

# Psychological Consequences of Hypertensive Disorders among Pregnant Women

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**Abstract:-** Hypertension is a general wellbeing worry because of its extent, dangers, trouble in administration, high medicinal and social expenses and extreme cardiovascular and renal confusions. Hypertension is the most widely recognized restorative issue experienced in pregnancy and remains a critical reason for maternal and fetal morbidity and mortality. Aim of the study: determine the prevalence of hypertensive disorders during pregnancy among pregnant women in relation to other medical disorders. In addition, consequences of hypertensive disorders among them. Methodology: An explorative study among 196 pregnant women with hypertensive disorders during pregnancy from 400 pregnancies associated with medical disorders in the high-risk obstetric departments, and the antenatal outpatient clinics at all governmental hospitals in Beni-Suef City. Results: The severe level of stress (53.6%) and depression (51.9%) was found in the age group of 25-30 years. Statistically significant correlation was found between depression and stress levels and women's level of education ( $p= 0.000, 0.002$ ), respectively. Severe level of depression (61.0%) and stress (67.4%) were observed in women who were in their first trimester (P-Value 0.000). Conclusion: Statistically significant association between sociodemographic and obstetrical characteristics and level of stress and depression symptoms.

**Index Terms:-** Hypertensive disorders, psychological distress, pregnancy.

## I. INTRODUCTION

Hypertensive grown-ups will achieve 1.5 billion by 2025, around 30% of the world populace. The quantity of deaths because of hypertension as essential driver was evaluated to be more than 7 million in 2002, roughly 13% of every single reported demise<sup>[1]</sup>. Hypertension is predominant worldwide and current proof recommends further increments in the pervasiveness of hypertension among individuals. Hypertension prompts expanding grimness and mortality. Hypertension expanded logically in more youthful age bunches among the previous 20 years<sup>[2]</sup>. National Hypertension of the Egyptian review of grown-ups directed in six Egyptian governorates, and had been evaluated the pervasiveness of hypertension as 26.3%<sup>[3]</sup>.

Hypertension is a general wellbeing worry because of its extent, dangers, trouble in administration, high medicinal and social expenses and extreme cardiovascular and renal confusions<sup>[1]</sup>. Hypertension is the most widely recognized restorative issue experienced in pregnancy and remains a critical reason for maternal and fetal horribleness and mortality. It confuses very nearly 10% of all pregnancies. Pregnancies confused by hypertension are connected with expanded danger of unfriendly fetal, neonatal and maternal results, including preterm birth, intrauterine development limitation (IUGR), perinatal demise, intense renal or hepatic disappointment, antepartum drain, baby blues discharge and maternal passing<sup>[4]</sup>.

Hypertension during pregnancy is defined as a systolic pressure of 140 mm Hg or higher, a diastolic pressure of 90 mm Hg or higher, or both<sup>[5]</sup>. Hypertension during pregnancy are ordered, as suggested by the National High Blood Pressure Education Program Working Group on High Blood Pressure in Pregnancy, into four classes: The first one is incessant hypertension, the second one is preeclampsia-eclampsia, the third one is preeclampsia superimposed on constant hypertension, and The fourth one is gestational hypertension (transient hypertension of pregnancy or unending hypertension recognized in the last 50% of pregnancy)<sup>[4, 6]</sup>. As a rule, hypertensive issue can confound 12% to 22% of pregnancies and are a noteworthy reason for maternal dismalness and mortality<sup>[5]</sup>.

The dispersion of various hypertensive issue of pregnancy was that, gestational hypertension of pregnancy was diagnosed in 19.2% of cases. 71.1% and 7.7% ladies had all the earmarks of being preeclamptic and eclamptic individually. In India, the rate of preeclampsia is accounted for to be 8-10% of the pregnancies. They likewise watched preeclampsia in 5.4% of the study populace. The occurrence of eclampsia from India is 0.71 %, recurrence of perpetual hypertension in Iran was 0.17%<sup>[7]</sup>. Discoveries of the study by Sajith M., etal (2014) proclaims that, the general commonness of eclampsia in their study was observed to be 0.6 % of pregnancies. The reported endless hypertension was discovered 0.15 % in their study<sup>[4]</sup>.

