

# Complications of Pregnancy and Outcome Among Teenage Pregnancy in Al-Najaf City

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## **Abstract:**

**Objective:** this study aimed to complications of pregnancy among teenage pregnancies at Al-Najaf city. Find out the relationship between Sociodemographic data and complications of pregnancy.

**Methodology:** Retrospective design, cross-Section study was adopted in the current study to achieve the early stated objectives. The study started from November 1st , 2015 until Febriayer ,2nd , 2017. A non-probability (purposive sample) of 200 teenage pregnant mothers, who admitted to normal labor room for delivery.

**Results:** the results found most teenage pregnant mothers were non educated , lived in urban with extended family, moderate socioeconomic status and without any past medical diseases and most of them were planned pregnancy; Most teenage pregnant mothers neglected the antenatal care and complicated with preeclampsia; the mode of delivery in most teenage pregnancies were vaginal deliveries without complications during delivery of term baby with low Apgar score and a significant association between Sociodemographic statistics and complications of pregnancy.

**Conclusion:** The study determined that the majority of the teenage pregnant mothers were illiterate , housewives, moderate economic status , secondary smoking, negative past medical diseases, neglected the antenatal care. Risk of preeclampsia and low Apgar score were higher among teenage pregnant mothers. Complications of pregnancy had strong relationship between Sociodemographic data; age, educational level, occupation, residency, type of family and smoking.

**Recommendation:** The study recommends that on pregnant teenager to have appropriate antenatal care as well as social support to avoid medical problems during pregnancy. Educational programs should be emphasized to pregnant teenage mothers for increasing their knowledge about pregnancy.

**Key words:** Complications of Pregnancy, Outcome, Teenage Pregnancies

## **INTRODUCTION**

Teenage pregnancy is a social problem distributed worldwide, has many significant implications on mother and her baby, specifically, in developing countries. The risk of adolescent pregnancy and outcome remains a public health problems in both developed and undeveloped countries, which leads to maternal and neonatal morbidity and mortality<sup>(1)</sup>.

According to WHO definition, Teenage is ranged from puppetry age to adulthood<sup>(2)</sup> conceiving in this period is known as teenage conception . Conception is a different period for women because many physical and psychological change occur to give a new role. These changes increase and may lead to serious complications if expectant mother under 19 years old because of teenage women's incomplete developmental task. Teenager is not well physically, psychologically and economically suitable to be pregnant with high risk for both teenage mother and child), for that reason the teenage pregnancies are considered at high risk pregnancy<sup>(3)</sup>.

According WHO,2008, teenage mothers are more likely to live in poverty and poor health and less educated than others women, because adolescent mother who have a baby less likely to finish school and unable to care both self and her baby . A higher poor nutritional rate among teenage mothers than older mothers and in adequate taking of recommended daily prenatal multivitamins to maintain adequate

nutritional status during gestation<sup>(5)</sup>. According to (WHO, 2008) , if the period between each birth decreased in teenage mother under 16 years old ,the risk of mortality increased compared with other women of age 20 and over. A higher poor nutritional rate among teenage mothers than older mothers and in adequate taking of recommended daily prenatal multivitamins to maintain adequate nutritional status during gestation. Health problems likely may occur with teenage pregnancies due to smoke cigarette, drink alcohol or take drugs during pregnancy<sup>(5)</sup>.

The physiological risk decreased when Teenage mother over 15 years old who takes prenatal care in early time of pregnancy than women over 20 years old. Many teenage women fail to visit early prenatal care and fail to complete her education and more likely to have big families. The smoking , drug abuse and low weight gain are found more likely in Teenage pregnant women than older. Thus risks for pregnant Teenager women increase such as: Low birth weight, Premature birth, Pregnancy induced hypertension, Iron deficiency anemia, pregnancy induced diabetes mellitus<sup>(3)</sup>.

Depression among teenage mothers is higher than adult mothers because teenage experience is lower than adult mother . Considerably the teenage mothers have higher depression levels before pregnancy and after child birth than the adult mothers<sup>(6)</sup>. Literacy among teenage pregnant mother's community become high rate because young mother is unable to complete study and rearing her baby. Loss the governmental income leads the government to design sufficient illegible threatening cost . Social legal requirement for a teenage mother has to have good work and respect from friends and family. Whole social status of teenage mother becomes destructive owing to initial pregnancy and occupy lifetime with impassive suffering and facing negative pregnancy feedback from the society<sup>(7)</sup>.

