

Association of Pregnancy Complications with Lifestyle Factors: A Clinical and Laboratory-Based Analysis

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ABSTRACT

Background: Pregnancy complications remain a major concern in maternal and fetal health, with various lifestyle factors playing a crucial role in their onset and severity. Understanding the relationship between daily habits, nutrition, physical activity, and biochemical markers can aid in early diagnosis and intervention strategies. **Objective:** This study aims to evaluate the impact of daily lifestyle factors on pregnancy complications and correlate these findings with clinical and laboratory parameters in pregnant women. **Methods:** A descriptive cross-sectional study was conducted on 150 pregnant women attending prenatal clinics. Data were collected through structured questionnaires assessing lifestyle factors such as diet, physical activity, smoking, caffeine intake, and stress levels. Laboratory investigations included fasting blood glucose, lipid profile, hemoglobin levels, and urine protein analysis to detect potential complications such as gestational diabetes mellitus (GDM), anemia, and preeclampsia. **Results:** The study revealed a significant correlation ($p < 0.05$) between unhealthy lifestyle factors and pregnancy complications. Women with high caffeine intake, sedentary behavior, and poor nutritional intake exhibited an increased risk of hypertension, GDM, and low birth weight outcomes. Laboratory findings showed that elevated blood glucose levels (≥ 126 mg/dL) and reduced hemoglobin levels (< 10 g/dL) were prevalent in mothers with poor dietary habits and sedentary lifestyles. **Conclusion:** Lifestyle factors have a direct impact on pregnancy outcomes, with unhealthy habits increasing the risk of metabolic and obstetric complications. Routine laboratory screening for biochemical markers alongside lifestyle modifications is essential to reduce maternal and fetal risks. This study highlights the importance of integrating clinical and laboratory assessments to improve maternal health outcomes.

Keywords: Pregnancy Complications, Daily Life Styles, Relationship, Primary Health Care Center.

INTRODUCTION

Pregnancy is a period of alteration with significant physical and emotional variations [1]. Optimal wellbeing of a woman's developing body needs a stable atmosphere and healthy lifestyles specifically during the forty weeks of gestation. Daily lifestyle is a way of life adopted by individuals, communities and nations that is shaped by geographical, political, economic, religious and cultural contexts. Quality of life (QOL) assessment has recently attracted growing interest in health care research and practice as a means to promote health and prevent illness. The World Health Organization defined QOL as an "individual's perception of their physical health, psychological state, level of independence, social relationships, personal beliefs, and their relationships to silent features of their environment" [2]. The features of residents of an area at a certain time and location are referred to as lifestyle. It covers an individual's day to day habits and duties in the workplace, sports, recreations and nutrition [3]. Prior to birth, parent's wellbeing and lifestyle decisions may have a relationship on fertility, reproductive health and the likelihood of their children having some health problems later in life such as eating a nutritious diet, exercising regularly, and minimizing risky behavior like (smoking, illicit drugs use, alcohol drinking and unsafe sexual).

As a result, people who are planning a pregnancy must be examined for health issues and must be diagnosed and treated for the optimum maternal and infant health [3]. Life style can affect the health of the future baby, even prior to conception, because developing baby will entirely depend on their mother's body for nourishment and protection, it is wise to alter a women's lifestyle prior to conception so

that she can eliminate any bad habits or risk factors that might compromise her health during pregnancy. Some women experience health problems during pregnancy. These complications can involve and affect the mother's health, the fetus, or both. Even women who were healthy before getting pregnant can also experience complications. These complications can make the pregnancy a high risk pregnancy [4]. Accordingly, this study aimed at assessing pregnancy complications and its relation with daily life styles among pregnant mothers who are attending primary health care facilities.

Methodology

A descriptive analytical study design was utilized, (262) pregnant women who diagnosed with pregnancy complications were selected from three primary health care facilities in Baghdad City for the period from 5/January/2023 to 15/October/2023. Seven pregnant women refused to participate in the study because they did not stay in the waiting area after registration and were busy with other activities. Five unanswered questionnaires were not included in the study. Thus, the final sample size was (250).

A structured questionnaire was used as a tool for data collection. The validity of the questionnaire is determined through a panel of experts. The data were collected through face-to-face interview technique and by using questionnaire format. Data were analyzed through the application of descriptive and inferential statistical analysis.