The first one is chronic hypertension: In a multicenter study, roughly 30% of hypertensive issues of pregnancy were because of endless hypertension while 70% of the cases were diagnosed as gestational hypertension/preeclampsia<sup>[4]</sup>. It is defined by Pushpalatha (2010) as blood pressure of 140/90

mm Hg or higher that was present before pregnancy, before the 20<sup>th</sup> week of gestation, or persisting beyond the 42<sup>nd</sup> postpartum day. Every now and again, ladies with incessant hypertension must change their restorative regimens when they suspect pregnancy to boost the wellbeing of the developing hatchling. Ladies of childbearing age who take unending antihypertensive drugs ought to be advised about the security of propositions meds in case of pregnancy well ahead of time of a potential pregnancy<sup>[5]</sup>.

The second one is preeclampsia-eclampsia: Preeclampsia, otherwise called toxemia. All inclusive, pre-eclampsia representing 3–7%<sup>[8]</sup>, happens in 3% to 8% of pregnancies in the United States. The great clinical triad includes quickening hypertension (systolic pulse 140 mmHg and/or diastolic circulatory strain 90 mmHg on no less than two events four hours separated following 20 weeks' gestation, yet before the onset of work, or baby blues systolic pulse 140 mmHg and/or diastolic circulatory strain 90 mmHg on no less than two events 4 hours separated) with proteinuria (higher than 300 mg/24 hours), or spot pee protein to creatinine proportion P 30 mg/mmol creatinine, or pee dipstick protein P 2+) or any multisystem confusion of pre-eclampsia, and edema. Side effects typically start in the third trimester<sup>[5,9]</sup>.

Pre-eclampsia and eclampsia likewise radically increase the danger of maternal morbidity. Generally speaking, 10-15% of maternal deaths from pregnancy-related causes are connected with pre-eclampsia and eclampsia<sup>[8]</sup>. Although definitive treatment includes delivery of the baby, most ladies with preeclampsia will require treatment with antihypertensive medicines before delivery and for some time postpartum. The reason for preeclampsia is still hazy. Eclampsia is the improvement of stupendous mal seizures in a lady with preeclampsia. Preeclampsia and eclampsia have been connected to the future advancement of cardiovascular ailment. Similarly, as with pregnancy-instigated hypertension, ladies with preeclampsia or eclampsia ought to experience a yearly physical examination and screening for customary danger components for cardiovascular infection after their pregnancy<sup>[5]</sup>.

The third one is preeclampsia superimposed on chronic hypertension: is characterized by Stedman's Medical Dictionary (2016) as The advancement of preeclampsia in a patient with chronic hypertensive vascular or renal sickness; when the hypertension precedes the pregnancy as set up by past circulatory strain recordings, an ascent in the systolic weight of 30 mmHg or an ascent in the diastolic weight of 15 mmHg and the improvement of proteinuria or edema, or both, are required amid pregnancy to set up the analysis<sup>[10]</sup>.

The fourth one is gestational hypertension: is characterized by Pushpalatha (2010) as hypertension that creates in the last a portion of pregnancy, not connected with proteinuria or different elements of preeclampsia, and determines by 12 weeks postpartum. This condition is otherwise called pregnancy-incited hypertension<sup>[5]</sup>. Taha et al (2012) reported that Pregnancy-prompted hypertension was characterized as an expansion of 30 mmHg in systolic blood pressure and 15 mmHg in diastolic blood pressure and benchmark values<sup>[9]</sup>. In spite of the fact that it determines postpartum, ladies with this

condition might be at danger for the improvement of hypertension or cardiovascular illness, or both, later on. They ought to experience a yearly physical examination and screening for conventional danger variables for cardiovascular sickness after their pregnancy<sup>[5]</sup>.

Psychiatric exploration on pregnancy concentrates for the most part on diagnosable mental issue, essentially anxiety, and depressive issue and to some degree on posttraumatic stress issue taking after unfavorable life occasions or labor encounters. In any case, an expansive group of exploratory examination outside psychiatry gives broad data on an extensive variety of clinical manifestations during pregnancy, as measured with screening tools, for example, the Edinburgh Postpartum Depression Scale (EPDS), for instance, the Beck Depression Inventory, or the Center for Epidemiological Studies Depression Scale<sup>[11]</sup>.

