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## **Abortion in relation to alcohol intake, tobacco chewing and smoking in pregnant women in Rajasthan**

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### **Abstract**

Health professionals have long considered exposure to tobacco smoke harmful to reproduction, affecting aspects from fertility and pregnancy outcome to fetal and child development. Tobacco smoke contains thousands of compounds, some of which are known to have toxic effects on reproductive health, such as carbon monoxide, nicotine, and metals. Therefore this study was conducted to get an insight of Abortions among pregnant women in relation to alcohol intake, tobacco chewing and smoking.

The sample comprised of 500 pregnant women in 05 eco geographical zones of Rajasthan (Aravalli plains, Mewar Dry- land, Desert, Eastern-hills). The primary source of data was collected through interview schedule. Statistical analysis was done by mean and percentage. The study revealed a relationship between abortion in pregnant women and their alcohol intake, tobacco chewing and smoking. In this study 73 cases of abortions were recorded. Out of these 58.90 percent were from the rural areas while 41.09 percent from the urban area. Statistics regarding abortions caused by alcohol, smoking and tobacco- chewing in women under study were: Alcohol (Rural 23.02% and Urban 20%); Tobacco chewing (Rural 30.23%) and urban 13.33%) and smoking (Rural 27.90 and Urban 16.66%). The percentage of smokers and tobacco chewers were higher in the rural areas of all the eco-geographical zones. However, the percentage of alcohol-consuming women was higher in the urban areas of the Mewar Hills only in comparison to the rest of the zones.

Further way forward is suggested not to take alcohol during pregnancy and if they cannot remain without taking it, they should take only a small quantity at a time so that it does not affect the growing child adversely.

**Keywords:** abortions, pregnancy, alcohol intake, tobacco chewing

### **Introduction**

Pregnancy is the common name for gestation in humans. Health professionals have long considered exposure to alcohol, chewing & smoking harmful to reproduction, affecting aspects from fertility and pregnancy outcome to fetal and child development. Pregnant smokers have a higher chance of miscarriage and stillbirth. Babies of smoking mothers have a higher chance of being born early and too small. Low-birth-weight babies (less than 5 ½ pounds) can suffer serious health problems throughout their lives.

Tobacco smoke contains nicotine, arsenic, various tar products, and carbon monoxide. All of these are damaging to the body, and all of them can reach the baby through the placenta. Alcohol users at any time of last pregnancy were fourfold more likely to use tobacco. Several studies show that people who drink alcohol often also smoke and vice versa. Tobacco epidemic is responsible for 5.4 million global deaths annually Tobacco use is the major public health problem and foremost preventable cause of mortality and morbidity in the world today [1]. Tobacco related deaths among women aged 20 years and above may rise from 1.5 million in 2004 to 2.5 million by 2030 and almost 75% of these projected death will be occurring in low- and middle-income countries [2]. While overall prevalence of global tobacco use among men is declining slowly, the use of tobacco among women is increasing rapidly. The women from developing countries are at a higher risk [3, 4] Abortion in pregnancy is a major public health problem and the focus of widespread media attention.

Rajasthan is a state located in northern India. The state covers an area of 342, 239 square kilometers or 10.4 percent of the total geographical area of India. It is the largest Indian state by area Rajasthan is located on the northwestern side of India, where it comprises most of the

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wide and inhospitable Thar Desert (also known as the Great Indian Desert) The geographic features of Rajasthan are the Thar Desert and the Aravalli Range, which runs through the state from southwest to northeast, almost from one end to the other, for more than 850 kilometers (530 mi). Mount Abu lies at the southwestern end of the range, separated from the main ranges by the West Banas River, although a series of broken ridges continues into Haryana in the direction of Delhi where it can be seen as outcrops in the form of the Raisina Hill and the ridges farther north. About three-fifths of Rajasthan lies northwest of the Aravallis, leaving two-fifths on the east and south direction. The northwestern portion of Rajasthan is generally sandy and dry. Most of this region is covered by the Thar Desert which extends into adjoining portions of Pakistan. (en.m.wikipedia.org)

**Objective**

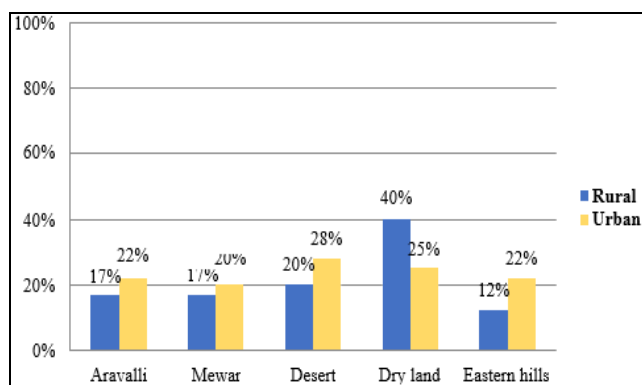
- To study a relationship between abortion in pregnant women and their alcohol intake, tobacco chewing and smoking.
- Further remedies are suggested.

