

## Harm to Others From Substance Use and Abuse

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## Supplement Aims and Scope

This supplement is intended to focus on harm to others from substance use and abuse. Harm to others from alcohol, opioid, cannabis, cocaine and nicotine use and abuse are within the supplement's scope. Types of harm include violence, family deprivation, crime, and neglect and abuse of children. Harm to others from substance use in understudied populations is also within the scope of the supplement.

*Substance Abuse: Research and Treatment* aims to provide researchers working in this complex, quickly developing field with online, open access to highly relevant scholarly articles by leading international researchers. In a field where the literature is ever-expanding, researchers increasingly need access to up-to-date, high quality scholarly articles on areas of specific contemporary interest. This supplement aims to address this by presenting high-quality articles that allow readers to distinguish the signal from the noise. The editor in chief hopes that through this effort, practitioners and researchers will be aided in finding answers to some of the most complex and pressing issues of our time.

Articles should focus on the harm to others from the use and abuse of:

- Alcohol

- Opioids
- Cannabis
- Cocaine
- Nicotine
- Heroin
- Amphetamine
- Prescription drugs with abuse potential (eg, prescription opioids, benzodiazepines, certain hypnotics and sedatives)

Types of harm may include:

- Violence, including interpersonal violence
- Harm to children, eg, neglect, abuse, or in utero exposure to different substances
- Passive smoking
- Family deprivation
- Crime
- Traffic accidents caused by intoxicated drivers
- Societal costs

At the discretion of the guest editors other articles on other relevant topics within the scope of the supplement may be included.

## Current Knowledge and Research Challenges

We are happy to introduce this special issue on harm to others from substance use and abuse. This is a topic of particular interest for all guest editors involved in the development of

this edition, and one we're excited to present for discussion. Substance use and abuse contribute to harm in both users and third parties.<sup>1</sup> The majority of previous research has focused on harm to the users.<sup>2</sup> Recently, however, there has been



increased interest in the harm experienced by people from others' substance use and abuse.<sup>3–10</sup> While this increased interest has contributed new knowledge on the topic, many questions remain unanswered. For instance, there is limited knowledge regarding the long-term consequences from others' substance use, and many studies have a limited capacity for drawing causal inferences due to small samples sizes and cross-sectional research designs. These are important challenges for this field of research to address in future studies.

The articles in this special issue can be broadly divided into three topics, with some articles incorporating more than one topic. The first topic addresses prenatal substance use, the second focuses on general population surveys on harm from others' drinking, and the third reports on innovative methodological approaches. The articles represent a variety of study designs, including large-scale population surveys, nationwide registry studies, and studies applying neuropsychological tests, and clinical interviews and observations.<sup>11–19</sup> Experts in the field have also contributed with a commentary and an opinion article.<sup>20,21</sup> Additionally, this special issue includes other articles related to harm to others from substance use and abuse that are not described in detail in this editorial.

The direct harms of substance use on the individual user are well known through previous research, as discussed. This special issue hopes to highlight that all people affected by substance use, including the user and third parties, require help, assistance and often treatment when experiencing the harms associated with substance use.

### Prenatal Substance Use

The section on prenatal substance use consists of articles that together provide a snapshot of research, expert opinion and treatment initiatives regarding prenatal substance use.

In their commentary, Terplan and colleagues explore assumptions about prenatal substance use and maternal unfitness.<sup>21</sup> They discuss that despite growing knowledge of addiction as a chronic relapsing medical condition, pregnant women with substance use issues suffer additional stigma. Their maternal fitness is questioned and punitive responses are common. The authors argue that scientific evidence does not support linking substance use with maternal unfitness. Such assumptions may have severe unintended consequences. For example, it may result in pregnant women refraining from seeking both obstetric care and treatment for their substance use, which will negatively affect the health of both mother and child. They argue that instead of pariah status and punishment, pregnant women who use substances should receive compassion and care.

Konijnenberg's review addresses the effects of prenatal substance exposure on children's development from a methodological perspective.<sup>22</sup> She provides a discussion of topics including how properties of a substance, timing, dose, and duration of exposure influence fetal development. The review also covers issues related to the assessment of developmental outcomes and potential confounders. The author argues that systematic,

large-scale, longitudinal studies are needed to address these methodological challenges and to develop appropriate intervention strategies to reduce and prevent developmental problems associated with prenatal substance exposure.