Mood disorders are common in women during their childbearing years. Pregnancy period is thought to be moderately high-risk times for ladies with pre-existing psychiatric particularly, particularly for depressive episodes in ladies. The prevalence of depression has been reported to be between 10 and 16% during pregnancy<sup>[13]</sup>. Depression is the most common psychiatric disorder associated with pregnancy. Pregnant women may also suffer from anxiety disorders, such as panic disorder, obsessive-compulsive disorder, and eating disorders<sup>[12]</sup>.

In depressed women, there will be a determined, pervasive discouraged state of mind or a diminished in pleasurable activities for a time of no less than two weeks, alongside with crying spells, feelings of hopelessness, helplessness and worthlessness, and suicidal ideations. She might be engrossed with blame in regards a lot of acts in the past. There will be a predominant socio-occupational deterioration from her premorbid level of functioning<sup>[13]</sup>. Depression that is left untreated during pregnancy, either in light of the fact that the manifestations are not perceived or on account of concerns in regards to the impacts of medications, can prompt a large group of negative outcomes, incorporating absence of consistence with prenatal care recommendations, poor nutrition and self-care, self-medication, alcohol and drug use, suicidal thoughts and thoughts of harming the fetus, and the development of postpartum depression after the baby is conceived. An extra and essential ramification of untreated maternal despondency is the mental impact that the sorrow may have on the baby<sup>[12]</sup>.

## II. SIGNIFICANCE THE STUDY

Data from the Egyptian National Hypertension Project (NHP) demonstrated that hypertension is common among Egyptians<sup>[14]</sup>. Hypertensive pregnancy disorders complicate roughly 10% of all pregnancies. They may trade off placental functioning and, along these lines, influence the fetal formative milieu. It is along these lines exceedingly conceivable that they have results for the formative outcomes of the posterity. Be that as it may, their role in the formative plasticity phenomenon named 'programming' remains generally unexplored<sup>[8]</sup>.

Interpersonal troubles, interruptions in mother-kid associations and connection because of maternal depression may profoundly affect baby improvement. Offspring of depressed moms will probably have behavioral issues and show interruptions in cognitive and emotional development. Studies have additionally demonstrated that depression during pregnancy essentially expands a lady's risk for post-partum depression. Antenatal depression therefore may have noteworthy unfavorable impacts that may extend beyond pregnancy and have more significant long-term consequences for psychosocial functioning<sup>[13]</sup>.

The vast majority of the studies done in Egypt analyzed the prevalence of hypertension in adults and during pregnancy. Thus, little is thought about the prevalence of hypertension among other medicinal issue. The present study was directed to determine the prevalence of hypertension among pregnant ladies in relation to other medical disorders. Also, the study distinguished the psychological disturbances (depression and stress) among pregnant women associated with hypertension.

Hypertensive pregnancy disorder complicates 10% of all pregnancies. Pre-eclampsia, an extreme type of these disorders represents for up to 4%. These disorders are described by new-onset hypertension after 20 weeks of gestation, with proteinuria being an additional characteristic in preeclampsia. The etiology of hypertensive pregnancy disorders remains unknown. Hypertensive disorders not only threaten the health and wellbeing of the mother, however may also compromise fetal development and cause extreme pre and postnatal complications in the offspring<sup>[15]</sup>.

### III. AIM OF THE STUDY

The present study was conducted to determine the prevalence of hypertensive disorders during pregnancy among pregnant women in relation to other medical disorders. In addition, the study identified the consequences of hypertensive disorders among them to shed light psychosocial support available for them.

### IV. RESEARCH QUESTIONS

- What is the prevalence of hypertensive disorders during pregnancy among pregnant women in relation to other medical disorders in Beni Suef?
- What is the relationship between hypertensive disorders during pregnancy among pregnant women and depression and stress levels?

### V. METHODOLOGY

#### Design and Population

This explorative study was conducted from 1<sup>st</sup> February to 30<sup>th</sup> July 2015 among 196 pregnant women with Hypertensive disorders during pregnancy, which were booked in the high-risk obstetric departments, and the antenatal outpatient clinics at our governmental hospitals in Beni-Suef City. Study sample selected purposively. Total selected sample was 400 pregnancies associated with medical disorders.