**Methodology**

For the present study sample was selected from five eco-geographical zones (according to Govt. of India 1982 Map) of Rajasthan i.e. (1). Aravalli Plains (2) Mewar Hill (3) Desert (4) Dry-Land (5) Eastern Hills. The Sample Size comprised of 200 Pregnant women selected randomly for study. For Primary data: Various biometric parameters were recorded on a questionnaire. The Secondary Data was collected through newspapers and magazines.

**Findings**

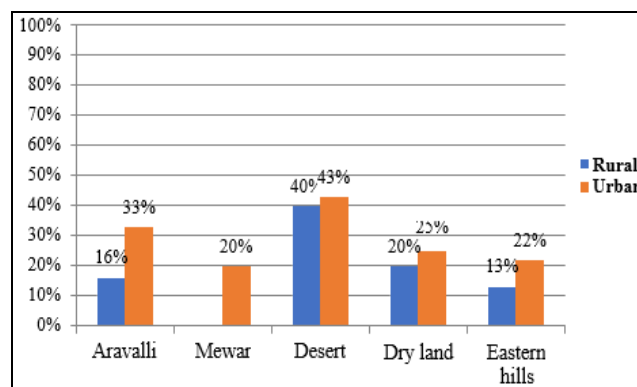
In the study of abortion in relation to alcohol in different zones of Rajasthan. It was found that in Aravalli zone 17% cases of abortion in rural areas were found while this was higher in urban areas (22%). In Mewar zone also this percentage was 17 in rural areas and in urban areas it was 20 percent. In Desert area this was 20 percent in rural areas and 28 percent in women of urban areas, In Dry land this was higher (40 percent) in rural areas than in the urban areas (25), In Eastern hills this percent was 12.in rural area in comparison to urban areas (22 percent).



**Fig 1:** Abortion in Relation to Alcohol Intake

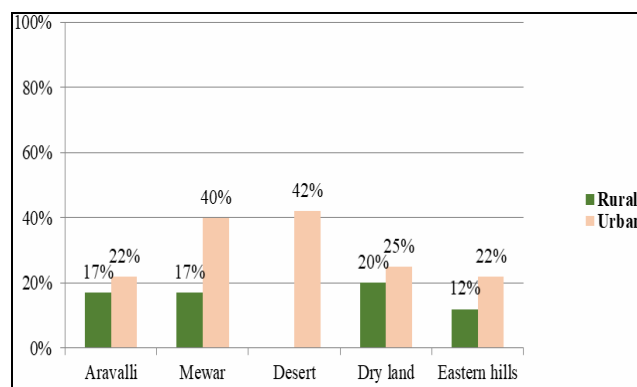
Fig 2 shows that Abortion in relation to smoking in different zones of Rajasthan. It was found that in Aravalli area 16% cases of abortion were found in comparison to the urban area (33), in Mewar no case was found in rural area, this percentage was 20 in urban area, in desert zone in rural area it was 40% and in urban area it was 43 % which was higher

than other areas, in Dry-Land this percentage was 20 in rural area and 25 in urban areas, in Eastern hills this percentage was 13 in rural and 22% in urban area.



**Fig 2:** Abortion In Relation to Smoking

Fig 3 shows Abortion in relation to tobacco chewing in different zones of Rajasthan. It was revealed that in Aravalli zone it was 17 in rural area while 22% in urban areas, in Mewar zone it was 17 in rural area and 40% in urban area, in Desert no cases were found in rural areas in comparison to the urban area (42), in Dryland this percentage was 20 in rural area and 25 in urban areas, Eastern hills this percent was 12 in rural areas and 22% in urban areas.