Nørgaard and colleagues studied birth and neonatal outcomes from opioid medication assisted treatment during pregnancy in all female Danish residents with a live birth or a stillbirth from 1997 to 2011.<sup>15</sup> Medical registers were used to identify use of opioids and opioid medication assisted treatment, birth outcomes, and neonatal abstinence syndrome (NAS). Of 950,172 pregnancies, 557 had been exposed to buprenorphine, methadone, and/or heroin. Prenatal opioid use was associated with increased risk of preterm birth, low birth-weight among infants born at term, and being small for gestational age compared to non-opioid exposure. Congenital malformations were more common in children exposed to opioids in utero than in those not exposed. Notably, the risk NAS was higher in neonates exposed to methadone compared to buprenorphine.

Løhaugen and colleagues describe an initiative to establish a regional resource center providing services for children and adolescents 2–18 years old who have been prenatally exposed to alcohol or other substances.<sup>23</sup> The resource center is the first of its kind in Scandinavia. The center will provide information, education, and seminars to health-care and child welfare personnel and special educators regarding identification, diagnosis, and treatment of children prenatally exposed to alcohol and/or other substances. The center will provide specialized health services to children referred from hospitals in the region, and it will initiate multicenter studies on diagnostic processes and intervention evaluation.

### General Population Surveys on Harm from others' Drinking

The section on general population surveys on harm from others' drinking includes empirical studies on harm from others' drinking<sup>11,12,14,19</sup> and one article that addresses methodological issues of using population-based surveys in the study of alcohol's' harm to others.<sup>20</sup>

Rosow presents an opinion article addressing methodological limitations of survey data in the study of substance use and harm's to others.<sup>20</sup> While acknowledging that there are some challenges in using a cross-sectional design to study alcohol's harm to others, she argues that cross-sectional data based on general population samples is an important first step in elucidating how common these problems are in populations.

Four articles using a cross sectional survey design explore harm as the result of other people's drinking. These articles explore a range of different types of harm (eg, family-, financial- and psychological harms, physical injuries, and assault), examine which correlates are associated with these harms, and describe the various relationships of the substance user to the third party.<sup>11,12,14,19</sup> The level of harm in these studies differs between types of harm and different countries. However, certain sub-groups of people are often



associated with reported harm across studies, namely women, young adults, and binge drinkers.

This result is particularly evident in the two articles with cross-country comparisons between the six northern European countries by Moan et al, and Ramstedt et al.<sup>14,19</sup> Both articles conclude that the proportion of people who had experienced harm from others' drinking differed greatly across countries. Ramstedt and colleagues further state that country differences in harm from family and friends' drinking is not fully explained by variations in drinking indicators and other alcohol-related harm measures at the country level.

Greenfield and colleagues report a significant upward trend from 2000 to 2015 in the United States for experiencing financial troubles due to others' drinking, whereas no such trend was found for the other types of harms investigated, namely family and marriage problems, assault, and vandalism.<sup>12</sup> They further found a strong association between having experienced harm from a partner and/or family member's drinking with symptoms of anxiety and depression.

Seid and colleagues studied how sociodemographic variables and drinking relate to a four-way typology of causing harm to others and/or being harmed by others' and one's own drinking.<sup>11</sup> They found that persons with higher education more often reported that others' drinking had a negative effect on relationships with a partner and family, and were at increased risk for financial problems, work problems, and injuries related to others drinking.

In addition to arguing the utility of population-based cross-sectional surveys, Rossow addresses some of the problems and challenges in using survey data to study alcohol's harm to others.<sup>20</sup> For instance, population surveys have a limited capacity for identifying long-term consequences from others' drinking. Further, while alcohol's harm to others always include at least two parties, ie, the drinker(s) and the third party, surveys typically reflect the perspective of only one of the parties. Harms not experienced by individuals, for example, harm to work places in terms of lost productivity, are typically neglected in survey studies. The harm measures used in surveys are often unspecific and vague with regard to the nature and the severity of harm. Further, while survey studies are well-suited to identify events, they are less well-suited at identifying lasting states, such as mental health or financial problems resulting from others' drinking. The author suggests that longitudinal study designs and combinations of population surveys and other data sources may overcome some of the problems related to surveys on alcohol's harm to others.