#### Data Collection

The researcher arranged with the director of hospitals for the proper available days for data collection the researcher started to collect data three times per week. Data were collected using a self-constructed face-to-face interviewed questionnaire. It is designed by the researcher based on the related literature. The clarity of language, the applicability of items, and time consumed for filling in the tools' items are evaluated by a pilot study which included about 10% of the study sample. Each woman took 20-30 minutes to complete the tool in the manner of privacy in the presence of researchers. Ethical issues, including anonymity, confidentiality and voluntary participation were considered before starting data collection. The study tool divided into three parts and covered the following items; part (1) socio demographic data as age, education,..... Part (2) women's obstetrical history as gestational age, parity, ..... part (3) the presence of depression and stress symptoms known to be associated with hypertensive disorders during pregnancy by using the Depression Anxiety Stress Scale (DASS-21)<sup>[16]</sup>. The DASS Depression focuses on reports of low mood, motivation, and self-esteem. A respondent indicates on a 4-point scale the extent to which each of 21 statements applied over the past week. Each point is scored from 0 (did not apply at all) to 3 (applied very much or most of the time). Higher scores on each subscale indicate greater levels of stress.

#### Data Analysis

The collected data were entered in Excel and was analyzed using statistical package for social science (SPSS) version 16. Data were presented using descriptive statistics in the form of frequencies and percentages for qualitative variables. Continuous variables were reported using mean  $\pm$  S.D (Standard deviation) for the normally distributed variables. Univariate analysis was done using Chi-square test to find the association between outcome and the other study variables, Pie, Column and Bar charts for the graphical presentation. All analysis was considered statistically significant at 5% level (p value <0.05).

### VI. RESULTS

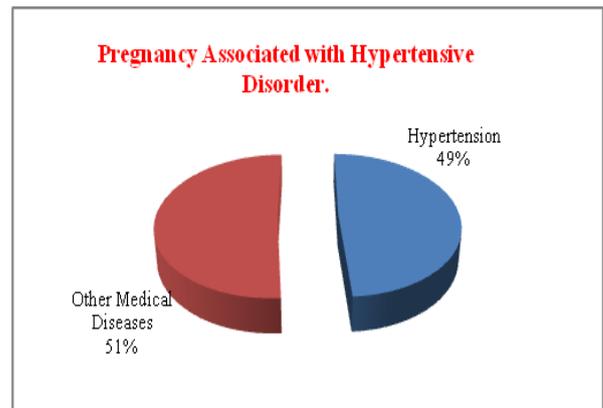
The total study sample was 400 pregnant women associated with various types of medical disorder of which 196 women were diagnosed with hypertensive disorders during pregnancy, the prevalence of hypertensive disorders during pregnancy was 49.0% as presented in **Figure (1)**.

Various levels of depression and stress associated with sociodemographic characteristics of the study sample are presented in **Table (I)**. The study sample mean age was  $25 \pm 4.495$ . It was observed that the highest percentage of severe level of stress (53.6%, P-Value 0.005) and depression (51.9%, P-Value 0.224) was found in the age group of 25-30 years. Statistically significant correlation was found between depression and stress levels and women's level of education (p= 0.000, 0.002), respectively. In addition, the highest percentage of severe level of stress (51.9%, P-Value 0.055) observed in housewives while depression (65.9%, P-Value 0.000) was found in working ones. Moreover, the highest percentage of mild to moderate level of depression (86.6%) and stress (89.4%) was found in low family adequacy group.

Obstetric characteristics and associations with depression and Stress severity were clarified in **Table (II)**. The study sample mean gestational age was  $12.06 \pm 8.91$  week. The majority of the women belonged to severe level of depression (61.0%) and stress (67.4%) were observed in women who were in their first trimester (P-Value 0.000). Regarding gravidity, it is clear that multigravida had the highest percentage of mild to moderate level of depression (78.8%) and stress (77.6%). Statistically significant correlation was found between depression (0.000&0.001) and stress (0.011 & 0.002) levels and women's history of abortion and birth defects, respectively.

The distribution of the studied sample as regards associated between hypertensive disorders during pregnancy and depression and stress symptom severity is presented in **Figure (2)**. It demonstrates that 62.2% of the study sample had severe depression while 42.4% of them had mild to moderate level. Moreover, 59.1% of the study sample had

severe stress while 45.3% of them had mild to moderate level. Statistically significant correlation was found ( $p=0.000$ ).



