcohol related problems between men and women.

Apart from the negative impact of alcohol on physical health, there are also implications on so called psychological or mental health. One of the most important concepts within this field is the subjective well-being. Until now, little is known about the relation between the different kinds of alcohol patterns of older people and their well-being, and very often psychological consequences were underreported. Some researchers, however, focused on the concept of "quality of life" and the linkage with older persons drinking moderately (Chan et al., 2009). Moderated alcohol use seems to be positively associated with a higher quality of life. This is in line with the findings of Lang et al. (2007) who additionally reported an association between moderated drinking behaviour of elderly and fewer depressive symptoms. A six year longitudinal Australian research on older women showed the same influence of alcohol on quality of life: abstinence had a serious negative impact on their quality of life (Byles, Young, Furuya, & Parkinson, 2006). Blazer and Wu (2009) focused on the 'at risk' and 'binge drinking' group. Surprisingly, both groups did not report any serious psychological distress. The authors referred to the difficulty to intercept older people in the 'at risk' and 'binge drinking' category. Furthermore elderly people have the tendency to underreport stress during face to face interviews. Blazer et al. (2009) found conflicted results. They pointed out a positive relation between 'heavy drinking' (the 'at risk' group as well as the 'binge drinking' group) and psychological distress. So in the very few studies, conflicting results concerning the association of drinking alcohol and psychological well-being are found.

The aims of our research are:

1. to explore the characteristics of elderly people consuming alcohol;
2. to explore the relation between drinking patterns and well-being;
3. to explore the relation between drinking patterns and late life alcohol use problems.

## 2. Method

### 2.1 Participants

Between 2008 and 2011, 1005 community dwelling Flemish elderly people (> 60 years of age) were questioned about their drinking behavior. The presence of a neurodegenerative disease or other major psychopathologies was an exclusion criterion. All respondents were contacted through regional elderly organizations. For this cross-sectional research, elderly needed to sign an informed consent in which anonymity and confidentiality were clarified.

### 2.2 Procedure and materials

During face to face interviews at the respondents' homes, the answers to a structured questionnaire were registered by the researchers. The selection of the demographic variables was based on a previous study of Castro-Costa E. et al. (2008) and consist of gender, age, living condition and education. Based on the report for the EU Expert Conference on Alcohol and Health, the limits for a safe level of drinking were defined as no more than two units a day. Consequently, the limits for alcohol use in this research were defined as abstinent, moderate and at risk. Elderly reporting no alcohol use were registered as "abstinent". Elderly consuming no more than two drinks a day were categorized as "moderate" (Balsa, Homer, Fleming, & French, 2008; Hallgren, Hogberg & Andreasson, 2009). People using three units a day or more were marked as 'at risk'. For binge drinking, the cutoff of four consecutive units was used (Hallgren et al., 2009).

Quality of Life data were obtained by administrating the Leuvense Schaal voor Welbevinden (Marcoen, 2002). This instrument is specifically designed for older people and contains 56 items representing different topics of well-being. The participant needed to indicate in which way the statement applied to his or her life on a 7-point Likert scale in which 1 means total disagreement and 7 total agreement. The sum of all responses reflects the general well-being of the elderly people. The higher the score, the higher the amount of general well-being. The geriatric version of the Michigan Alcoholism Screening Test (MAST-G) was used to assess late life alcohol use problems. This test was specifically designed to rate specific consequences of drinking by the elderly and was found to be a robust screening instrument for elderly (O'Connell et al., 2004; Sorocco & Ferrell, 2006). The tool consists of 23 questions that have to be answered by the participants as "yes" (present) or "no" (absent). The more positive answers are given, the more likely there is an occurrence of an alcohol use problem. The general clinical cut off for possible alcohol problems is set at five or more positive answers. Consequently, people scoring  $\geq 5$  on the MAST-G are indicated as having a late life alcohol use problem (Greene, McCaul, & Roger, 2009).