According to the urban child institute, it is found the women under 19 years old are deprived emotionally supportive , responsibility, poor knowledge and awareness about child bearing and rearing than women over 19 years old<sup>(8)</sup>. Teenage mothers are born children experience social, emotional, abuse and other problems as inadequate nutrient, in sufficient health care , psychological distress and low social stimulation. The outcomes are risk to decrease their education. Teenage mothers who born girls have more than 22 percent likely to become teenage mothers themselves<sup>(9)</sup>.

In developed countries verses developing countries diverse factors for teenage pregnancies comprise to society beliefs , sexual behavior , alcohol and drugs intake, teenager abuse, violence, family trouble, low self- esteem, illiteracy and low education level . In developing countries, adolescent girls have poor knowledge regarding reproductive sexual health , deficit of using tools to prevent pregnancies , engagement with peer pressure in sexual activity , improper use of contraception and sexual abuse which leads to poverty.<sup>(10)</sup>

## **METHODOLOGY:**

### **Research Design**

Retrospective design, cross-Section study was adopted in the current study to achieve the early stated objectives. The study started from November 1st 2015,1 until February,2nd, 2017.

### **Ethical Consideration:**

This is essential principle before gathering the data, to protect mother's values and self-respect. The researcher achieved this approval from the Ethical Committee at the Faculty of Nursing/ Kufa University (appendix B). The researcher promised to keep the mother's information confidential and use these data for this study only then explained the purposes of this study. In addition to above, the researcher told each participant that is a voluntary work and they can leave the interview process at any time.

### **Study Setting**

The setting of the study includes (1) hospital / Alzahraa Teaching Hospital of AL-Najaf City.

### **Study sample:**

A non-probability (purposive sample) of 200 teenage pregnant mothers, who admitted to normal labour room for delivery. Purposive sample was used in order to obtain the representative sample according to the following criteria:

- Mothers admitted normal labour room for delivery and lived in al-Najaf city.
- All samples were Iraqi Nationality.

- Teenage pregnant mother age (13-19) years.
- Teenage prime gravida women.

**The Study Instrument**

An assessment tool was adopted and developed by the researcher to assess the complications of pregnancy and outcome among teenage pregnancies in AL-Najaf city. The last study instrument consisted from parts as the following (appendix D): (5) parts as the following (appendix D).

**Part 1: Socio- demographic Data:** This part consists of 10 items including the age of teenage mother, Educational level, Occupation, Residence, Economic status, Type of family, no. of family, size of house ,no. of rooms, smoking.

**Part 2: Medical History:** This part includes 9 items, that asked the mother about medical disease and conditions that having or not.

**Part3: Reproductive History:** This part consists of 3 section the menstrual history, family planning history, infertility treatment.

**Part4: Current Pregnancy:** This part deals with present pregnancy and many questions asked the teenage mother about this conception include : GA, conception, pregnancy plane, prenatal care, folic acid, vitamins during pregnancy.

**Part5: complications of current pregnancy:** This part deals with complications of pregnancy.

**Part6: Delivery and Outcome :**This part deals with complications of pregnancy.

**Objective of the study:**

This study aimed to identify risk factors of Infertility among young women, To identify demographic and reproductive variables related to women' s infertility and To find out relationship between demographic and reproductive data with infertility.

**RESULTS:**

**Table (1): statistical distribution of the teenagers studied sample according to their socio-demographic data.**

Demographic data	Rating and intervals	Frequency	Percent
Age (Years)	< 16	72	36.0
	>= 16	128	64.0
Education level	Illiterate	66	33.0
	Read and write	38	19.0
	Primary school	46	23.0
	Secondary school	50	25.0
Occupation	Housewife	174	87.0
	Student	24	12.0
	Employment	2	1.0
Economic status	Sufficient	40	20.0
	Sufficient to some extent	108	54.0
	Insufficient	52	26.0
Residence	Urban	140	70.0
	Rural	60	30.0
Type of family	Nuclear family	50	25.0
	Extended family	150	75.0
Smoking	Non smoker	28	14.0
	Smoker	4	2.0
	Secondary smoker	168	84.0
Crowing index	1	130	65.0
	2	64	32.0
	3	6	3.0

Total		200	100
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Table (4.1) shows the socio-demographic data that are related to teenage mother. The majority of study sample are (64.0) within age  $\geq 16$  years old. Concerning the educational level, the study indicates that the majority of teenage pregnant mothers (33.0) are illiterate. Regarding to occupational status of teenage mothers, (87.0) are house wives. The socioeconomic status of this study sample is 54.0 moderate socioeconomic status. Most study subject (70.0) lived in urban. Regarding to family type, (75.0) are extended family. In regard to smoking, (84.0) are secondary smoking. The Crowding index in this table is the index 1 calculated 65.0, the index 2 calculated 32.0, the index 3 calculated 3.0.