### **Innovative Methodological Approaches can Provide New Insight**

The articles in this section describe innovative methodological approaches to study harm to others from substance use. The first article describes the great potential in using nationwide registries, either alone or in combination with surveys, to study harm to others from substance use.<sup>18</sup> The next two

articles describe the background and design of cohort studies that combine registry and survey data.<sup>16,17</sup>

Lund and Bukten note that nation-wide registers are rarely used to study harm to others from substance use.<sup>18</sup> Their paper provides an introduction to how registers can be applied to study harm to children or partners from parental or partner substance use, respectively. Advantages include the long-term follow-up of entire or large subsets of a population with minimal attrition. The personal identification numbers and family numbers included in most registers in the Nordic countries allow for the linkage of information from several registers both at the individual and family level. The authors discuss how registry data can be combined with survey data to maximize the benefits from both approaches. Finally, they address methodological and ethical considerations associated with the use of registry data for research purposes.

Lund and colleagues describe the background and study design of a cohort study on long-term adverse effects of parental drinking.<sup>16</sup> They argue that while many studies have addressed adverse outcomes in children of parents with alcohol use issues, less is known about possible long-term effects of more common parental alcohol consumption, such as low consumption and episodic heavy drinking. The extent of harm from parental drinking may therefore be underestimated. Further, due to methodological limitations in most previous studies on parental drinking and negative long-term outcomes in children, they have limited capacity for drawing causal inferences from associations between exposure and outcomes. Using a large general population cohort where both survey data on exposure to parental drinking and registry data on child outcomes are available, the projects' main objective is to study possible long-term effects of parental drinking on children's mental health, substance use, and unemployment as they age. The authors argue that a better understanding of the extent of parental drinking and potential adverse consequences for children can serve as a strong argument for effective strategies to prevent harmful drinking in parents.

Bukten and colleagues describe the background, design, and implementation of a large-scale longitudinal cohort study that combines national survey and registry data to study mental health, substance use, and criminal activity before, during, and after custody among prisoners in Norway.<sup>17</sup> The unique combination of research methods allow for addressing questions that will provide new knowledge that may help reduce relapse rates and prevent overdoses among prisoners. This will likely reduce societal harm in that fewer relapses would mean lower costs associated with treatment after relapse, and fewer crimes to finance substance use after release from prison.

### **Conclusions**

This special issue contributes to the advancement of the field of harm to others from substance use by discussing important issues relating to prenatal substance use, harm from others' drinking, and by highlighting innovative methodological



approaches that can be useful for future investigations. Besides discussing novel findings relating to the types, prevalence, and correlates of harm to others, many of the articles contribute to the research field by addressing knowledge gaps that need to be further explored. Several contributions also addressed common methodological limitations in the literature and suggestions to avoid some of these frequently occurring limitations. Moreover, this issue includes a thought-provoking opinion piece regarding the stigma of substance use among pregnant women. Studies on harms from others substance use and abuse has the potential to influence alcohol and drug policies through increased societal understanding of the negative consequences of substance use and abuse. We hope this special issue spurs discussions and inspires ideas for future work to address the identified gaps in knowledge and methodological challenges facing this important field of research in an effort to reduce substance use related harm.

