

## Outcome Evaluation of the Effect of Opioid Use in Pregnancy

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**Abstract:** **Introduction:** **Background:** One of the most often prescribed pharmaceuticals in the world is an opioid pain reliever. Over the past few years, rising opioid misuse tendencies have overshadowed advancements in pain perception and control. Opioid use during pregnancy makes it more difficult to treat a patient population that is already at risk. **Objective:** This paper aims to outcome evaluation of the effect of opioid use in pregnancy. **Patients and methods:** This paper showed a cross-sectional study followed to outcome evaluation of the effect of opioid use in pregnancy that conducting throughout 18<sup>th</sup> 2021 October to 25<sup>th</sup> May 2022, in different hospitals in Iraq were focused into the study of pregnant patients with used opioid materials during pregnancy. This paper compared between opioid patients and nonopioid patients were, included 60 cases into each of the two groups for ages during 25 to 40 years old by using the SPSS program. **Results and discussion:** This multiyear population-based study indicated that opioid use and misuse within pregnant women in Iraq is becoming more common, which is consistent with earlier research. The syndrome of neonatal abstinence is becoming more common as opiate misuse rates during pregnancy rise. This condition causes extended neonatal hospital stays, which raises the total cost of care for these moms and their newborns. By examining the effects of opiate use and addiction throughout pregnancy on a variety of mother and newborn birth outcomes, the current study adds to the body of prior research. This result was anticipated, given that these comorbid illnesses are linked to the emergence of chronic pain, a poor response to painkillers, or the presence of the clinical condition after opiate withdrawal. **Conclusion:** To sum up, our study shown that treating a patient population that is already at risk is made more challenging by opiate usage during pregnancy. Dependency makes poor outcomes for moms and newborns more probable. In addition to having fewer stable households, a worse socioeconomic status, and inadequate prenatal care

**Keywords:** Opioid analgesics, Symptoms, Comorbidities, Anxiety, Depression, insomnia.

## INTRODUCTION

One of the most often prescribed pharmaceuticals in the world is an opioid pain reliever. Over the past few years, rising opioid misuse tendencies have overshadowed advancements in pain perception and control [Kuehn, B. M., 2007]. The important burden of avoiding opioid addiction and drug abuse without compromising their legitimate and effective use in the treatment of pain now falls on clinicians, administrators, and politicians. [Benningfield, M.M. *et al.*, 2010]

Opioid use during pregnancy makes it more difficult to treat a patient population that is already at risk. Poor outcomes for mothers and babies are more likely when there is dependency [Benningfield, M.M. *et al.*, 2012]. In addition to having a lower socioeconomic position, unstable families, receiving subpar prenatal care, and abusing both prescription and illicit opioid medicines, women of reproductive years who use and misuse these drugs are more likely to also use alcohol, nicotine, and illicit substances. These coexisting diseases raise the likelihood of unfavourable prenatal outcomes along with the hazards linked to opiate dependency. [Shinker, S.A. *et al.*, 2012; Compton, W.M. *et al.*, 2006; Hayes, M.J. *et al.*, 2012]

Opioid usage during pregnancy increased by an estimated 3 to 4 times between 2000 and 2009, continuing its disturbing upward trend [Höflich, A.S. *et al.*, 2012]. According to the United States' 2011 National Interview Survey of Drug Use and Health [Kelly, L.E. *et al.*, 2012; Meyer, M. *et al.*, 2012], 5% pf pregnant women between the ages of 15 and 44 report taking illegal substances. These findings point to the urgent need for a nationwide assessment of not just the adverse health consequences of maternal opioid use while pregnant but also the accompanying financial impact upon the country's healthcare system [Park, E.M. *et al.*, 2012; Heberlein, A. *et al.*, 2012]. Using a sizable, nationwide hospital discharge database, we were able to pinpoint the variables in our study that are linked to a higher risk of opiate use during pregnancy. Following that, we contrasted specific maternal and fetal results among opioid users [Patrick, S.W. *et al.*, 2012]. Opioid usage during pregnancy increased at a worrying pace, by an estimated 3–4 times, between 2000 and 2009 [NSDUH, 2012; HCUP, 2011]. According to the United States 2011 nationwide survey of Drug Use and Health, 5% between pregnant women between the ages of 15 and 44 reports taking illegal substances. These findings

point to the urgent need for a nationwide assessment of not just the adverse health consequences of maternal opioid abuse during pregnancy but also the accompanying financial impact on the nation's healthcare system [Salemi, J.L. et al., 2013; Salihu, H.M. et al., 2014; Song, X. et al., 2008]. This paper aims to outcome evaluation of the effect of opioid use in pregnancy.