**Table (4.2): statistical distribution of the teenager's studied sample according to their past Medical history data.**

Demographic data	Rating and intervals	Frequency	Percent
Past medical conditions	No medical history	88	44.0
	anemia, Urinary Tract Infection and Respiratory Disease	8	4.0
	Urinary Tract Infection	4	2.0
	anemia, hypertension, Urinary Tract Infection, Respiratory Disease and diabetes	6	3.0
	Urinary Tract Infection and Respiratory Disease	2	1.0
	Urinary Tract Infection	16	8.0
	anemia, Urinary Tract Infection, and diabetes	2	1.0
	Depression	2	1.0
	Heart Disease, Urinary Tract Infection and Respiratory Disease	2	1.0
	Heart Disease+ Urinary Tract Infection+ Respiratory Disease	8	4.0
	Anemia +Arthritis	10	5.0
	Urinary Tract Infection +Respiratory. Disease	10	5.0
	Anemia +Respiratory Disease +Urinary Tract Infection	6	3.0
	Arthritis +Urinary Tract Infection +Respiratory Disease +	4	2.0
	Arthritis	2	1.0
	Anemia+ Arthritis+ Respiratory Disease +Urinary Tract Infection	2	1.0
	Anemia +Heart Disease+ Urinary Tract Infection	2	1.0
	Heart Disease +Urinary Tract Infection	6	3.0
	Heart Disease +Urinary Tract Infection +Depression	2	1.0
	Respiratory Disease +Thyroid Disease +Depression	2	1.0
Heart Disease +Respiratory Disease	6	3.0	
Diabetes	2	1.0	
Arthritis+ Respiratory Disease.	2	1.0	

	Arthritis+ Diabetes.	6	3.0
Total		200	

Table(4-2) shows most of the study subject(44.0) without medical disease.

**Table (4-3) : statistical distribution of the teenager's studied sample according to their Reproductive history.**

Items		Rating and intervals	Frequency	Percent
Menstrual cycle	Menstrual age	<= 12	70	35.0
		13 and more	130	65.0
	Menstrual period	Regular	58	29.0
		Irregular	152	71.0
Family planning history	Using control device	Yes	26	13.0
		No	174	87.0
	If yes, type of control device	None	174	87.0
		Pills	8	4.0
		Male condom	12	6.0
		With drawl	6	3.0
			200	36.0
Infertility treatment		yes	66	33.0
		No	134	67.0

Table (4-3) shows the reproductive history of teenage mother. Regarding to menarche, (65.0) Teenage mothers have menarche at age 13 or more. Concerning the regularity of menstruation (71.0) are Irregular. The majority of teen mother (87.0) do not use birth control. In regarding to the infertility treatment, 67.0 with no infertility treatment.

**Table (4-4): statistical distribution of the teenager's studied sample according to their current pregnancy.**

Demographic data	Rating and intervals	Frequency	Percent
Gestational Age	<= 35	54	27.0
	36 and more	146	73.0
Conception	Single	168	84.0
	Twins	32	16.0
	Multiple	0	0.0
antenatal visit	Never	72	36.0
	Less than 3 visit	80	40.0
	3-5 visit	24	12.0
	more than 5 visit	24	12.0
	Never	92	46.0
folic acid during 4 month	Yes	114	57.0
	No	86	43.0
take vitamins and iron	Yes	108	54.0
	No	92	46.0
Total		200	100.0

Table (4-4) shows the current pregnancy of teenage mothers. Regarding to gestational age, (73.0) are within gestational age 36 week and more. Most of teenage mothers(84.0) within the conception single. Concerning antenatal care visit, (40.0) are less than 1-3 visit. Regarding to the folic acid, (57.0) are taking folic acid during 4 months gestation. In regard to take vitamin and iron during current pregnancy (54.0) take vitamins and iron during pregnancy.

