

# Marketing study investigates impact of Viagra TV ads on birth rates

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Many marketing studies have examined the impact of direct-to-consumer advertising of pharmaceuticals on sales and market shares. But in a new study, a researcher from The University of Texas at Dallas

wanted to know whether drug advertising might have some unintended, population-level health consequences.

"A colleague and I were brainstorming, and I wondered, 'Can Viagra ads result in more babies?'" said Dr. Tongil "TI" Kim, assistant professor of marketing in the Naveen Jindal School of Management and one of the study's co-authors. "With a more or less fixed gestation period, my colleague and I knew that we could compare advertising amount and birth rates after 10 months."

In the study, published online April 28 and in the August print issue of the *Journal of Marketing Research*, Kim and Dr. Diwas KC of Emory University explored the impact of direct-to-consumer advertising of erectile dysfunction (ED) drugs on [birth rate](#) at the population level.

The researchers examined local television commercials for three drug brands: Viagra (sildenafil), Levitra (vardenafil) and Cialis (tadalafil). They compared advertising data with hospital data from Massachusetts between 2001 and 2010, and with 15 million birth certificate records from the U.S. between 2000 and 2004.

They used a type of quasi field experiment—a way to show causality in economics and marketing—to address many potential confounding factors. They examined two sets of adjacent rural ZIP codes with similar characteristics, where one side received more ED drug ads than the other side due to discontinuity in TV ad market delineation. In other words, they compared two sets of ZIP codes that are very similar in terms of demographics and socioeconomic factors except for the level of ED drug ads.

Additionally, the researchers considered other variables that might have affected increased birth rates during these time periods, such as inclement or cold weather. They also considered other advertising, over-

the-air signal quality and the possibility of couples moving across the television markets' geographic borders, and determined those factors were not major concerns in the study's setting.

In further robustness checks, the researchers replaced ED drug advertising with advertising for an unrelated drug category and found no impact on birth rates. Also, they did not find significant effects in earlier months as gestation would take at least nine months.

The researchers found that in ZIP codes where more ED drug ads ran than in neighboring ZIP codes, the birth rates were higher 10 months after the advertising aired. Their results showed that a 1% increase in ED drug advertising contributed to an increase of 0.04% to 0.08% of total births. They also found the ads particularly increased births among families with children.

The researchers believe that some viewers watched the ads and purchased ED drugs to improve their chances of achieving pregnancy (consumption effect), while others may have been affected by the suggestive nature of the ads without purchasing ED drugs (media effect).

"As for the content of the ads, many of the ED drug commercials during the data period featured suggestive ad copy and content," Kim said, "which resulted in some people deeming ED drug ads inappropriate for family viewing, as demonstrated by a legislative bill that was introduced in 2009 calling to ban ED drug ads on TV between 6 a.m. and 10 p.m."

Further analysis using Google Trends data indicated that more frequent ED [drug advertising](#) was associated with higher pregnancy-intent keyword searches.

One popular hypothesis for the increased birth rates focused on older male ad viewers taking the pill and fathering more babies, Kim said. The

data, however, did not show an increase in the average age of the fathers. It is possible this effect plays a role equally across different age groups, he said.

An unexpected finding was a stronger effect from the ads on birth rates in regions with lower incomes.

"It was surprising. During our data period, the majority of ED drug consumers paid the full price out of their own pockets because ED drugs were generally not covered by insurance in the U.S.," Kim said.

Based on the increased Google searches with intent to get pregnant and higher birth rates in lower-income areas that cannot be solely explained by the consumption effect, the researchers believe the media effect is possible.

"Can mere TV content affect fertility decisions? Many studies have found this. For example, the launch of TV shows in Brazil about female working professionals was linked to a substantial decrease in the nation's [birth](#) rates," Kim said.

The researchers said their study could provide companies a framework to monitor unintended health consequences in relation to the launch and marketing of pharmaceutical goods. Companies should be aware that, beyond simply increasing sales and market shares, marketing activities may have unforeseen spillover effects on societal outcomes, especially if the products are related to health or wellness.

"This is not only a responsible thing to do, but it can also create creative marketing opportunities," Kim said. "For example, companies selling infant-related medicines and goods like children's cold medicine, baby car seats or diapers might use ED drug ads as an additional market variable to better anticipate and predict local pregnancy rates 10 months

later—essentially their market potential—and improve upon jointly deploying marketing and distribution resources across various regions."

The study also has implications for policymakers. Kim said they should be mindful of the multifaceted and even unexpected outcomes when considering whether to allow direct-to-consumer advertising of pharmaceuticals—something that only is permitted in the U.S. and New Zealand. The Food and Drug Administration relaxed restrictions on direct-to-consumer advertising in 1997. Since then, TV [advertising](#) for pharmaceuticals increased substantially, with more than 80 [drug](#) ads estimated to be aired every hour on U.S. television.

**More information:** Kim et al. Can Viagra Advertising Make More Babies? Direct-to-Consumer Advertising on Public Health Outcomes, *Journal of Marketing Research* (2020). [DOI: 10.1177/0022243720914271](#)

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