### 2.3 Statistical analyses

To explore whether there were significant differences between the drinking patterns and demographic variables, Pearson chi-square tests were performed. Spearman's rho bivariate correlation analyses were conducted to study the association between the different kinds of drinking patterns, well-being and alcohol use problems. Non-parametric analyses were selected due to the conditions related to parametric analyses. First, the assumption of normality was tested with a Kolmogorov Smirnov test and Shapiro-Wilk test. Second, the Levene Test was used to investigate the homogeneity of variance. The three tests indicated a violation of respectively the assumption of normality and the homogeneity of variance ( $p < .001$ ). The analyses were conducted using SPSS 20.0. A criterion alpha of .05 was used throughout the analyses indicating significance.

### 3. Results

The average age of the participants was 75.59 years with 13.67 years of education. Of the 1005 elderly, 59.7% were female. Half of the population was older than 75 years (51.1%). More than half of the women (58.8%) reported living alone, while most men (73.1%) registered living with someone. Only 15% of the women and 29.4% of the men received a higher education; half of the elderly reported an education till 18 years (50%). As presented in table 1, 64.6% of the non-drinkers lived alone and 59.9% of the drinkers lived together. In the ‘nondrinkers’ category, 66.5% was older than 75 years and 8.3% was younger than 65 years. In the drinkers category, 47.1% was older than 75 years and 17.9% was younger than 65 years. Half of the population in the ‘nondrinkers’ (50.4%) and ‘drinkers’ (49.9%) completed a high school education. One quarter of the drinkers were highly educated (25.2%).

Table 1: Demographic characteristics of the drinkers and non drinkers.

	Non drinkers n (%)	Drinkers n (%)	Total n (%)
Living alone	159 (64.6%)	304 (40.1%)	463 (46.1%)
Living together	87 (35.4%)	454 (59.9%)	541 (53.8%)
Age			
<65 years	20 (8.3%)	134 (17.9%)	154 (15.5%)
65-75 years	61 (25.2%)	263 (35.1%)	324 (32.7%)
>75 years	161 (66.5%)	353 (47.1%)	514 (51.8%)
Education			
Element. school	104 (42.3%)	189 (24.9%)	293 (29.2%)
High school	124 (50.4%)	379 (49.9%)	503 (50%)
Higher education	18 (7.3%)	191 (25.2%)	209 (20.8%)

Over 75% of the participants reported drinking during the past year. Looking at gender specific results, significant more men than women reported consuming alcohol at the time of the interview ( $p < .001$ ). Of the total population 56.8% drank moderately, 18.7% showed a ‘risky drinking behavior’ and 18.4% of the population report ‘binge drinking’ in the last month (see table 2). ‘Binge drinking’ was reported by 31.8% of men and 9.5% of women. Almost as many men (57.5%) as women (56.8%) consumed alcohol moderately at the time of the interview.

There was a significant difference between the number of men and women in the ‘abstinent’, ‘at risk’ and ‘binge drinking’ group ( $p < .001$ ). Table 2 shows that 11.3% of the women and 28.9% of the men were categorized as ‘at risk’ drinkers.

Table 2: Prevalence of drinking patterns in Flanders

	Men n(%)	Women n(%)	Total n(%)	P
Drinking			7	<.001 <sup>a</sup>
Yes	351 (87.3%)	407 (67.8%)	58 (75.5%)	
No	51 (12.7%)	193 (32.2%)	244 (24.5%)	
Drinking pattern				<.001 <sup>a</sup>
Abstinent	51 (12.7%)	193 (32%)	246(24.5%)	
Moderate <sup>b</sup>	231 (57.5%)	339 (56.5%)	571 (56.8%)	
At risk	120 (28.9%)	68 (11.3%)	188 (18.7%)	
Binge Drinking <sup>c</sup>				<.001 <sup>a</sup>
Yes	128 (31.8%)	57 (9.5%)	185 (18.4%)	
No	274 (68.2%)	543 (90.5%)	817 (81.6%)	

<sup>a</sup> Significance level with  $\chi^2$

<sup>b</sup>  $\leq 2$  units/day

<sup>c</sup> Binge drinking:  $\geq 4$  consecutive units; during the past month

As shown in Table 3, a significant positive association is found between the drinking patterns on one hand and ‘binge drinking’ on the other hand, and the amount of alcohol use problems ( $p < .001$ ). These results have been found in both sexes. Elderly who exceeded the limits and who reported ‘binge drinking’ during the past month, were more likely to report alcohol use problems.