**Table (4-5): statistical distribution of the teenager's studied sample according to their complications of current pregnancy.**

Demographic data	Rating and intervals	Freq.	Percent
Complications of current pregnancy	Antepartum hemorrhage +Urinary Tract Infection	10	5.0
	Urinary Tract Infection+ Gestational Diabetes	6	3.0
	Anemia, Threatened Abortion +Hyper emesis gravidarum	32	16.0
	Preeclampsia	42	21.0
	Gestational Diabetes +Preeclampsia Anemia	6	3.0
	Preeclampsia+ Anemia+ Threatened Abortion	6	3.0
	Pregnancy Induced Hypertension +Threatened. Abortion+ Hyper emesis gravidarum	6	3.0
	Gestational Diabetes +Anemia +Polyhydramnios	2	1.0
	Anemia +Threatened .Abortion +Hyper emesisgravidarum+ Urinary Tract Infection	4	2.0
	Gestational Diabetes +Anemia	28	14.0
	Anemia +Threatened .Abortion +Hyper emesisgravidarum+ Polyhydramnios+ Antepartum hemorrhage+ Urinary Tract Infection	6	3.0
	Anemia +Pregnancy Induced Hypertension +Threatened .Abortion + Urinary Tract Infection+ Antepartum hemorrhage	2	1.0
	Anemia +Pregnancy Induced Hypertension+ Threatened .Abortion + Urinary Tract Infection+ Antepartum hemorrhage	8	4.0
	Preeclampsia +Anemia +Threatened. Abortion +Oligohydramnios+ Antepartum hemorrhage	4	2.0
	Gestational Diabetes +Anemia +Polyhydramnios.	2	1.0
	Anemia +Threatened Abortion +Hyper emesis gravidarum+ UrinaryTractInfection	2	1.0
	Preeclampsia +Anemia +Urinary Tract Infection+ Threatened Abortion	2	1.0
	Gestational Diabetes+ UrinaryTractInfection+ Antepartum hemorrhage	4	2.0
	Oligohydramnios	4	2.0
	Anemia +Threatened. Abortion+ Hyperemesisgravidarum +Oligohydramnios	4	2.0
	Anemia +Threatened .Abortion +HEG +Antepartum hemorrhage	2	1.0
	Gestational Diabetes +Polyhydramnios+ UrinaryTractInfection	4	2.0
	Pregnancy Induced Hypertension Threatening abortion +Hyperemesisgravidarum	4	2.0
Threatened. Abortion +Oligohydramnios	4	2.0	
Preeclampsia+ Anemia+ Antepartumhemorrhage+UTI	2	1.0	

	Anemia+HEG	4	2.0
Total		200	100.0

Table(4-5) shows that the complications of current pregnancy. In this study the majority of teenage pregnant mothers (21.0) are complicated with preeclampsia during their current pregnancy.

**Table (4-6): statistical distribution of the teenager's studied sample according to their Delivery and outcome of current pregnancy.**

Items	Rating and intervals	Frequency	Percent
Mode of delivery	Normal delivery	144	72.0
	Vaginal delivery with epidural anesthesia	10	5.0
	Instrumental	0	0.0
	Cesarean	46	23.0
Complications of delivery	None	160	80.0
	Failure to progress	32	16.0
	Umbilical cord issues	8	4.0
State of birth	Live & term baby	158	79.0
	Still birth	2	1.0
	Preterm birth	38	19.0
	Congenital anomalies	2	1.0
	Fetal death	10	5.0
Birth Weight	Normal	120	60.0
	Low	66	33.0
	very low	8	4.0
	Extremely	6	3.0
Apgar score	More than 7	86	43.0
	Less than 7	114	57.0
Total		200	100.0

Table (4-6) shows that the delivery and outcome of teenage pregnancies. Regarding the mode of delivery,(72.0) are normal vaginal delivery. Concerning the complications during delivery, (80.0) are delivers without any complication during delivery. In this study, most of births (79.0) are a live and term baby. Regarding to the birth weight, (60.0) are normal birth weight. In regard to the Apgar score, most neonate(57.0) with Apgar Score less than 7.

**Table (4-7): relationship between complications and their demographic data.**

Demographic data	Chi-square (X2)	df	P-value (Sig.)
Age (Years)	58.471	25	0.00001(HS)
Education level	108.953	75	0.006(HS)
Occupation	82.113	50	0.003(HS)
Economic status	105.198	50	0.00001(HS)
Residence	52.976	25	0.001(HS)
Type of family	39.041	25	0.036(S)
Smoking	86.735	50	0.001(HS)
Crowded index	119.989	50	0.000001(HS)

Table (4-6) shows the high significant relationship between socio-demographic characteristics; Age, Educational level, Occupation, Economic status, Residence, smoking, Crowded index with complications of pregnancy. Also there is significant relationship between extended family and complications of pregnancy. P value < 0.05.