## PATIENTS AND METHODS

This paper showed a cross-sectional study followed to outcome evaluation of the effect of opioid use in pregnancy that conducting throughout 18<sup>th</sup> 2021 October to 25<sup>th</sup> May 2022 in different hospitals in Iraq were focused into the study of pregnant patients with used opioid materials during pregnancy. This paper compared between opioid patients and nonopioid patients were, included 60 cases into each of the two groups for ages during 25 to 40 years old by using the SPSS program. To follow that, this paper presented Demographic information of Opioid patients based on age with basic parameters of Alcohol to check patients' cases into yes or no, location of patients staying which divide into Rural and Urban; economic level have three different patterns that include low, middle, and high which all information points were be clarify in Table 1, Table 2, Table 3, and Table 4.

This paper has focused on Symptoms of Opioid patients' during the pregnancy period, where they get on into Blurred vision, feeling dizzy, feeling

sick to your stomach, and trouble breathing. That all these outcomes can be seen in Table 5. As well as this paper was interested to examine too the Comorbidities of Opioid patients during the pregnancy period, where have been seen into Table 6.

Furthermore, this paper was extended to find out the Perinatal results of Opioid patients that have Anxiety, Depression, insomnia, Obesity, Osteopenia, Pre-pregnancy diabetes, and Pre-pregnancy hypertension, where the outcomes can be shown in Table 7.

In the assessment of results, this study was determined into Rates of outcomes in comparison between opioid patients and nonopioid patients, which that include Threatened preterm labor, Acute renal failure, In-hospital maternal mortality, Hospital stays, Stillbirth, Wound infection, and Poor fetal growth that can be presented in the Table 8.

To achieve the outcomes, this study was assessed of quality-life of between opioid patients and nonopioid patients, which built into Age. Pre-pregnancy diabetes, Acute renal failure, Wound infection, Obesity, and Trouble breathing all these comparisons of quality of life have been progressed into Table 9.

## RESULTS

**Table 1:** Demographic of Opioid patients based on ages

Statistics		
Age- Opioid patients		
N	Valid	60
	Missing	0
Mean		32.1167
Std. Error of Mean		.72684
Median		31.0000
Variance		31.698
Skewness		.163
Std. Error of Skewness		.309
Range		15.00
Minimum		25.00
Maximum		40.00
Sum		1927.00

**Table 2:** Demographic of Opioid patients' distributions based on Alcohol

Alcohol distribution of opioid patients					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	no	51	85.0	85.0	85.0
	yes	9	15.0	15.0	100.0
	Total	60	100.0	100.0	

**Table 3:** Changes of Opioid patients' distributions based on the location of patients staying

Location of patients staying					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Rural	10	16.7	16.7	16.7
	Urban	50	83.3	83.3	100.0
	Total	60	100.0	100.0	

**Table 4:** Changes of Opioid patients' distributions based on an economic level

Distribution of Opioid patients					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	high	6	10.0	10.0	10.0
	low	40	66.7	66.7	76.7
	middle	14	23.3	23.3	100.0
	Total	60	100.0	100.0	

**Table 5:** Symptoms of Opioid patients' during pregnancy period

Symptoms					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Blurred vision	8	13.3	13.3	13.3
	Feeling dizzy	23	38.3	38.3	51.7
	Feeling sick to your stomach	17	28.3	28.3	80.0
	trouble breathing	12	20.0	20.0	100.0
	Total	60	100.0	100.0	