**Figure 1:** Pregnancy Associated with Hypertensive Disorder.

**TABLE I:** DEMOGRAPHIC CHARACTERISTIC AND ASSOCIATIONS WITH DEPRESSION AND STRESS SEVERITY.

Variables	Depression				Stress			
	Absent	Mild to Moderate	Severe	P-Value	Absent	Mild to Moderate	Severe	P-Value
<b>Age</b>								
< 20-	0.0%	11.1%	13.4%	0.224	22.4%	13.0%	6.6%	0.005
20-	47.4%	33.2%	27.4%		32.8%	29.2%	33.1%	
25-	52.6%	46.5%	51.9%		31.0%	50.3%	53.6%	
30-	0.0%	9.2%	7.3%		13.8%	7.5%	6.7%	
<b>Educational level</b>								
Primary education (read write)	15.8%	12.4%	3.0%	0.000	0.0%	9.3%	11.0%	0.002
Secondary education or equal	84.2%	83.9%	84.8%		100.0%	85.7%	78.0%	
University education	0.0%	3.7%	12.2%		0.0%	5.0%	11.0%	
<b>Occupational status</b>								
Working	0.0%	50.7%	65.9%	0.000	58.6%	60.2%	48.1%	0.055
Housewives	100.0%	49.3%	34.1%		41.4%	39.8%	51.9%	
<b>Family income adequacy</b>								
Enough	15.8%	13.4%	13.4%	0.938	0.0%	10.6%	20.4%	0.000
Not enough	84.2%	86.6%	86.6%		100.0%	89.4%	79.6%	

**TABLE II:** OBSTETRIC CHARACTERISTICS AND ASSOCIATIONS WITH DEPRESSION AND STRESS SEVERITY.

Variables	Depression				Stress			
	Absent	Mild to Moderate	Severe	P-Value	Absent	Mild to Moderate	Severe	P-Value
<b>Trimesters</b>								
1st Trimester	100.0%	78.8%	61.0%	0.000	100.0%	68.3%	67.4%	0.000
2nd Trimester	0.0%	12.4%	26.2%		0.0%	19.9%	21.0%	
3rd Trimester	0.0%	8.8%	12.8%		0.0%	11.8%	11.6%	
<b>Gravida</b>								
Multigravida	47.4%	78.8%	69.5%	0.004	75.9%	77.6%	69.1%	0.170
Primigravida	52.6%	21.2%	30.5%		24.1%	22.4%	30.9%	
<b>Parity</b>								
Multiparous	94.7%	47.5%	54.3%	0.000	51.7%	53.4%	51.9%	0.965
Nulliparous	5.3%	52.5%	45.7%		48.3%	46.6%	48.1%	
<b>History of abortion</b>								
None	21.1%	92.2%	68.3	0.000	82.8%	66.5%	89.0%	0.011
Once or more	78.9%	7.8%	31.7		17.2%	33.5%	11.0%	
<b>History of birth defects</b>								
None	100.0%	71.9%	55.5%	0.001	74.1%	73.9%	57.5%	0.002
Once or more	0.0%	28.1%	44.5%		25.9%	26.1%	42.5%	

