

Background

Out-of-hospital cardiac arrest (OHCA) is a leading cause of death worldwide, with cardiovascular disease (CVD) being a key risk factor. Despite depression being linked to increased CVD risk, little is known about depression and OHCA.

Aim

To investigate disparities in OHCA characteristics and survival in patients with and without depression.

Methods

- A retrospective cohort study using data from the AmsteRdam Resuscitation Studies (ARREST) registry from 2008–2018.
- History of comorbidities, including prior depression, was obtained from patients' general practitioner.
- OHCA Survival defined as survival at 30 days post-OHCA or hospital discharge.
- Logistic regression models were used obtain crude and adjusted odds ratios (ORs) for the association between depression and OHCA survival, investigating for effect modification by age and sex.
- We explored potential mediation by calculating direct and indirect effects of initial shockable rhythm and bystander cardiopulmonary resuscitation (BCPR).

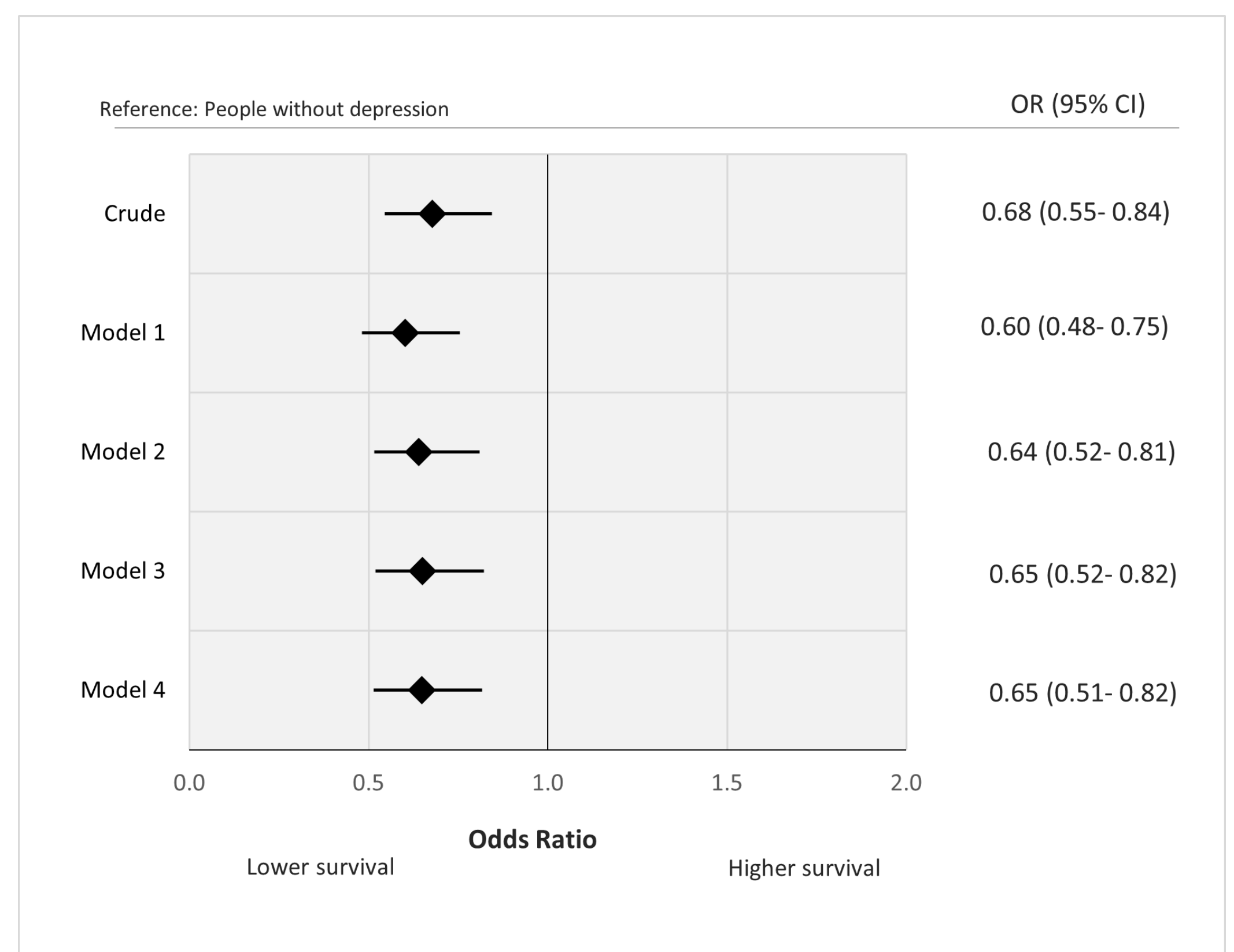


Figure 2 Association between having depression and survival to hospital discharge or 30-day survival following OHCA. ORs were adjusted for: Age in model 1, age and sex in model 2, age, sex and number of comorbidities in model 3, age, sex and cardiovascular diseases comorbidities in model 4. CI: Confidence Interval; OR: Odds Ratio.