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### REFERENCES

1. Nutt DJ, King LA, Phillips LD. Drug harms in the UK: a multicriteria decision analysis. *The Lancet*. 2010;376(9752):1558–65.
2. Rehm J, et al. Global burden of disease and injury and economic cost attributable to alcohol use and alcohol-use disorders. *The Lancet*. 2009;373(9682):2223–33.
3. Giesbrecht N, Cukier S, Steeves D. Collateral damage from alcohol: implications of 'second-hand effects of drinking' for populations and health priorities. *Addiction*. 2010;105(8):1323–5.
4. Room R, et al. The drinker's effect on the social environment: A conceptual framework for studying alcohol's harm to others. *International Journal of Environmental Research and Public Health*. 2010;7(4):1855–71.
5. Casswell S, You RQ, Huckle T. Alcohol's harm to others: reduced wellbeing and health status for those with heavy drinkers in their lives. *Addiction*. 2011;106(6):1087–94.
6. Connor J, Casswell S. Alcohol-related harm to others in New Zealand: evidence of the burden and gaps in knowledge. *NZ Med J*. 2012;125(1360):11–27.
7. Storvoll EE, Moan IS, Lund IO. Negative Consequences of Other People's Drinking: Prevalence, Perpetrators and Locations. *Drug and Alcohol Review*. 2016.
8. Rognum K, et al. Paternal and maternal alcohol abuse and offspring mental distress in the general population: The Nord-Trøndelag Health Study. *BMC Public Health*. 2012;12(1):448.
9. Raitasalo K, et al. Hospitalisations and out-of-home placements of children of substance-abusing mothers: A register-based cohort study. *Drug and Alcohol Review*. 2014.
10. Laslett AM, et al. Surveying the range and magnitude of alcohol's harm to others in Australia. *Addiction*. 2011;106(9):1603–11.
11. Seid AK, et al. To Cause Harm and to be Harmed by Others: New Perspectives on Alcohol's Harms to Others. *Subst Abuse*. 2015;9(Suppl 2):13–22.
12. Greenfield TK, et al. Trends in Alcohol's Harms to Others (AHTO) and Co-occurrence of Family-Related AHTO: The Four US National Alcohol Surveys, 2000–2015. *Subst Abuse*. 2015;9(Suppl 2):23–31.
13. Mellingsen S, Torsheim T, Thuen F. Effect of Prepregnancy Alcohol Consumption on Postpartum Relationship Satisfaction and Divorce among Norwegian Mothers. *Subst Abuse*. 2015;9(Suppl 2):85–92.
14. Moan IS, et al. Experienced Harm from Other People's Drinking: A Comparison of Northern European Countries. *Subst Abuse*. 2015;9(Suppl 2):45–57.
15. Norgaard M, Nielsson MS, Heide-Jorgensen U. Birth and Neonatal Outcomes Following Opioid Use in Pregnancy: A Danish Population-Based Study. *Subst Abuse*. 2015;9(Suppl 2):5–11.
16. Lund IO, et al. A Cohort Study on Long-Term Adverse Effects of Parental Drinking: Background and Study Design. *Subst Abuse*. 2015;9(Suppl 2):77–83.
17. Bukten A, et al. The Norwegian Offender Mental Health and Addiction Study—Design and Implementation of a National Survey and Prospective Cohort Study. *Subst Abuse*. 2015;9(Suppl 2):59–66.
18. Lund IO, Bukten A. Harm to Others from Substance Use and Abuse: The Underused Potential in Nationwide Registers. *Subst Abuse*. 2015;9(Suppl 2):33–8.
19. Ramstedt M, et al. Harm Experienced from the Heavy Drinking of Family and Friends in the General Population: A Comparative Study of Six Northern European Countries. *Subst Abuse*. 2015;9(Suppl 2):107–18.
20. Rossow I. How Well Do Survey Studies Capture Alcohol's Harm to Others? *Subst Abuse*. 2015;9(Suppl 2):99–106.
21. Terplan M, Kennedy-Hendricks A, Chisolm MS. Prenatal Substance Use: Exploring Assumptions of Maternal Unfitness. *Subst Abuse*. 2015;9(Suppl 2):1–4.
22. Konijnenberg C. Methodological Issues in Assessing the Impact of Prenatal Drug Exposure. *Subst Abuse*. 2015;9(Suppl 2):39–44.
23. Lohaugen GC, et al. Establishment of the South-Eastern Norway Regional Health Authority Resource Center for Children with Prenatal Alcohol/Drug Exposure. *Subst Abuse*. 2015;9(Suppl 2):67–75.

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Dr Andrea Fielder is a pharmacologist specializing in the area of substance use and pregnancy, with particular interests in opioid maintenance pharmacotherapies. She received her PhD from the University of Adelaide investigating the use of buprenorphine and methadone in pregnancy and their effects on the mother, fetus and neonate. In 2014 she undertook her Fulbright Scholarship at the University of North Carolina Horizons Program in Chapel Hill North Carolina, where she was able to observe the logistics of a comprehensive treatment program to improve outcomes for substance using pregnant and parenting women and their families. She has published extensively including 29 peer reviewed publications, 11 international and national conferences and has provided peer review for 12 journals. Dr Fielder has also significantly contributed to clinical guidelines in the area of substance use and mental health in pregnant and non-pregnant populations, including guidelines for the World Health Organization, the Colombo Plan and the United States International Narcotics and Law Enforcement.



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