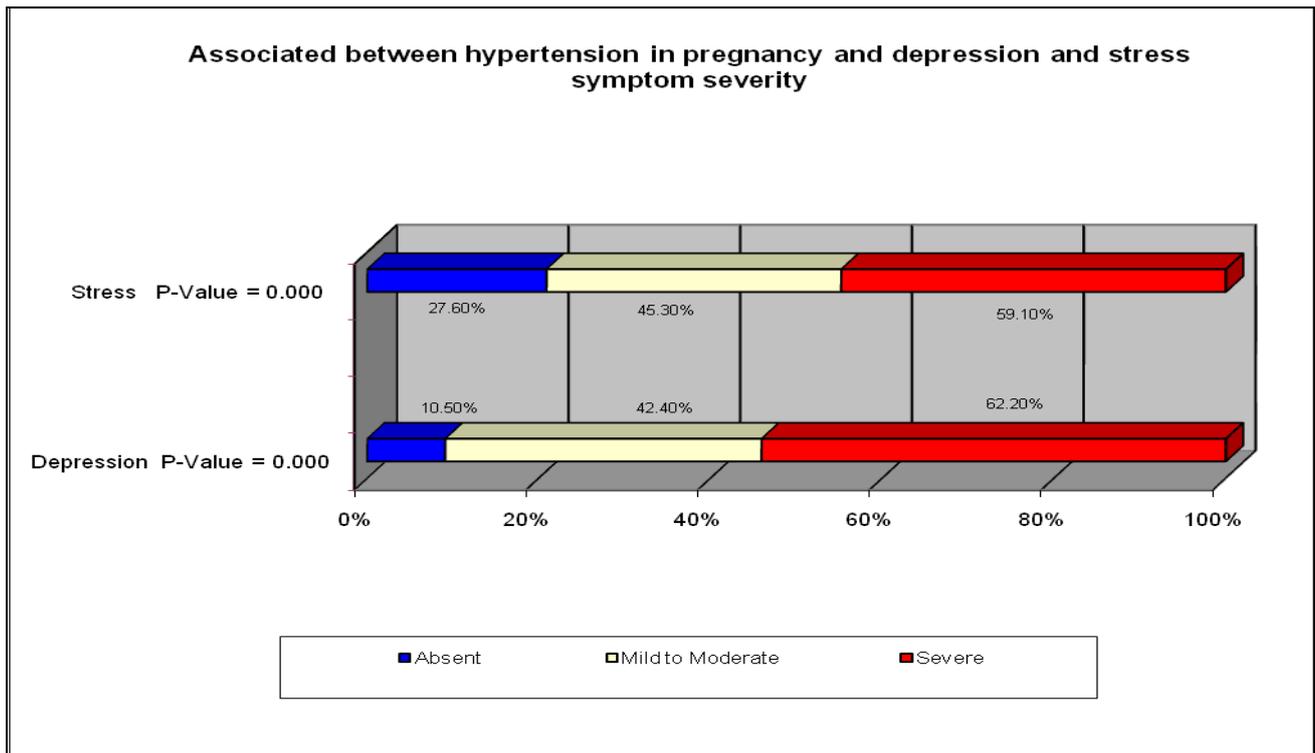


Figure 2: Associated between hypertension in pregnancy and depression and stress symptom severity.

## VII. DISCUSSION

Hypertensive disorders during pregnancy draw vigorously on ladies' every day working. The disease, treatment and related requests greatly affect physical and emotional prosperity and interfere with ladies' social roles. As indicated by the World Health Organization, non-transmissible diseases will be the leading cause of practical inability in the following two decades and, among chronic degenerative conditions, arterial hypertension will be the most imperative cause [17]. Universally, hypertensive pregnancy disorders muddle around 6-16% of all pregnancies [8]. Despite the fact that the rate of eclampsia in the United Kingdom (UK) seems to have fallen, hypertension in pregnancy remains one of the main sources of maternal death in the UK [6].

The gestational period is thought to be moderately high-risk times for ladies with previous various psychological well-being issues which emerge during or not long after pregnancy. These incorporate depression, psychotic disorders, anxiety disorders, and schizophrenia [13, 18].

Between 14% to 23% of pregnant ladies will have depressive manifestations while pregnant [19]. There is no doubt that extreme clinical depressive manifestations are the exacting and perilous disease. Be that as it may, sadness is a normal and healthy response to numerous life circumstances, as are stress and anxiety [18, 20]. Stress variables may influence uterine circulation, thus diminishing blood stream achieving the decidua, and in this way influencing the implantation site [13]. Evidence for impacts of maternal stress in pregnancy on adverse neurodevelopmental outcomes for the kid is

considerable, through a procedure known as 'fetal programming'. Late research on side effects of anxiety and depression during pregnancy is inspected correspondingly inside two subsections recognizing discoveries on PTB from those on LBW [11, 21].

The purpose of this article is to quickly audit aftereffects of the most recent research on the impacts of negative affective states (referring throughout to stress and depression) in pregnancy, basically in regards to the effects of Hypertensive disorders during pregnancy. We direct attention particularly to late research on pregnancy stress and depression, a more up to date idea that is among the strongest maternal risk factors for unfavorable maternal and child outcomes. By highlighting these advancements, we would like to empower synthesis and new headings in research and to encourage evidence-based practices in screening and clinical protocols.

