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Values of adding the DNBC to register based studies on

SSRI use and risk of miscarriage

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Already known at that time

- Concerns about increased risk of miscarriage following SSRI use in pregnancy
- Studies with self-reported data in teratology information services had reported no statistically

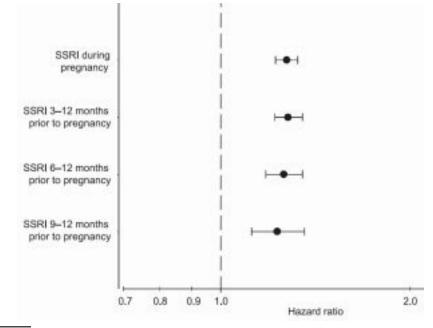
significant effect – properly due to sample size

 Register-based studies had indicated 20-60% increased risk of miscarriage following SSRI use in pregnancy

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Studies based on the Danish registries

Adjusted RR for miscarriage according to AD and depression



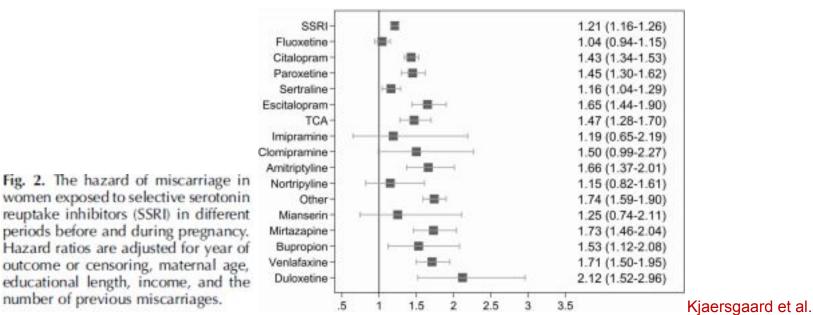
	Diagnosis of depression		No diagnosis of depression		Marginal	
	Exposed	Unexposed	Exposed	Unexposed	Expresed	Unexposed
Dvent:	210	105	2427	110377	2637	110462
No event	1464	715	11962	706049	12826	700764
lishs"	0.125	0.128	0.176	0.195	0.371	0.135
18	0.06 (870:123)		131 (136138)		1.36 (1.22.1.31)	
wer.	1.00 (0.80/1.24)		1.17 (1.13.1.23)		1,14 (1,19,1,16)	

[&]quot;Probabilities of event.

Crude RR for miscarriage according to specific types of AD

Adjusted for resternal age, collabitation, income, education, history of severe mental discreter and discreter and drug abuse in case of the marginal analysis and the startfield analysis for no diagnosis of deprecian.

Adjusted for resternal age, colsobilation, education, and history of severe mental disorder in case of the stratified analysis for a diagnosis of deprecian.



PloS ONE 2013 Andersen et al. Obstet Gynecol 2014

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number of previous miscarriages.

The association could be due to

Misclassification – redeemed prescriptions ≠ use •

Confounding by illness severity – hospital contacts

 Confounding by life-style – no information on health behaviors

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Aim

Advance previous studies by addressing:

Whether mental illness, lifestyle factors and misclassification of



miscarriage, but the association may be biased by maternal mental illness, lifestyle and exposure misclassification.

Methods: A register study on all pregnancies in Denmark between 1996 and 2009 was conducted using individualised data from the Denish National Patient Register, the Medical Birth Register, the Danish Psychiatric Central
Register, the Danish National Prescription database and the Danish National Birth Cohort (DNBC).

Mesufis: A total of 1 191 164 pregnancies were included in the study, of which 98 273 also participated in the DNBC.

Pregnancies exposed to SSRIs during or before pregnancy were more likely than unexposed pregnancies to result
in first trimester miscarriage, hazard rate (HR) = 1.06 [95% confidence interval (CI) 1.04, 1.13] and HR = 1.26
[95% CI 1.16, 1.37], respectively. No difference was observed for second trimester miscarriage. SSRI-exposed
pregnancies without a maternal depression/anxiony diagnosis from a psychiatric department were less likely to

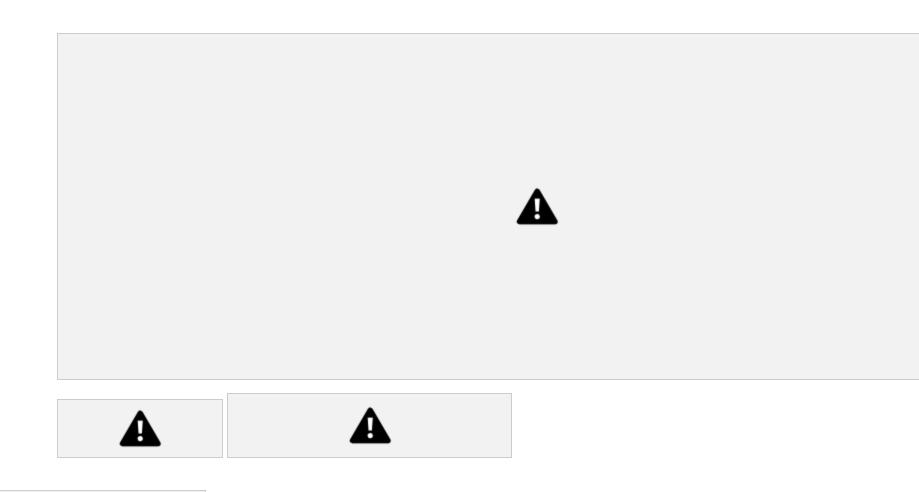
result in first trimester miscarriage than unexposed pregnancies with a diagnosis, HR = 0.85 [95% CI 0.76, 0.95].

