

Relative Treatment Rates for Sleep Disorders and Sleep Disturbances Following Abortion and Childbirth: a Prospective Record-Based Study

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Abstract: Sleep disorders are linked with mood disorders and other psychiatric illnesses. Many women attribute sleep difficulties to abortion, but this self-diagnosis has not been tested using record-based evidence. Examination of records for 56,824 women with no known history of sleep disorders or sleep disturbances revealed that women were more likely to be treated for sleep disorders or disturbances following an induced abortion compared to a birth. The difference was most pronounced in the first

180 days after pregnancy resolution and was not significant after the third year.

Keywords: Sleep deprivation, anxiety, trauma, post-abortion stress disorder, nightmares, sleep disorders, abortion

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INTRODUCTION

SLEEP DISORDERS ARE COMMON IN THE GENERAL POPULATION AND ARE OFTEN LINKED TO A PREVIOUS OR CONCURRENT MOOD DISORDER.¹ SLEEP DISORDERS are also a common complaint associated with posttraumatic stress disorder (PTSD). For example, a recent study of accident victims revealed that reports of sleep difficulties at 1, 3, 6, and 12 months after the accident were significant predictors of PTSD as diagnosed at one year.² Sleep disturbances may be related to the symptoms of reexperience or hyperarousal included in the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition diagnostic criteria for PTSD.

In a recent two-nation study, many women attributed sleeping difficulties (14% Russian; 23% American) and nightmares (8% Russian; 30% American) to a prior induced abortion.³ These data only reflect self-attributed causal interpretations. However, it is also known that women who have abortions, compared with women who carry unintended pregnancies to term, are at higher risk of generalized anxiety disorder⁴ and depression.⁵ They are also more likely to receive inpatient and outpatient psychiatric treatment, compared with women who deliver, with the highest risk occurring closest to the time of the abortion.^{6,7} Finally, while the authors of one study using "abortion-specific" PTSD questions concluded that only a small minority of women (1.5%) experienced PTSD attributable to an abortion, other research has shown that it is common for women to self-attribute multiple symptoms of PTSD to their abortions.³

No previous epidemiologic studies have examined the incidence of sleep disorders following induced abortion and delivery. Therefore, the goal of this study was to determine if women who

had induced abortions were more likely to be treated for subsequent sleep disorders, compared with women who give birth, using a record-based sample.

METHODS

Variables for this study were selected from a data set provided by the California Department of Health Services for low-income women eligible for state-funded medical insurance, MediCal, who had an induced abortion or delivery in 1989. The data included all "short paid claim" records for these women between July 1988 and June 1994. The data were carefully screened for aberrant, indeterminate, and out-of-scope data. Only women who had an abortion or delivery between January 1 and June 30, 1989, were included. This yielded 12 to 18 months of prior medical records. Women with a history of treatment for sleep disorders during this period prior to the pregnancy outcome were excluded. The final sample comprised 15,345 women who had an induced abortion and 41,479 women who delivered and had no known subsequent history of induced abortion.

Sleep disturbances were identified by International Classification of Diseases-9 (ICD-9) treatment codes for non-organic sleep disorder (3074) and sleep disturbances (7805). There does not appear to be any clear distinction in the ICD-9 between these two codes. Moreover, most women probably received treatment from general practitioners or gynecologists, who were not sleep specialists; therefore, it is likely that little or no distinction was made between these two ICD-9 codes when treatment codes were entered. Therefore, we have treated the two codes as synonymous for the purpose of this analysis.

All data-handling steps were blind to the pregnancy outcome. Odds ratios and 95% confidence intervals were calculated by means of a logistic regression using age and the number of months of eligibility for MediCal coverage as covariates. Months of eligibility represents an appropriate covariate, since some women had lapses of coverage during the period examined.

RESULTS

The results revealed that women who had an induced abortion, compared with women who delivered, were significantly more likely to be treated for sleep disturbances or nonorganic sleep disorders (Table). The observed risk was highest closer to the time of pregnancy outcome and was not significant after the third year.

Disclosure Statement

This was not an industry supported study. Drs. Reardon and Coleman have indicated no financial conflicts of interest.

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Table 1—Treatments for Sleep Disorders and Sleep Disturbances Following Delivery (N = 41,479) or Induced Abortion (N = 15,345) Excluding Cases That Had Any Similar Treatments Within the 12- to 18-Month Period Prior to the Target Pregnancy Event

Length of time since pregnancy event	Delivery N per 100,000	Abortion N per 100,000	Adjusted* Odds Ratio	Adjusted* 95% Confidence Interval	p value
180 days	96	195	1.85	1.15 to 2.97	.011
1st year†	178	339	1.68	1.18 to 2.40	.004
2nd year	142	319	1.40	0.98 to 2.00	.066
3rd year	212	345	1.41	1.00 to 1.99	.049
4th year	211	280	0.99	0.70 to 1.42	.972
1 - 4 years	808	1206	1.29	1.08 to 1.55	.005

*Adjusted for age and months of eligibility.

†Includes claims for the first 180 days.

DISCUSSION

Our findings support the hypothesis that sleep disorders will be more common following an induced abortion compared with after childbirth. Since nonprescription medications for sleeping problems are easily obtainable, the actual number of women in both groups experiencing sleep disturbances may be much higher than the number who received treatment from a physician. Another limitation is that we only compared to delivering women. An additional comparison to a control group of nonpregnant woman is warranted, but we did not have access to such data.

Additional research is necessary to examine if specific symptoms of sleep disturbance are more likely to be associated with induced abortion and to determine if any of these symptoms may be markers for anxiety, depression, PTSD, or other psychiatric reactions. Clinicians may be able to make more-appropriate referrals for counseling if they are aware of these potential relationships.

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