Hypertensive disorders of pregnancy are thought to be a noteworthy overall wellbeing issue running an expanded danger of Perinatal and maternal mortality. The prevalence of Hypertensive disorder in Pregnancy changes as indicated by geographic districts of the world and extents from 1.5% of Sweden's to 7.5% in Brazil [4]. In Western Australia alone, Hypertension occurs in 4.0% of all pregnancies, 2.7 % because of Pre-Eclampsia and 13.6% because of Essential Hypertension. 2.4 % of perinatal deaths are because of hypertension in pregnancy [6]. As indicated by our study, the frequency of hypertensive disorders of pregnancy was 49% of all pregnancies connected with medical disorders. This outcome is in accordance with Sajith M., et al (2014) who

reported in their study that, the recurrence of hypertensive disorders of pregnancy was 7.8%. The variations can be credited to racial contrasts, financial status and some different parameters like parity and age<sup>[4]</sup>. Additionally, Yonkers K., et al (2009) included that, somewhere around 14% & 23% of pregnant ladies will encounter a depressive disorder while pregnant<sup>[19]</sup>.

The results of the current study illustrated that, 49% of the study subject had a hypertensive disorder associated with pregnancy. Concerning to the level of psychological symptoms (depression and stress), the present study showed that the majority of women had severe level of depression (62.2%) and stress (59.1%) symptoms, while 42.4% & 45.3% of them had mild to moderate level. Highly Statistically significant associations between woman's hypertensive disorder and severity level of psychological symptoms (depression and stress),  $p = (0.000 \text{ \& } 0.000)$ , respectively. This result is consistent with the recent research which demonstrates that significant associations between depressive symptoms and medical complications worldwide the assessment of the depressive effect on these patients should always take the medical burden of their disease into consideration<sup>[22]</sup>. Additionally, Santvana S., et, al. (2005) showed that The prevalence of depression has been reported to be between 10 and 16% during pregnancy<sup>[13]</sup>.

Socioeconomic factors such as low income, poor education, residence in low income areas and poor access to health services are strong indicators of the development of hypertension. Age has an essential impact on the occurrence of hypertensive disorders of pregnancy. Youthful primigravida under 20 years and all patients over 30 years have an expanded shot of hypertension. Preeclampsia and eclampsia were clearly higher in more youthful pregnant ladies, less than 30 years. The frequency of chronic hypertension has all the earmarks of being higher in lady aged 30 years or more<sup>[4]</sup>. In our study highest incidence of the psychological disorders which associated with medical disorders and occurred among those aged  $\geq 20$  to  $\leq 30$  years. This could be because the majority of conceptions take place in this age group in our country. These symptoms range from mild to severe. All women over 25 years and 30 years have an expanded possibility of mild to moderate symptoms of depression and stress (46.5% & 50.3%), respectively. Additionally, they had severe symptoms of depression and stress (51.9% & 53.6%), respectively. A recent study has found increasing evidence of associated maternal age with stress ( $p=0.005$ ). This results consistent with the study of Moussa M., et, al. (2016) who found a statistically significant relationship between hypertension and age and stress<sup>[2]</sup>. Another study by Simão et al. (2008) as cited by White Moussa M., et, al. (2016) demonstrates that the risk factors for hypertensive disease, can be mentioned as age, genetic (race and family history) and environmental factors, including excessive consumption of salt and fat<sup>[23]</sup>.

On the off chance that wide screening for symptoms associated with medical disorder during pregnancy. The results are declared high rates of negative affective symptoms (depression & stress) with insufficient or ineffective education for women. Screening for pregnancy stress and depressive

symptoms in pregnancy illustrated that, women with higher education had the least symptom's rate of mild to moderate depression & stress (3.7% & 5%), respectively. The same was observed with severe symptoms of depression & stress (12.2% & 11%), respectively. Highly and moderately significant correlation ( $p=0.000 \text{ \& } 0.002$ ), respectively, was found. These findings are congruent with the result of various studies as they denote that, low education has been connected with the forgetting of medical data & more negative attitudes<sup>[24, 25]</sup>.

Al-Nozha et al. (2007) established that hypertension was essentially more in the low-income group<sup>[2, 26]</sup>. And in addition Kearney et al. (2005) and Soliman et al. (2014) have emphasized that low financial status was connected with hoisted rates of blood-pressure related cardiovascular illness<sup>[2, 27, 28]</sup>. A portion of the stressors that usually influence ladies during pregnancy around the world are low material resources, unfavorable employment conditions, overwhelming family and household responsibilities, strain in intimate relationships, and pregnancy complications<sup>[11]</sup>. According to the present study results, a statistically significant relationship was revealed between low family incomes with elevated symptom's rate of mild to moderate depression & stress (86.6% & 89.4%), respectively, among the lowest-income group. In addition, depression & stress were significantly more in the working group than in housewives ( $p= 0.000 \text{ \& } 0.055$ ) for depression & stress, respectively. However, this result was contradicted by Upkong's (2006) as he found that, the rate of psychological disorder was higher among housewives' women<sup>[29]</sup>. This finding goes to the results of other researchers<sup>[30, 31]</sup>. They establish that of positive psychological disorder were observed more in outside employees than in housewives.