Results

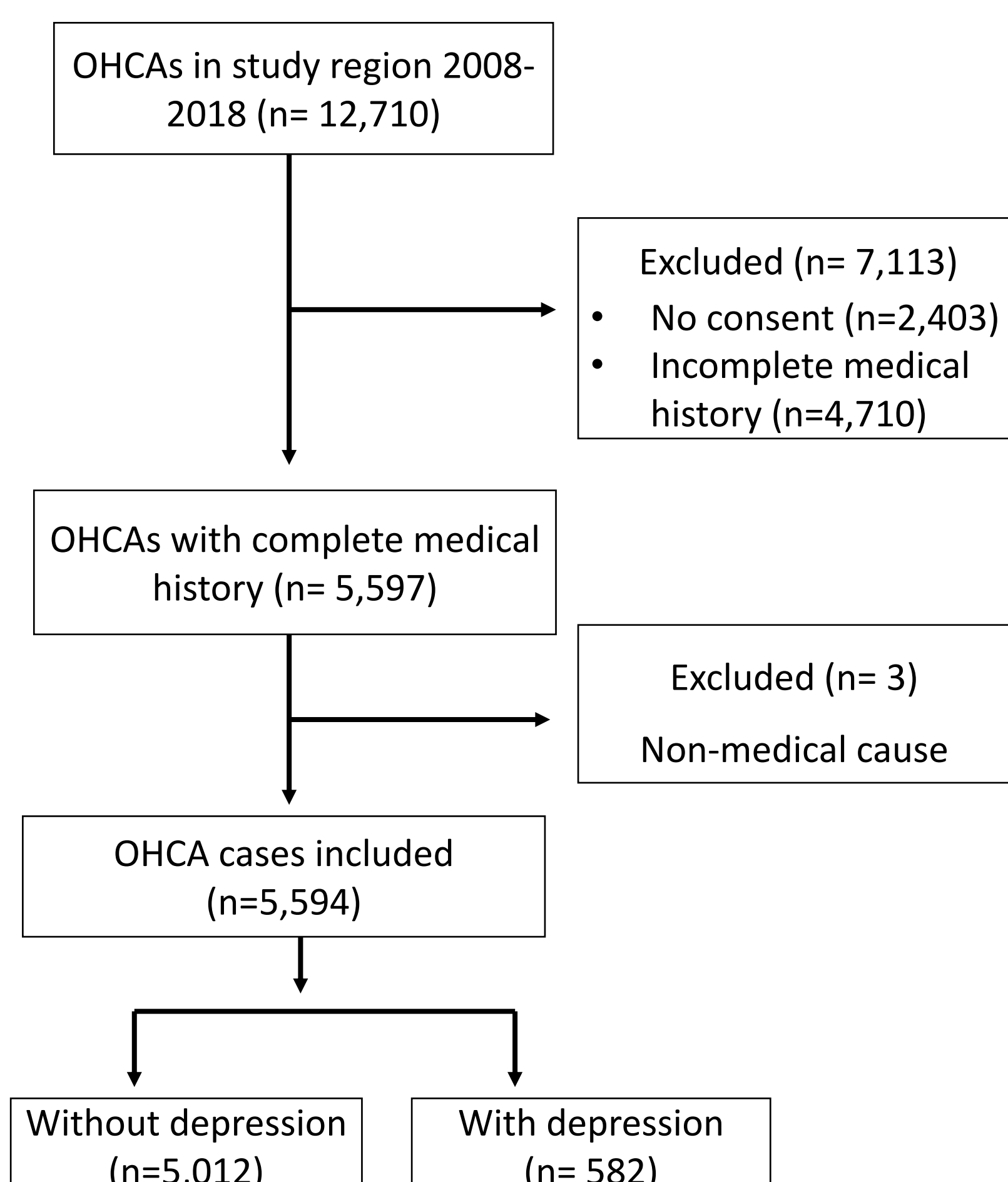


Figure 1 Flow diagram of the study population.

- Among 5,594 OHCA cases, 582 individuals (10.4%) had pre-existing depression.
- People with depression had lower rates of BCPR and shockable rhythms. Depression was associated with lower odds of OHCA survival (crude OR 0.68, 95% CI 0.55–0.84).
- After adjustment for age, sex, and comorbidities, depression remained associated with lower odds of survival (fully adjusted OR 0.65, 95% CI 0.51-0.82), with findings similar by sex and age.
- The association may be partially mediated by fewer initial shockable rhythms and BCPR provision in individuals with depression.

Conclusion

Depression is associated with lower OHCA survival. Further investigation into potential contributing factors, such as socioeconomic status, is warranted.