

# The effect of moderate alcohol use on the health of older adults in New Zealand: an analysis of the Health, Work and Retirement Study

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**Background:** Studies have found a J-shaped relationship between alcohol and health where moderate drinking has the lowest risk of disease or mortality, and non-drinking and heavy drinking represent heightened risk. Researchers argue that this J-shaped relationship is spurious and a result of the 'sick quitter' effect (confounding effect from ex-drinkers who quit due to ill health) and residual confounding factors.

**Aim and objectives:** To undertake secondary data analyses of a New Zealand (NZ) cohort to investigate the effects of light to moderate alcohol consumption on health-related quality of life (measured using the Short Form (SF-12) Health Survey) in older adults.

**Method:** Secondary data analyses was conducted with eight waves of data (2006 – 2020) from 3,959 older NZ adults ( $\geq 50$  years) from the Health, Work and Retirement Study after accounting for the 'sick quitter' effect and socioeconomic status (SES). Descriptive statistics were conducted using chi-square tests, ANOVA and t-tests. Hierarchical linear regression was conducted to analyse baseline data (cross-sectional analysis) and linear mixed-effects modelling was used to analyse data from all waves (longitudinal analysis).

## Results

**Descriptive statistics -** Baseline cohort was represented by more females (55%) and non-Māori (63%). Half of participants drank  $< 1$  drink/day (48%) and one-fifth drank 1 to  $< 2$  drinks/day. In contrast, a smaller proportion were former drinkers (10.9%), those who drank 2 to  $< 3$  drinks/day (8.7%), lifetime abstainers (4.7%), and heavy drinkers ( $\geq 3$  drinks/day). At baseline, former drinkers had the lowest mean physical health (PCS) and mental health summary scores (MCS) among all drinking groups, and those who drank 1 to  $< 2$  drinks had the highest SF-12 PCS and MCS scores ( $p < 0.01$ ). Of the participants who drank consistently over the eight waves, over 75% consumed  $< 2$  drinks/day.

### *Cross-sectional analysis of baseline wave (adjusted for 'sick quitter' effect and SES)*

Males	Females
Alcohol consumption did not have a significant effect on SF-12 PCS and MCS scores.	Alcohol consumption had a significant linear relationship with SF-12 PCS scores but did not have a significant effect on SF-12 MCS scores.

### *Longitudinal analysis of eight waves (adjusted for 'sick quitter' effect and SES)*

Males	Females
The longitudinal trajectory of SF-12 PCS and MCS scores were not significantly associated with alcohol drinking patterns over time.	Compared to lifetime abstainers, drinkers who consistently consumed any level of alcohol had significantly higher SF-12 PCS scores over time. Heavy drinking ( $\geq 2$ drinks/day) was associated with reduction in SF-12 MCS scores over time.

**Conclusion:** Findings indicate discrepant health effects of moderate drinking between genders, suggesting that future research should study the effects of alcohol based on different characteristics (e.g. gender, age, and ethnicity).