The incidence of pregnancy induced hypertension is conveyed unevenly all through late gestation, expanding with advancing gestation. Roughly 50% of pregnancy affected hypertension cases happen during the term over than 37 weeks' gestation, including most instances of gestational hypertension. Early-onset pregnancy induced hypertension is regularly connected with extreme preeclampsia<sup>[4]</sup>. The reported gestational age of onset of preeclampsia is more than twentieth week of pregnancy in the vast majority of patients, however as of late a case was accounted far from Japan with typical features of preeclampsia occurring at under twentieth weeks of gestation<sup>[4]</sup>.

Pregnancy either prompts or worsens pre-existing stress and thus stress appears to negatively affect pregnancy, particularly in the primary trimester. The time of the greatest stress during pregnancy, the primary trimester, is likewise the time of the most elevated rate of pregnancy loss<sup>[13]</sup>. The mean gestational age at the present study was  $12.06 \pm 8.91$ , which is not comparable with other studies (i.e. 32.7 and 37 weeks)<sup>[4, 32, 11]</sup>. A large body of research is presently accessible in regards stress and affective states during pregnancy as indicators of particular pregnancy conditions and birth outcomes<sup>[33]</sup>. Carter D., etal (2005) reported that, during pregnancy, symptoms of depression such as changes in sleep, appetite, and energy are often difficult to distinguish from the normal experiences of pregnancy<sup>[12]</sup>. The current study revealed that the first trimester of pregnancy is the greatest

one associated with mild to moderate level of depression and stress (78.8% & 68.3%), respectively, while the third trimester is the least one (8.8% & 11.6%). The highly significant relationship was revealed ( $p=0.000$ ). These results not consistent with the study of Carter D., et al (2005) who reported that, in spite of the fact that up to 70% of ladies report some negative mind manifestations during pregnancy; the prevalence of ladies who meet the symptomatic criteria for depression has been appeared to be between 13.6% at 32 weeks' gestation & 17% at 35 to 36 weeks' gestation. The course of depression differs all through pregnancy: most studies report a manifestation crest during the 1<sup>st</sup> and 3<sup>rd</sup> trimesters & improvement during the 2<sup>nd</sup> trimester. In a recent study, more ladies got to be depressed somewhere around 18 and 32 weeks' gestation than between 32 weeks' gestation and 8 weeks postpartum<sup>[12]</sup>.

Preeclampsia is basically viewed as a sickness of 1<sup>st</sup> pregnancy. In our study, 73.5% were multigravida and 26.5% were primigravida. Other authors have reported primiparity in 52-73% ladies with preeclampsia. As indicated by Hellman incidence of eclampsia in primigravida and multigravida was in the extent of 3:1<sup>[4]</sup>. Seriousness of psychological manifestations might be influenced gravidity and parity<sup>[25]</sup>. The present study revealed that 69.5% & 69.1% of multigravida had severe level of depression & stress symptoms compared with 30.5% & 30.9% primigravida. Moreover, 47.5% & 53.4% multiparous had mild to moderate level of depression and stress symptoms compared with 52.5% and 46.6% nulliparous.

### VIII. CONCLUSION

Based on the results of the present study, it is presumed that diverse levels of stress and depressive symptoms have been observed to be connected with ladies with hypertensive disorders during pregnancy. Statistically significant relationship between sociodemographic and obstetrical characteristics and level of stress and depression symptoms was found.

### IX. RECOMMENDATION

In the light of the study discoveries, it is recommended to:

1. Screening for pregnancy depressive and stress manifestations in pregnancy stands to give possibly essential clinical advantages to moms and their kids.
2. Activating the role of the nurse in antenatal centers and branches of obstetrics to enhance their capacity to comprehend the way of state of mind of the pregnant lady and took care of well.

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