**Table 6:** Comorbidities of Opioid patients during pregnancy period

Comorbidities					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Anxiety	8	13.3	13.3	13.3
	Depression	11	18.3	18.3	31.7
	insomnia	8	13.3	13.3	45.0
	Obesity	14	23.3	23.3	68.3
	Osteopenia	5	8.3	8.3	76.7
	Pre-pregnancy diabetes	6	10.0	10.0	86.7
	Pre-pregnancy hypertension	8	13.3	13.3	100.0
	Total	60	100.0	100.0	

**Table 7:** Perinatal results of Opioid patients

Perinatal Results					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Anxiety	8	13.3	13.3	13.3
	Depression	11	18.3	18.3	31.7
	insomnia	8	13.3	13.3	45.0
	Obesity	14	23.3	23.3	68.3
	Osteopenia	5	8.3	8.3	76.7
	Pre-pregnancy diabetes	6	10.0	10.0	86.7
	Pre-pregnancy hypertension	8	13.3	13.3	100.0
	Total	60	100.0	100.0	

**Table 8:** Rates of outcomes in comparison between opioid patients and nonopioid patients

Results	Opioid patients (60)	Nonopioid patients
Threatened preterm labor	7 (11.67%)	1 (1.7%)
Acute renal failure	11 (18.33%)	2 (3.33%)
In-hospital maternal mortality	14 (23.33%)	6 (6.67%)
Hospital stays	130.55	42.34
Stillbirth	9 (15%)	2 (3.3%)
Wound infection	11 (18.3%)	3 (5%)
Poor fetal growth	8 (13.3%)	2 (3.3%)

**Table 9:** Assessment of quality-life of between opioid patients and nonopioid patients

Parameters	Opioid patients	Nonopioid patients
Age	5.1±1.3	7.7±1.8
Pre-pregnancy diabetes	4.5±1.8	7.8±1.7
Acute renal failure	3.3±2.7	6.7±1.66
Wound infection	6.1±1.7	8.2±1.1
Obesity	4.7±3.66	7.5±1.42
Trouble breathing	5.8±2.4	9.1±0.33

## DISCUSSION

This multiyear population-based study indicated that opioid use and misuse within pregnant women in Iraq is becoming more common, which is consistent with earlier research. The disturbing overall rise, as well as regional, geographic, and sociodemographic variations in the rate and patterns of opioid use over the past 20 years [HCUP, 2006], are also discussed in our earlier study on the nationwide pattern of opioid use among expectant mothers in Iraq. Opioid misuse during pregnancy is still a big cause of worry due to worries about the negative consequences upon the mother and growing fetus. The syndrome of neonatal abstinence is becoming more common as opiate misuse rates during pregnancy rise. This condition causes extended neonatal hospital stays, which raises the total cost of care for these moms and their newborns. By examining the effects of opiate use and addiction throughout pregnancy on a variety of mother and newborn birth outcomes, the current study adds to the body of prior research. Our research revealed a higher likelihood of additional comorbidities, such as anxiety, insomnia, depressive disorders, diabetes, and hypertension, among pregnant women who used or misused opioids during pregnancy [Davison, S. N, 2003]. This result was anticipated, given that these comorbid illnesses are linked to the emergence of chronic pain, a poor response to painkillers, or the presence of the clinical condition after opiate withdrawal. In our investigation [Pritham, U.A. *et al.*, 2012], pregnant women who took or misused opioids were additionally more probable than nonusers to experience a lengthy hospital stay, develop severe renal failure, and pass away before

being released from the hospital [Pritham, U.A. *et al.*, 2012]. Their offspring experienced a higher incidence of birth defects and stillbirth. Our findings agreed with earlier studies. Women who depend on opioids are more probable to have numerous comorbid conditions, such as anxiety and depression. Additionally, studies link prenatal mother worry to the fetus's poor brain growth. Along with having mental health issues, opioid dependant women are more likely to come from underprivileged families, have poor eating habits, and receive subpar prenatal care. [Fisher, J. *et al.*, 2010]

## CONCLUSION

To sum up, our study shown that treating a patient population that is already at risk is made more challenging by opiate usage during pregnancy. Dependency makes poor outcomes for moms and newborns more probable. In addition to having fewer stable households, a worse socioeconomic status, and inadequate prenatal care.

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