SSRI explain the observed association





DNBC outline

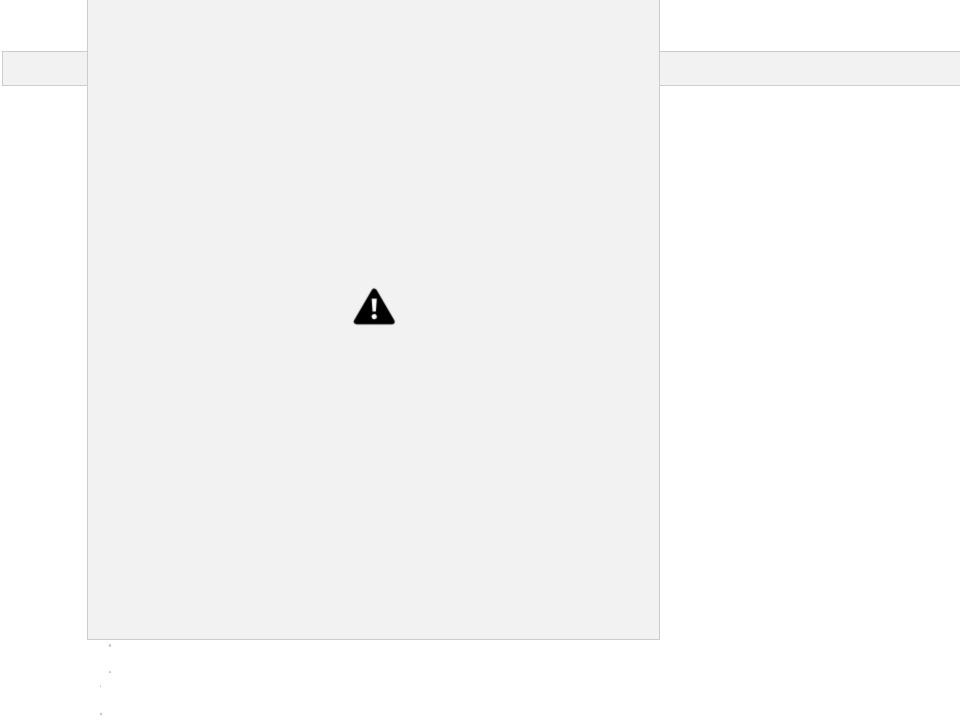


SSRI use

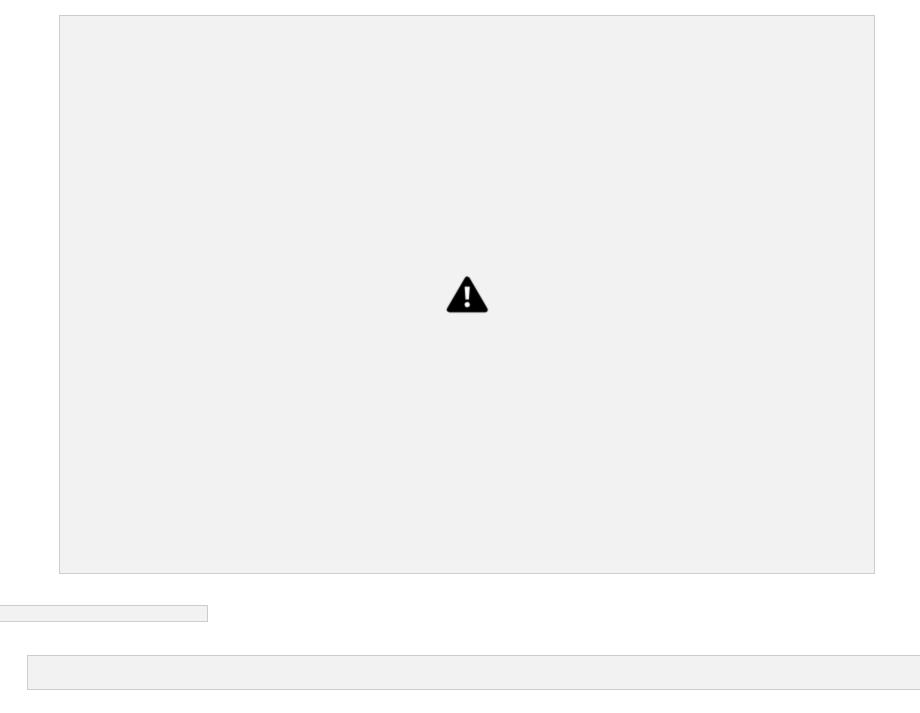
- First trim. use: -4 wks from LMP to termination or GA 84 days
- Discontinued use: -1 to-3 mo. from LMP and not in pregnancy
- Unexposed: no

- redemption from -3 mo. from LMP through end of 1st trim.
- First trim. use: -4 wks
 from LMP to enrollment
 or GA 84 days

Confounding by indication



Misclassification of SSRI



Conclusion

Information bias and especially confounding compete as explanations for the observed

- Higher risk among discontinued users and lower or identical risk among pregnancies exposed to SSRI compared to SSRI-unexposed pregnancies with a recent maternal depression/anxiety diagnosis
- Discontinued users seem to be a better comparison group to SSRI users than SSRI unexposed



Thank you for your attention

Questions?

- DNBC participants
- DNBC funders
- Co-authors

