

# Prevalence of Preeclampsia Among Pregnant Females of District Bahawalpur

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## Author's Contribution

All the authors contributed significantly to the research that resulted in the submitted manuscript.

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## ABSTRACT

**Objective:** To evaluate the prevalence of preeclampsia among pregnant females of Bahawalpur District.

**Methods:** A cross sectional study was conducted from August 2016-2017 after consenting from ethical committee of The Islamia University of Bahawalpur to reveal the epidemiology of the pre-eclampsia in district Bahawalpur. Questioners were developed and distributed to reveal the epidemiology and their corresponding symptoms.

**Result:** The mean age of the participants was 22±5 years. Total n=1126 females were chosen for the study. Results show that n=38(3.7%) females suffering every year in pre-eclampsia while n=1084 (96%) females were not with ailment of pre-eclampsia. n=12(28%) with gestational hypertension=9 (21%) chronic hypertension=20 (47%) with pre-eclampsia and n=17 (40%) with eclampsia=39 (92%) with ailment of protein urea, hypertension n=27 (64%) had edema=33 (78%) having seizures.

**Conclusion:** In Pakistan there is a limited type of cross sectional studies, it is the need of the hour to educate them how to manage to eradicate the maternal and neonatal morbidity and mortality. To ensure the health, safety precaution and prevention and the health awareness programs should be governed.

**Keywords:** Bahawalpur, edema, hypertension, prevalence, pre-eclampsia.

## INTRODUCTION

Hypertension is defined as the medical condition in which blood pressure increase more than 140/90 mmHg [1,2]. It is also developed during the phase of pregnancy after 20 week of gestation called as gestational hypertension [3,4]. If it left to be untreated, it may proceed into a phase called as pre-eclampsia where other sign and symptoms along with hypertension such as protein uria [5,6]. The up next stage of pre-eclampsia is eclampsia [7,8]. Eclampsia is onset of convulsion with pre-eclampsia. It is a main causative factor of morbidity and mortality [9,10]. Hypertensive disorders are account of 6-8% of all pregnancies [11,12]. In Pakistan there are limited type of studies regarding eclampsia and their education. It is the need of the hour to measure the prevalence and educate the patient. Eclampsia affects about 1 woman in every 200 women with ailment of pre-

eclampsia [8]. The multiple pregnancies in vitro fertilization, positive family history, obesity and age greater than 35, are at risk for developing the pre-eclampsia [9,13]. The exact prevalence of pre-eclampsia is difficult to determine because of lack of standard measurements and due to secular variation [14,15]. A study was conducted in USA to document the prevalence and that was 3% of total population [15,16]. In developed countries range is 3.3% [8,17]. Globally it is top listed hazard of maternal mortality [18,19] so, the present attempt has been made to measure the prevalence of pre-eclampsia.

## METHODOLOGY

A six months transverse study was designed to document the prevalence of eclampsia in pregnant women in the district of Bahawalpur. The study was conducted after consent from medical ethical

committee organized by The Islamia University of Bahawalpur. In Pakistan there are inadequate studies held over eclampsia, and its associated features, prevalence magnitude and variability.

After taking consent from the participant's questionnaires were developed and distributed. Total 1126 (n=1126) study participants were selected for this study. The study participants were fully assured that their data will use just for research purpose. Contestants and their care takers were instructed to complete questionnaires carefully and assured them that their history will keep secret. Study questionnaires were designed with reference to previous studies held on eclampsia [14,16].

The very first part of questionnaires comprises the individual bio data i.e. date, name (D/O, W/O), age, contact number, national identity number (CNIC) and mailing address. While the second part comprises of gestational history, hypertension, others sign and symptoms experienced during pregnancy, and the way of their management. The third portion comprises the details about previous obstetrical history, metabolic disease, previous history of hypertension and previous medication intake. Forth part was about the general physical examination and lab test evaluation for assessment of the eclampsia, proteinuria and edema.

In six month duration, total n=1126 pregnancies were reported in the Bahawalpur Victoria Hospital, Bahawalpur Civil Hospital, and all other government hospitals located in the district of Bahawalpur. The complete data from guardian, medical organization and patient were gathered carefully and ensured them that data is collected to progress research.

### Statistical Analysis

Microsoft excel 2007 was used to analyze study data and statistics. The Study data then articulated in standard mean and mean error. A 'p' value of that is equal or less than to 0.05 was considered significant.

## RESULT

The duration of the study was six months. Data were taken and analyzed carefully for the prevalence of pre-eclampsia and their parameters were also measured. In the present study, the mean age of the female participants was  $22 \pm 5$  years. Total n=1126 females were chosen for the study. Results indicate that n=42 (3.7%) females were suffering from pre-eclampsia while n=1084 (96%) females were not

suffering from pre-eclampsia in Bahawalpur district (Table 1).

**Table 1. Age limit and the prevalence of preeclampsia in district of Bahawalpur.**

Age years	Percentage	No. Of patients
15-20	38%	16
20-25	33%	14
25-30	29%	12
Prevalence	Percentage	No. of patients
Pre-eclampsia	3.7%	42
No pre-eclampsia	96%	1084

Table 2 shows the sign and symptoms and their percentage. Results indicate that n=39 (92%) females were with the ailment of proteinuria, while n=42 (100%) in all females those with eclampsia were with increased blood pressure, 27 (64%) were with edema and n=33 (78%) were present with seizures.

**Table 2. Sign and symptoms of participants.**

Signs and symptoms	Percentage	No. of patients
Proteinuria	92%	39
Hypertension	100%	42
Edema	64%	27
Seizures	78%	33

Table 3 indicates n=12 (28%) females were with gestational hypertension, n=9 (21%) chronic hypertension, n=20 (47%) with pre-eclampsia, and n=17 (40%) were with eclampsia=39 (92%).

**Table 3. Type of pregnancy hypertension.**

Type of hypertension	No of participants	Percentage
Gestational hypertension	12	28%
Chronic hypertension	9	21%
Pre-eclampsia	20	47%
Eclampsia	17	40%

## DISCUSSION

Preeclampsia affects the quality of life in the pregnant women. The secular trend is present in pre-eclampsia [15,20] however in Pakistan there is limited type of cross sectional studies, it is the need of the time to educate females how to manage and to eradicate the maternal and neonatal morbidity and mortality. It affects the quality of life and gives huge burden to economy. To ensure the health safety precaution and prevention and the health awareness programs should be governed. Steps should be taken on larger

scales to overcome the development of pre-eclampsia. There are many mis-conceptions present among females so it is necessary to educate the women how to manage and completely move on the treatment option and regular checkup [21].

## CONCLUSION

Pregnancy induced hypertensive disorders are counted as an important factor of perinatal and maternal mortality and morbidity ratio in women. Concrete management steps must be taken to diagnose and manage hypertensive disorders occurring in pregnancy to control the fatal morbidities. The prevalence of hypertensive disorders are increasing worldwide. The secular trend is present in the prevalence of the pre-eclampsia. The present study indicates the prevalence is 3.7% in Bahawalpur district, Pakistan.

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