However, gender differences were found: men showed more alcohol use problems than women. Especially in the ‘moderate’ group, men reported almost twice as much alcohol use problems than women. We found no correlation between the drinking patterns and the well-being of the elderly. Nonetheless, there is a sex difference in the ‘binge drinking’ group. For men, no correlation has been found between ‘binge drinking’ and well-being. For women there is a negative association between ‘binge drinking’ and well-being ( $p < .05$ ).

Table 3: Characteristics of the different alcohol patterns for men and women

	Abstinent	Moderate	At risk	P	Binge Drinking	Not Binge Drinking	p
	Mean	Mean	Mean		Mean	Mean	
Men N	51	229	116	<.001	128	274	<.001
Age	77.78	73.87	71.57	<.005	71.42	74.75	<.001
educ level	12.31	14.68	14.94	<.005	15.15	14.14	<.05
Well-being <sup>a</sup>	5.49	5.62	5.47	n.s.	5.49	5.59	n.s.
Alc useprob <sup>b</sup>	1.71	4.46	6.62	<.001	6.52	3.93	<.001
Women N	190	336	66	<.001	57	540	<.001
Age	79.2	76.8	73.51	<.001	72.27	77.7	<.001
Educ level	12.13	13.57	13.99	<.001	13.98	13.07	n.s.
Well-being	5.53	5.53	5.41	n.s.	5.33	5.54	<.05
Alc use prob	0.87	2.85	5.68	<.001	5.93	2.17	<.001

<sup>a</sup> Well-being was put on a Likert scale from 1 till 7, 7 meaning a very positive well-being

<sup>b</sup> Alcohol use problems assessed with MAST-G, with 5 as a cut-of for late life alcohol use problems

#### 4. Discussion

More than three quarters of the elderly people drank alcohol. This could be a fast growing problem due to the increase of this segment of the population (Johnsen, 2000). In line with previous research, more men than women were consuming alcohol. However, despite the fact that there are more older people who consume alcohol, the amount of drinks and consequently elevated alcohol use declines with age and increases with education level (Salunder et al., 2004; Merrick et al. 2008; Blazer et al. 2009).

In comparison with previous research, twice as many men and about as many women reported not drinking (McCaul et al, 2009). One of the reasons why more men in this sample reported being ‘abstinent’ could be the average age of the sample group. The more older elderly in the sample group, the more older people will report abstinence.

Elderly people were categorized as ‘abstinent’, ‘moderate’ or ‘at risk drinkers’. Additionally, they were classified as ‘binge drinkers’ or not. Using the limits of more than two drinks on a typical day, the ‘moderated’ category was for both gender strongly represented. These results are supported by the findings of Chan et al. (2009). The idea that elderly in Flanders do drink alcohol but are aware of the need for moderation can be supported. A lot of researchers have elaborated the positive consequences of moderated alcohol consumption (Cauwthon et al., 2007; Balsa et al, 2008; Halme et al., 2010). This could be a positive evolution for aging people.

A recent study classified one tenth of the population in the ‘at risk’ group (Nadharni et al., 2011). Our findings reflected a larger number of people presented ‘at risk’ drinking (18.8%), whereby more men than women were categorized in the ‘at risk’ group. The amount of men in this group was similar to previous research (Hamle et al., 2010) or higher than others (Blazer et al., 2009; Chan et al., 2009). The number of women in the ‘at risk’ group was higher than precedent reports (11.3% in our study versus 7.5% and 1.3% in previous research) (Chan et al., 2009; Hamle et al., 2010). This could explain the higher percentage of the total population categorized as ‘at risk’.

‘Binge drinking’ is more frequent in the male, younger than 75 years and educated population. These results correspond to Blazer et al. (2009).