Results and Discussion

Table 1: Distribution of the Studied Sample by their Socio-Demographic and Personal Characteristics

Socio-Demographic & Personal Characteristics	Group	Frequency	%
- Age / Years	16-25	54	21.6
	26-35	122	48.8
	36-45	74	29.6
- Educational Level	Not read and not write	14	5.6
	Read and write	16	6.4
	Primary school graduate	28	11.2
	Intermediate School graduate	28	11.2
	Secondary school graduate	34	13.6
	Institute and above	130	52.0
- Occupation	Governmental employee	56	22.4
	Private job	12	4.8
	Student	42	16.8
	House wife	140	56.0
- Economic Status	Sufficient	68	27.2
	Barely sufficient	84	33.6
	In sufficient	98	39.2
- Residence	Urban	186	74.4
	Rural	64	25.6
- Current BMI during Pregnancy	Normal weight	54	21.6
	Overweight	86	34.4
	Obesity	110	44.0
	Yes	6	2.4
- Do you Smoke	No	244	97.6
	Less than 4 cigarettes	5	83.4
- If yes, how many Cigarettes do you Smoke per Day	4 cigarettes and above	1	16.6

Table 2: Assessment of Daily Life Style Factors on Pregnancy Complications among Studied Sample

Daily Life Style Factors	N	MS	SD	Ass.
▪ Dietary Habits	250	2.05	0.276	M
▪ Physical Work Activity and Household Chores	250	1.83	0.430	M
▪ Sleep Pattern	250	1.77	0.288	M
▪ Domestic Violence	250	1.50	0.475	L
▪ Stress	250	1.22	0.518	L
▪ Overall Assessment	250	1.67	0.220	L

Table 3: Quality of Daily Life Style Factors and its Relationship with Pregnancy Complications among Sample Under Study

Quality of Daily Life Style Factors with Pregnancy Complications	N	Mean	S.D.	df	P. Value	Sig.
▪ Anemia	50	1.54	0.147	124	0.001	S
▪ Urinary Tract Infection	56	1.75	0.225	124	0.001	S
▪ Gestational Diabetes Mellitus	54	1.71	0.210	124	0.001	S
▪ Pregnancy Induced Hypertension	40	1.75	0.244	124	0.001	S
▪ Placenta Previa	10	1.69	0.283	124	0.001	S
▪ Anti-Phospholipid	40	1.59	0.159	124	0.001	S
▪ Total	250	1.67	0.220	125	0.001	S

Discussion

Out of 250 pregnant mothers enrolled in this study, nearly one third of them were within the age between (26-35) years with mean age 35.7. This is may be because they were in the reproductive age and most of them were considered young. This result was inconsistent with study conducted by hoodbhoy et al., [5] 2018 who found that most of their study sample were within 20-30 years old at mean age (26.4%) (5). More than half of the studied sample were graduated from institutes and above, regarding their occupation the study found that more than half of them were housewives, around one third of them were having inadequate monthly income and the majority of them were living in urban areas. In regard to their body mass index during pregnancy, more than two fifth of the studied sample were obese and almost all of them were not smokers. Information about maternal socio-demographic characteristics varies from place to place tied to geographical areas also according to the social and health culture. The

present study revealed that the level of relationship between dietary habits factors with pregnancy complications were moderate. These findings are close to a study conducted on 306 pregnant women in Melilla, Spain in that it stated that pregnant women only struggle with dietary patterns due to a lack of knowledge to pique their interest. As well as and due to the fact that pregnant women were unaware of these factors, so they must gain awareness in order to understand the value of a healthy dietary routine during pregnancy. Results of the study showed that the level of relationship between physical work activity and household chores factors with pregnancy complications were moderate too. Result advocated by a study conducted in Pakistan among Pakistani pregnant women and the results revealed that the average range of physical activity failed to fulfill the regular recommendations for physical activity due to a lack of energy and a lack of knowledge about the benefits of physical activity with facilities in the area of residence [5]. In regard to sleep pattern factors, current study revealed a moderate level of relationship. The findings depicted that most

pregnant mothers experience sleep problems during pregnancy. Pregnant women tend to get more sleep during their first trimesters but experience a big drop in the quality of their sleep. It can cause night sleepless. In relation to domestic violence and stress factors, the study revealed that they were having low level of assessment. This is may be due to low economic status and husband of families having bad relationship. Recommendation of screening for domestic violence during perinatal period using high quality surveys is utmost importance [6, 7].

In this regard, findings of recent study come with study demonstrated that prevalence of stress symptoms in pregnant women living in an urban area in Thailand was having high level. Assessment and management of stress early in pregnancy is crucial [8]. Finally, findings indicated statistically significances association was found between life style factors and pregnancy complications among studied sample. This is may be due to quality of life considers risks factors associated with pregnancy. This results agreed with studies depicts how the antenatal deals with risk factors associated with complications during pregnancy [9, 10].

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Conclusions

The study concluded that daily life styles among studied sample in term of physical work activity and household chores, sleep pattern and dietary habits were within moderate level of assessment. Other daily life styles among them in term of domestic violence and stress they were within low level of assessment.

Recommendations

Conducting an educational program for pregnant mothers focusing on physical work activity and household chores, sleep pattern, dietary habits and domestic violence and stress factors during antenatal checkup, mass media and social media. Preparation of consistent instructions for pregnant mothers which are written in large, clear letters for providing better information and education regarding daily life style factors affecting pregnancy complications. Regular prenatal (even preconception) care is crucial. Women are encouraged to come in for a preconception consult to talk about what they can do to reduce their risks.



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