

# Awareness of Oral Contraceptive Pills in Stroke Patients: A Cross-Sectional Survey

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**Abstract:** ***Background:** The women in Reproductive Age group are generally targeted for family planning and therefore many protective methods including oral contraceptive pills are advised to them. Due to lack of awareness about the adverse effects of oral contraceptives is the base of this study. There are paucity of Researches where the awareness is evaluated about the correlation of pills with stroke, thus in this study we wanted to find association between these oral contraceptive pills and its effects in the causation of stroke with its awareness in known cases of stroke females. **Objective:** The objective of this study was to determine the Awareness of oral contraceptive pills in stroke patients. **Methodology:** The study began after Ethical clearance. Consent form was taken from all participants and they were randomly allocated. Total 130 participants were screened, out of them 83 participants were selected according to inclusion and exclusion criteria and the survey was done with the help of a questionnaire which was self made. Statistical analysis was done using t test and unpaired t test and conclusion was drawn. **Result:** Estimates of awareness that oral contraceptive pills are one of the risk factors of stroke was seen to be less in the age group 35 - 45. A good awareness was seen in the age group 18 - 25. The participants in the age group 26 - 35 were moderately aware. According to a questionnaire which was self made ( $p < 0.05$ ). Hypertension and Migraine was also the risk factor that significantly correlated with OCP consumption and stroke. **Conclusion:** We confirm that the longer duration of OCP use significantly increased the risks of stroke. This study significantly suggest that people are aware of stroke, not all of them were aware that oral contraceptive pills use can lead to stroke. Thus, it is significant to carry out health and educational programs which may be critical for the instruction of OCP use and the prevention and management of cerebrovascular diseases as a valuable avenue to enhance awareness about the relationship between oral contraceptive pills and stroke.*

**Keywords:** Stroke, oral contraceptive pills, Self made questioners.

## 1. Introduction

[Cerebrovascular accident] is an acute, focused neurological dysfunction that is clinically caused by vascular injury (infarction, haemorrhage) to the central nervous system. The second most common cause of death and disability globally is stroke.

The primary aim of this systematic review is to evaluate the impact of hormonal contraceptives on the incidence and progression of stroke. We seek to comprehensively assess the risk of venous thromboembolism, ischemic stroke, and myocardial infarction associated with different types of hormonal contraceptives. Our review also aims to examine how the Cerebrovascular accident risk varies with different estrogen doses, duration, regimen, and progestogen types, providing insights into the relative safety of various contraceptive formulations

Ischemic stroke is an uncommon disease among healthy women of childbearing age with an annual incidence increasing with age. The association between OCP use and ischemic stroke risk has been assessed in many studies. [5]

Pregnancy, puerperium, hereditary factors, migraines, substance addiction, and foramen ovale are all common causes or risk factors in young stroke patients [6]

It has been reported women OC users have a two - to - five fold increased risk of stroke compared to non - users. Oral contraceptive use for a long time is associated with an increased risk of arterial thrombosis and blood clotting - the causes of stroke. [7]

OCPs are associated with higher levels of procoagulant components such as fibrinogen, prothrombin, and factors VII and VIII as well as reduced concentrations of antithrombin and tissue factor pathway inhibitor. [6]

Young women are less likely to experience strokes than older women. The baseline incidence of stroke in women under 35 is estimated to be six to 20 per 100, 000 and the incidence rises with age. About one - third of strokes result in death, and their long - term effects can be severe.

## 2. Materials

- Google Forms
- Laptop
- Phone

**Selection Criteria:**

**Inclusion Criteria:**

- 1) pre and post partum women
- 2) women between 18 - 45 years
- 3) Patient with stable vital sign
- 4) Mini - Mental State Examination (MMSE) more than 24.
- 5) Able to give consent and follow instruction
- 6) Female who is aware of oral contraceptive pills.
- 7) History of taking oral contraceptive pills.
- 8) Any previous history of stroke.

**Exclusion Criteria:**

- 1) women between <18 years
- 2) Any metabolic disorder

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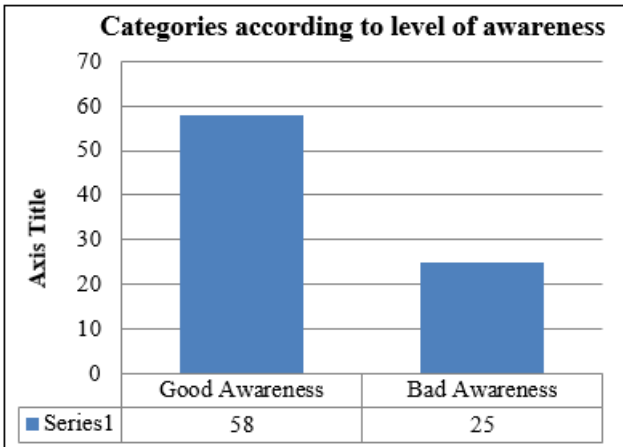
- 3) Any Psychological disorder
- 4) Patient visual and hearing dysfunction
- 5) Patient with other Musculoskeletal Condition
- 6) Patient with severe Psychological problem

