

Factors associated with suicide drug poisoning deaths, by sex, in Ireland

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Conflict of interest

No conflict of interest to report

Suicide deaths

- Suicide is a significant public health concern with over 700,000 people worldwide dying by suicide each year (World Health Organisation, 2021)
- Drug poisoning deaths:
 - Majority unintentional
 - Account for approx. 1 in 5 suicides
 - Men dominate drug poisoning deaths but what about suicide DPDs?
 - Lack of data comparing risk factors/drugs associated with suicide drug poisonings by sex



Study aims

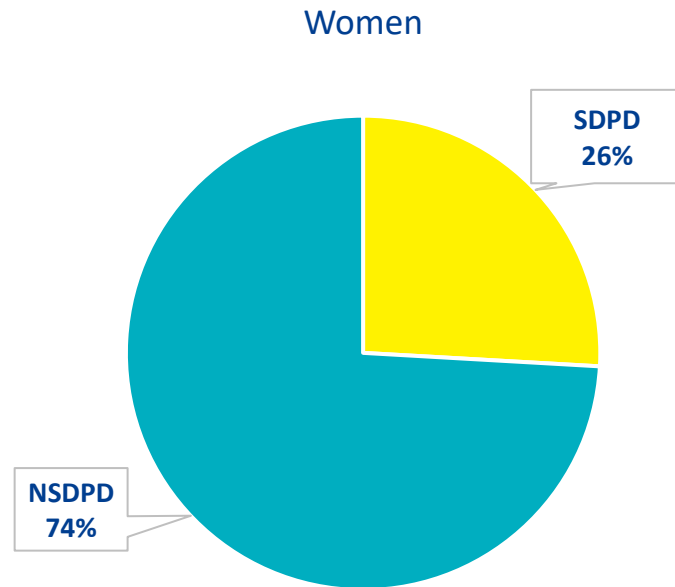
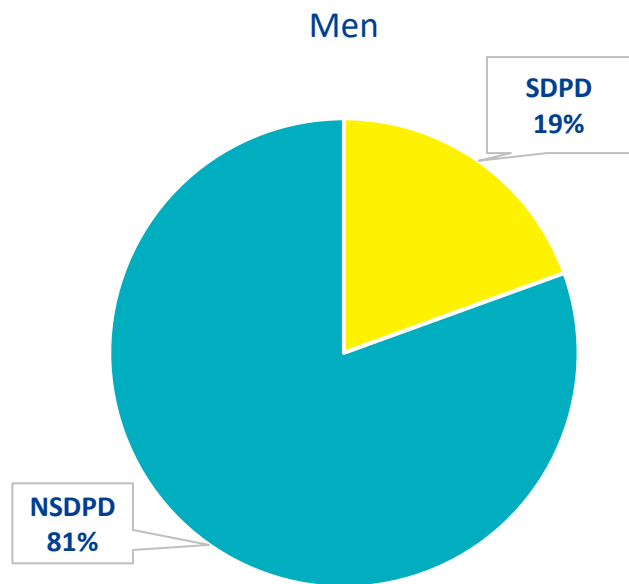
- To investigate factors associated with suicide drug poisoning deaths by sex in Ireland (2015 – 2017)

Data source and definitions used

- National Drug-Related Deaths Index (NDRDI): 2015 to 2017 deaths
- What is a drug poisoning death?
- Definition of suicide used: included both legal ‘beyond reasonable doubt’ and broad ‘based on the balance of probabilities’ categories
 - Suicide Drug Poisoning Deaths (SDPD)
 - Non-suicide Drug Poisoning Deaths (NSDPD)

Results: Drug poisoning deaths

(n=1114, 68% male)



Factors associated with suicide drug poisoning deaths (SDPD)

- **Age:** Median age higher for SDPD (men: 47yrs, women: 49yrs) relative to Non SDPD (men: 40yrs, women: 44.5yrs)
- **Mental ill health:** 7 time more likely to be associated with SDPD (AOR 7.85, 95% CI: 5.46-11.28) – similar for both sexes
- **Chronic pain:** 5 time more likely to be associated with SDPD (AOR 5.57, 95% CI: 3.28-9.46) - Men: AOR 2.73 **Women: AOR 6.75**
- **History of previous overdose:** 5 time more likely to be associated with SDPD (AOR 5.06, 95% CI: 3.39-7.56) - Men: AOR 4.25 **Women: AOR 5.46**

