

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 (≥ 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 (≥ 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 (≥ 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).