**Outcome Measures:** Questionnaire

### 3. Procedure

The present study was design to evaluate risk factor of oral contraceptive pills among stroke patients in rural area. The procedure of data collection involves several steps in which first we will distribute Questionnaire, than second inform consent is provided to participants. Then third demographic details are filled which contains question based on this question the participants are selected in this study. This step determining the participants as pr the inclusion and exclusion criteria participants is as per response than the questionnaire is filled by participants. This is a fourth and final step. Data was collected thought the questionnaire data analysis summarize. the collected data analytical and logically reasoning determine the patterns and enter relations between the subjects, promoting the derivation of conclusion in order to develop conclusion, the outcomes measure determine by deriving the score from questionnaire, the enter data will be configured and statistical presentation augmenting the conclusion /interference to be drawn.

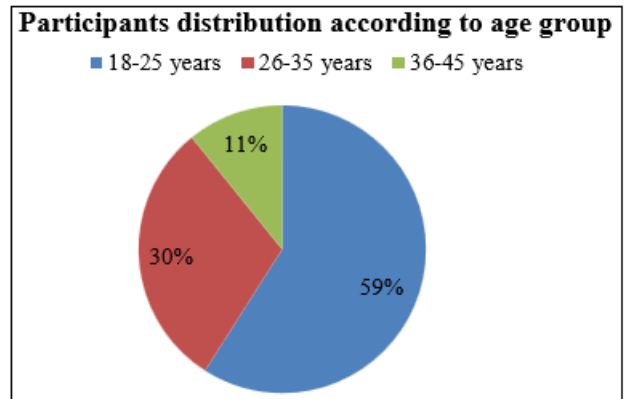
#### Statistical Analysis:



#### Interpretation:

##### From Table no.1

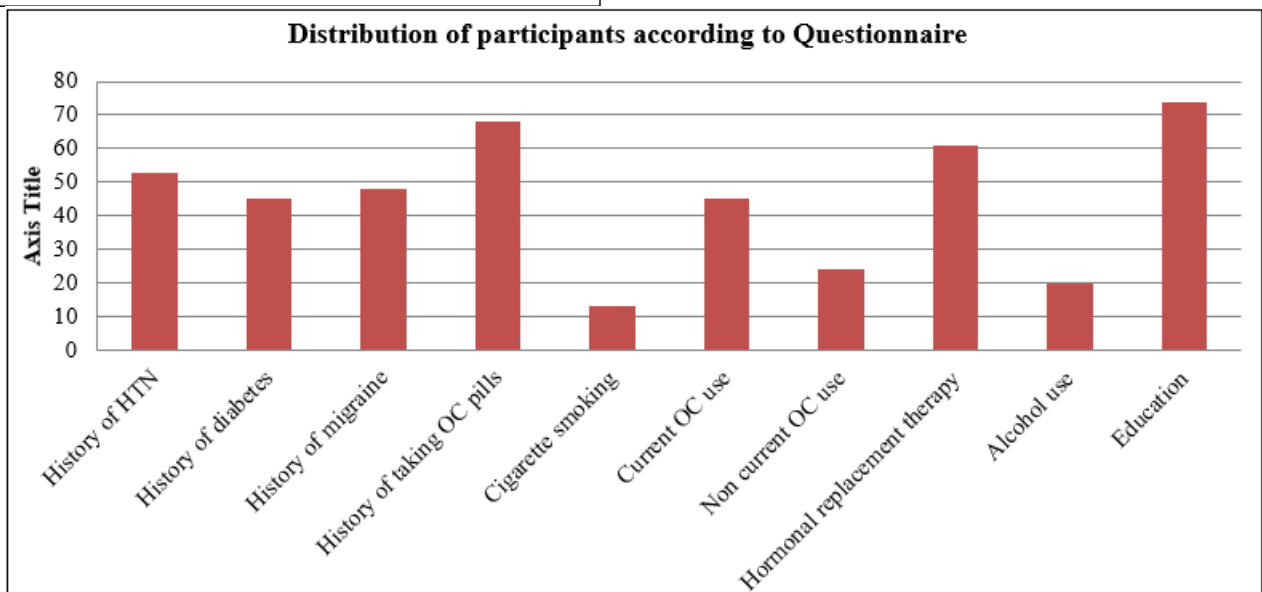
We can conclude that 58% having good awareness and 24% having bad awareness about awareness of OC pills as a risk factor stroke with P=0.0001, which is less than the set p value of 0.05, showing extremely significant.