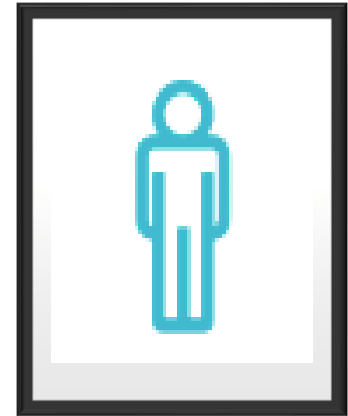
Factors associated with **decreased odds** of suicide drug poisoning deaths (SDPD) relative to Non SDPD

- **NSDPD:** represent 87% of drug poisoning deaths among people with a hx of drug use
- **Hx of incarceration:** decreased odds for men (AOR 0.31) and women (AOR 0.46)
- **Drugs:** Alcohol, heroin and benzodiazepines – decreased odds among both sexes

Factors associated with decreased odds of suicide drug poisoning deaths (SDPD) relative to Non SDPD

Association with decreased odds of SDPD only found for men

- **Unemployment:** men (AOR 0.57, 95% CI: 0.33 - 0.98) - high number of unknown status may be a confounding factor
- **Alcohol dependency:** men (AOR 0.40, 95% CI: 0.24 - 0.68)
- **In receipt of treatment for substance use disorder:** men (AOR 0.32, 95% CI: 0.15 - 0.70)



Drug associated with suicide drug poisoning deaths

- **Non-opioid analgesics:** 4 time more likely to be associated with SDPD (OR 4.06, 95% CI: 2.66-6.18) relative to Non SDPD (men: 3.57, women: 4.52)
- **Antipsychotics:** twice as likely to be associated with SDPD (OR 2.42, 95% CI: 1.63-3.60) - slightly higher for women (men:1.99, women: 2.79)
- **Antidepressants:** twice as likely to be associated with SDPD (OR 2.18, 95% CI: 1.59-2.97) - similar for both sexes
- **Z drugs:** associated with overall SDPD (OR 1.43, 95% CI: 1.00-2.03) but no association when data stratified by sex
- **Pregabalin:** associated with SDPD among women only (OR 1.86, 95% CI: 1.09 - 3.19)

Breakdown of antidepressant drugs associated with suicide drug poisoning deaths

- **Antidepressants:** twice as likely to be associated with SDPD (OR 2.18, 95% CI: 1.59-2.97) - similar for both sexes
- **TCAs:** 3 times as likely to be associated with SDPD (OR 3.08, 95% CI: 1.91-4.97) - slightly higher for men (men: 3.25, women: 2.61)
- **SSRIs:** Statistically significant for overall SDPD (OR 1.65, 95% CI: 1.07-2.55) - but no association when data is stratified by sex
- **Other antidepressants:** Statistically significant for overall SDPD (OR 1.62, 95% CI: 1.09-2.42) but no association when data is stratified by sex

Summary of findings: associations with SDPD relative to Non SDPD

- **Factors:** Age, mental illness, hx of previous overdose and chronic pain
- **Drugs:** Non-opioid analgesics, antidepressants (esp TCAs), antipsychotics, Z drugs and pregabalin

Sex differences

- similar findings for factors associated with SDPD with small variation in magnitude of effect
- slightly higher significance among women for: Non-opioid analgesics and antipsychotics
- pregabalin associated with SDPD among women only

Conclusions

- Association of antidepressant and antipsychotic drugs: in contact with medical services
- TCAs: Appropriate balance between the therapeutic effects of drugs and the risk of potential harm
- WHO recommends a more holistic, person-centred approach which extends beyond pharmaceutical treatment and includes psychosocial, psychological and peer support interventions
- Majority of SDPD had hx of mental illness: need to alleviate stigma associated with mental illness
- Pain management: broader range of non-pharmaceutical therapy to complement pharmaceutical therapy

Dissemination: influence policy and practise



National Office for
Suicide Prevention

- National Office for Suicide Prevention (**NOSP**) – established to strategically lead on suicide prevention across the HSE and in collaboration with multiple sectors



An tÚdarás Rialála Táirgí Sláinte
Health Products Regulatory Authority

- The Health Products Regulatory Authority (**HPRA**): Highlight the impact of TCAs and specific association of pregabalin among women.

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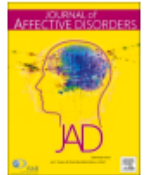


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Research paper

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