Our study showed no correlation between older people drinking patterns and well-being. Different researches found a positive association between a moderate consuming pattern and well-being. However, these findings focused on moderate drinking behavior. The authors didn’t focus on the ‘at risk’ nor ‘binge drinking’ group (Byles et al., 2006; Lang et al., 2007; Chan et al., 2009). Unexpectedly, in this research the ‘at risk’ elderly did not report worse well-being than the moderate group. These findings are similar to Blazer et al. (2009) who were surprised to find no association as well. They explained these findings by the difficulty for older people to report distress, especially due to alcohol. This could be a reason for our results as well but there could be another issue. The respondents of this research are older people without any impressive problems. That these elderly actually are feeling well at the time of the interview is one plausible explanation. Of course at the long run, we can’t make any prediction about their well-being. A longitudinal follow up of our participants would be appropriate.

There was a gender difference in the ‘binge drinking’ group. We found a negative association between ‘binge drinking’ and well-being for women, but not for men. These findings are similar to Choi and DiNito (2011), pointing at a positive association between ‘binge drinking’ and distress among women. Their study suggested the possibility for women that encounter continuous interaction between heavily drinking and a negative affected mental health (Choi et al., 2011). ‘Binge drinking’, especially for women, is a phenomenon needing to be monitored closely in the elderly population.

The results showed a significant association between the drinking patterns and the amount of alcohol use problems. Older people in the ‘at risk’ category and ‘binge drinking’ group will consequently experience more problems. These findings are in line with previous research (Moos et al., 2004; John et al., 2009). Moos et al. (2004) suggested that older men in the ‘at risk’ group were drinking much more than women what leads to more problems.

In all categories, women showed less alcohol use problems than men. These findings are surprising since women should be less resilient to alcohol than men (NIAAA, 2005).

The fact that older people in Flanders actually are consuming alcohol is the most important conclusion of this research. Their current drinking behaviour had no significant impact on the well-being, but longitudinal research could clarify the long term consequences of this drinking behaviour. The association between ‘risky drinking’ – ‘at risk’ group and ‘binge drinking’ group – and late life alcohol use problems is an important issue for all professional and family-related caregivers.

## References

- Basla A., Homer J., Fleming M., & French, M. (2008). Alcohol consumption and health among elders. *The Gerontologist*, 40 (3), 622-636.
- Blazer, D., & Wu, L. (2009). The epidemiology of at-risk and binge drinking among middle-aged and elderly community adults national survey on drug use and health. *American Journal of Psychiatry*, 166(10), 1162–1169.
- Byles, J., Young, A., Furuya, H., & Parkinson, L. (2006). A drink to healthy aging: The association between older women’s use of alcohol and their health-related quality of life. *Journal of American Geriatric Society*, 54, 1341–1347.
- Castro-Costa, E., Ferri, C., Lima-Costa, M., Zaleski, M., Pinsky, I., Caetano, R., & Laranjeira, R. (2008). Alcohol consumption in late-life — The first Brazilian National Alcohol Survey (BNAS) *Addictive Behaviors*, 33, 1598–1601.
- Cawthon, P., Fink, H., Barrett-Connor, E., Cauley, J., Dam, T., Lewis, C., Marshall, L., Orwoll, E. & Cummings, S. (2007). Alcohol use, physical performance, and functional limitations in older men. *Journal of American Geriatric Society*, 55, 212–220.
- Chan, A., Muhlen, D., Kritz-Silverstein, D., & Barrett-Connor, E. (2009). Regular alcohol consumption is associated with increasing quality of life and mood in older men and women: The Rancho Bernardo Study. *Maturitas*, 62, 294–300.