#### Interpretation:

##### From Table no.2

To begin with the first age group (18 - 25), the maximum number of participants (59%) Second age group (26 - 35) moderate number of participants (30%) moderately aware and third age group (36 - 45) minimum number of participants (11%) minimum aware.



**Interpretation:**

From Table no.3

We can conclude that 53% having History of HTN, 45% History of diabetes, 48% History of migraine, 68% History of taking OC pills, 13% Cigarette smoking, 45% Current OC use, 24% Non current OC use, 61% Hormonal replacement, 20% Alcohol use and 74% Education about awareness of OC pills as a risk factor stroke with  $P=0.0001$ , which is less than the set  $p$  value of 0.05, showing extremely significant.

**4. Result**

During the study period, 83 participants taken, women aged between 18 and 45 years and diagnosed with stroke.

All participants were from Rural population.

All women were married and majority of the women are educated. Majority of women having history of Hypertension (64%) and history of Migraine (58%). Very less are having history of cigarette smoking (16%) and history of alcohol (24%). According to a questionnaire which was self made which consists of 13 question.

Estimates of awareness that oral contraceptive pills are one of the risk factors of stroke was seen to be less in the age group 35 - 45 years (11%). A good awareness was seen in the age group 18 - 25 years (59%).

The participants in the age group 26 - 35 years (30%) were moderately aware. According to a questionnaire which was self made ( $p<0.05$ ). Hypertension and Migraine was also the risk factor that significantly correlated with OCP consumption and stroke.

Though people are considerably aware of stroke and oral contraceptive pill use they are not familiar with the exact effect of oral contraceptive pills on stroke. Looking from an overall perspective it is readily apparent that, it is important to create more awareness regarding the use of oral contraceptive pills which can lead to an increase in the risk to cause a stroke.

**5. Discussion**

The aim of the present study was to evaluate oral contraceptive pills is a risk factors to stroke.

Without taking into account other risk factors, demonstrated that OCP usage in isolation was significantly related to the incidence of stroke in women of a reproductive age. Inappropriate use of OCP without physician prescription is frequent among women of our society. [15]

There was a relatively more OCP consumption in patients suffering venous and thrombotic stroke than in a control population. Various studies have demonstrated the relationship between consuming high dose OCP and an increased incidence of venous and arterial complications such as stroke. There was a trend towards an increase in the female. [14]

It is widely accepted that the other risk factors, including hypertension, migraine and smoking, affect the incidence of stroke in young women. OCP consumption in hypertension and migraine patients increased the risk of ischemic stroke up to three times. other studies that report the role of migraine in the development of stroke, particularly in association with OCP consumption and smoking. [14]

While our study revealed considerable awareness about the signs and symptoms of a stroke. A maximum percentage of people were aware of all the signs of a stroke while a moderate percentage of people were not sure and the least number of participants did not know. As 58% of respondents aware what is stroke while the rest of 25% participants respondents do not aware about stroke. Inappropriate use of OCP without physician prescription is frequent among women of our society. This may be due to a lack of social knowledge. We added incorrect risk factors of a stroke to the list of questionnaires along with oral contraceptive pills, with the help of a questionnaire which was self made, this might have given the reader some indication to provide a positive response.

The majority of participants in all three age groups are aware of the majority of stroke risk factors, as our study encompasses both younger and older generations.

The younger generation is more conscious than the elderly, who are primarily less informed. The generational divide or their lack of familiarity with contemporary conventions could be the cause of this. Many people are not aware that oral contraceptive pills might result in blood clots when taken, in addition to other stroke concerns.

This may be one of the factors contributing to the lack of awareness regarding stroke, its risk, and the connection between the use of oral contraceptives and stroke.

**6. Conclusion**

The awareness of the risk of oral contraceptive pills causing a stroke is familiar to some of the participants. In addition, the mechanism behind this process is known by a few, therefore, it is of prime importance to make people aware and abolish the occurrence of stroke caused by the use of oral contraceptive pills.

We confirm that the longer duration of OCP use significantly increased the risks of stroke. This study significantly suggest that people are aware of stroke, not all of them were aware that oral contraceptive pills use can lead to stroke.

Thus, it is significant to carry out health and educational programs which may be critical for the instruction of OCP use and the prevention and management of Cerebrovascular diseases as a valuable avenue to enhance awareness about the relationship between oral contraceptive pills and stroke.

Further, various educational programs with specific plans targeting different age groups specially in the modern era as the use of oral contraceptives is increasing, the youth should

be held that not only focus on the main risk factors of stroke but also the exact process of them leading to stroke.

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