**Fig 3:** Abortion in relation to tobacco

**Discussion and results**

Alcohol can be a risk for the developing baby during pregnancy, including before when woman knows that she has conceived. Alcohol intake in the first few months of pregnancy can cause growth retardation, effect on brain development, low birth weight and some abnormal facial features in the new born. In this study it was found that in all the zones except Dry – Land the percentage of rural women (who were having abortion) was less than the women from urban areas, but this percentage was higher in Dry land because most of them were from higher income group and most of them were from Rajput families.

This study revealed that the prevalence of tobacco use during pregnancy was that women who were taking alcohol 33 percent of them were having under weight babies in urban areas in comparison to rural areas, because in rural areas less women were taking alcohol and were also taking more locally grown vegetables. Cereals specially bajra. makka, jwar and other grains which are having more fiber and other nutrients, and they were more active even during late stages of pregnancy so they were mentally and physically more healthy and happy than the urban women, who were having the

complaint of high blood pressure, edema, head ache, tiredness etc.

Abortion in relation to smoking in different zones, it was found that in Aravalli, Dry Land and Eastern Hills, the percentage was less in rural area than the women from urban areas and there was no case found in Mewar Hills in rural areas because these women were having good physical and mental health in comparison to the urban area (20%), in Desert zone in both rural and urban women, this percentage was higher than other areas (rural 40% and in urban area it was 42.86%), most of these women were illiterate and doing hard physical work and indulged in smoking habit probably to remove monotony from the routine and some of them were passive smokers also. Similar to studies done by Nisar *et al.* in Karachi (Pakistan) [5], illiterate research participants were found to be more likely to use tobacco than the literate. After adjustment of other variables, education level of the research participant was statistically associated with tobacco use in line to findings from some other studies (6, 25–27). Reason behind protective effects of education may be because people tend to avoid harm related tobacco by avoiding its use when they come to know about it through education [7]. Education may also increase the likelihood that the people come through informative booklets and health messages relating to harmful effects of tobacco use during pregnancy thereby sensitizing them and encouraging them to quit tobacco. Furthermore, as suggested in one of the previous study, higher prevalence of tobacco use among women with lower education level can be because higher social acceptance of tobacco use among illiterate women [7].

Using tobacco during pregnancy does not only affect mother, but also the fetus health. Deep vein thrombosis, pulmonary embolism, myocardial infarction, ectopic pregnancy, placenta previa in mother and preterm birth, still birth, stunted gestational development, congenital heart disease in child are associated with tobacco use during pregnancy [8, 9]. Despite having knowledge on adverse health effects of tobacco use during pregnancy, it was found that the habit of tobacco consumption does not significantly change before and after getting pregnant [10]. Evidence suggests that though some women quit when they become pregnant, many other continue to use tobacco throughout the duration of pregnancy [11]. A relationship between tobacco and miscarriage was also found. Using tobacco during pregnancy does not affect only mother. Abortion in relation to tobacco chewing, it is found that in all the zones this percentage is less in rural area in comparison to urban areas specially in Desert area no case of abortion was found in rural women, they were consuming sufficient amount of milk and milk products, Bajra and some desert vegetables like kaire, sangari, lasoda etc. In Desert the percentage of urban women was higher because most of them were from lower income group, were not educated and they were not aware about their food and health.

### Conclusion

Alcohol, Smoking and Tobacco use during pregnancy was widely prevalent in study. Furthermore, it is seen that nutritional status, habitat illiteracy, physical fitness found to be significantly associated. Thus health care providers and policy makers need to give special attention in those issues and effective implementation of national guideline for effective curbing alcohol intake, smoking and tobacco consumption epidemic during pregnancy.

Recommendations:

- The sooner you quit smoking during pregnancy, the

healthier you and your baby can be.

- Take advice from counselor/doctor/midwife. Antenatal visits to the health facility could be opportunity for counseling.
- Health care administrators and/or public health practitioners should ensure that clinicians or other health personnel have the training and support to deliver consistent and effective intervention to alcohol, smoking and tobacco users.
- Try replacing an alcohol/tobacco chewing/smoking with other stress-easing pleasures:
  - Take up A hobby such as painting or gardening
  - Exercise such as Yoga or Meditation
  - Listen to your favorite music
  - Take A long shower
  - Get a massage
  - Watch Television or Read a Book
- Some people worry about gaining weight when they give up smoking, as the appetite may improve.
- Anticipate an increase in appetite, and try not to increase fatty or sugary foods as snacks.
- Write a list of all the reasons why you want to stop, and keep them with you. Refer to them when you are tempted to light up.
- Tell everyone. Friends and family often give support and may help you.

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