- Choi, N., & DiNito, D. (2011). Psychological distress, binge/heavy drinking, and gender differences among older adults. *The American Journal on Addictions*, 20, 420–428.
- Ganry, O., Baudoin, C., Fardellone, P., & Dubreuil, A. (2001). Alcohol consumption by non-institutionalized elderly women: the EPIDOS study. *Public Health*, 115, 186-191.
- Geerlings, P.J., Brink, W., & Schippers, G.M. (Red.). (1996). *Behandelingsstrategieën bij alcoholproblemen*. Houten/Diegem: Bohn Stafleu Van Loghum.
- Hallgren, M., Hogberg, P., & Andreasson, S. (2009). Alcohol consumption among elderly European Union citizens. Health effects, consumption trends and related issues. *Expert conference on alcohol and health*. Stockholm, Sweden.
- Halme, J., Seppä, K., Alho, H., Poikolainen, K., Pirkola, S., & Aalto, M. (2010). Alcohol consumption and all-cause mortality among elderly in Finland. *Drug and Alcohol Dependence*, 106, 212–218.
- John, P., Montgomery, P., & Tyas, S. (2009). Alcohol misuse, gender and depressive symptoms in community-dwelling seniors. *International Journal of Geriatric Psychiatry*, 24, 369–375.
- Johnsen, I. (2000) Alcohol problems in old age: A review of recent epidemiological research. *International Journal of Geriatric Psychiatry*, 15, 575-581.
- Johnson-Greene, D., McCaul, M., & Roger, P. (2009). Screening for hazardous drinking using the Michigan Alcohol Screening Test–Geriatric Version (MAST-G) in elderly persons with acute cerebrovascular accidents alcoholism. *Clinical and Experimental Research*, 33(9), 1555-1561.
- Lang, I., Wallace R., Huppert, F., & Melzer, D. (2007). Moderate alcohol consumption in older adults is associated with better cognition and well-being than abstinence *Age and Ageing*, 36, 256–261.
- Merrick, E., Horgan, C., Hodgkin, D., Garnick, D., Houghton, S., Panas, L., Saitz, R., & Blow, F. (2008). Unhealthy drinking patterns in older adults: Prevalence and associated characteristics. *Journal of American Geriatric Association*, 56, 214-223.
- Moos R., Brennan P., Schutte, K., & Moos, B. (2010). Late-life and life history predictors of older adults' high risk alcohol consumption and drinking patterns. *Drug and Alcohol Dependence*, 108, 13-20.
- Moos, R., Brennan, P., Schutte, K., & Moos, B. (2004). High-risk alcohol consumption and late-life alcohol use problems. *American Journal of Public Health*, 94 (11), 1985-1991.
- Moos, R., Brennan, P., Schutte, K., & Moos, B. (2005). Older adults' health and changes in late-life drinking patterns. *Aging & Mental Health*, 9(1), 49–59.
- Nadkarni, A., Acosta, D., Rodriguez, G., Prince, M., & Ferri, C. (2011). The psychological impact of heavy drinking among the elderly on their co-residents: The 10/66 group population based survey in the Dominican Republic. *Drug and Alcohol Dependence*, 114, 82–86.
- National Institute on Alcohol Abuse and Alcoholism (2005). *Helping patients who drink too much. A clinician's guide*. Updated 2005 edition. U.S. Department of Health and Human Services, National Institutes of Health Publication Retrieved from [http://pubs.niaaa.nih.gov/publications/Practitioner/CliniciansGuide2005/clinicians\\_guide.htm](http://pubs.niaaa.nih.gov/publications/Practitioner/CliniciansGuide2005/clinicians_guide.htm)
- O'Connell, H., Chin, A., Hamilton, F., Cunningham, C., Walsh, J., Coakley, D., & Lawlor, B. (2004). A systematic review of the utility of self-report alcohol screening instrument in the elderly. *International Journal of Geriatric Psychiatry*, 19, 1074-1086.
- Sattar, S., Padala, P., McArthur-Miller, D., Roccaforte, W., Wengel, S., & Burke, W. (2007). Impact of problem alcohol use on patient behavior and caregiver burden in a geriatric assessment clinic. *Journal of Geriatric Psychiatry and Neurology*, 20, 120-127.
- Sorocco, K. & Ferrell S. (2006) Alcohol use among older adults. *The Journal of General Psychology*, 113(4), 453-467.
- Sulander, T., Helakorpi, S., Rahkonen, O., Nissinen, A., & Uutela A. (2004). Smoking and alcohol consumption among the elderly: Trends and associations, 1985–2001. *Preventive Medicine*, 39, 413–418.
- WHO. (2011). *What are the public health implication of global ageing?* Retrieved from <http://www.who.int/features/qa/42/en/index.html>