## DISCUSSION:

Throughout the course of the present study (table 4-1) refers to statistical distribution of the observed frequencies, percentage for some related demographic variable characteristics for the study sample. According to the mother's age/years, the majority of study samples are within age  $\geq 16$ . This result is supported with <sup>(11)</sup> who reported that young pregnant mother under age 18 years old is a dominant age for complications of pregnancy and adverse outcome.

Concerning the mother's education, the present study indicates that the highest percentage of the study is illiterate. This result is in agreement with <sup>(12)</sup> who mentioned that most adolescent mother dropout school and also agree with another study made by <sup>(13)</sup>, who mentioned that most adolescent mothers are illiterate.

In regard to mother's occupation, the highest percentage is housewives. This result is supported by <sup>(14)</sup>, who reported that most adolescent pregnant mothers were housewives.

Regarding the socioeconomic status, the majority of study sample are from the moderate socioeconomic status. This result disagrees with study that made by <sup>(15)</sup> most teenage mothers are living in poverty because less knowledge in their life and no occupation or work.

Relative to the residency, the present study shows that the majority of study are living in urban residential area. This result disagrees with <sup>(16)</sup> that state teenage birth rate is greater in rural regions than major urban centers.

Concerning to smoking, The present study found that most of teenage mothers with in secondary smoking. This result disagrees with <sup>(17)</sup>, who mentioned that cigarette smoking is the most common among teenage pregnancy. Also this result disagrees with another study made by <sup>(18)</sup>, that stated smoking rate is much higher among adolescent pregnancies.

According to the table (4-2), the result of present study show that the majority of teenage pregnant mothers are with negative past medical diseases, except few number have RUTI, Hypertension.

According to the 4-3 The study results deal with reproductive history; menarche, regularity of menstruation, infertility treatment, family planning. In present study, the majority of teenage women with menarche age 13 years and more but high percentage of study has irregular cycle. This result is supported by <sup>(19)</sup> in their study they mentioned that "irregular menstruation are highly rate among adolescent girls".

In addition, this table shows the highest percentage of teenager are has no any treatment for infertility and more likely to get pregnant and not using contraceptive device. This result agrees with <sup>(20)</sup>, who mentioned most teenagers are not using medical contraceptive services and become pregnant in first 6 months after married.

In current pregnancy the table (4-4), it shows higher frequencies among prime gravida teenage mother that give birth with gestational age 36 or more that disagree with <sup>(21)</sup> who stated in their study that "more deliveries of teenage mother are before or during 32 weeks".

The present study shows that majority of teenage prime gravida mothers have antenatal care less than 3 visits, this study supported by <sup>(22)</sup>, in their study they mentioned that "pregnant mother from 13-19 years old are less likely to seek regular prenatal care".

In addition most teenage prime gravida mothers take folic acid during the first four month of pregnancy and take vitamins that disagrees with <sup>(23)</sup>, who mentioned that teenage pregnancy initiates prenatal care late and not take folic acid during 4 month of beginning pregnancy and vitamins.

According to table (4-5) the present study indicates that the majority of complications during pregnancy among teenage prime gravida mothers are Preeclampsia. This result supported with <sup>(24)</sup>, who mentioned that preeclampsia is a major maternal complications among teenage pregnancy. This result agree with another study made by <sup>(25)</sup>, who stated "Teenage mothers are more susceptible to preeclampsia."

The table (4-6) shows the delivery and outcome of current pregnancy. Regarding to method of delivery, the present study found that most of mothers are with normal vaginal delivery. This result disagrees with <sup>(26)</sup>, who indicate cesarean section is more common in teenage mothers .

Also the study results shows that the majority of teenage pregnant mothers without complications during labor. This results disagree with <sup>(27)</sup>, who stated that relationship between teenage childbearing and labor and delivery complications.

Adolescent pregnancy record high percentage of term, live birth that disagrees with <sup>(28)</sup>, who indicated teenage pregnancy was associated with higher risk of preterm birth and still birth. Also the study results indicate the higher percentage of normal birth weight that disagree with <sup>(29)</sup>, in their study who stated that "higher incidence of low birth weight among teenage pregnancy".

Regarding to the Apgar score, the present study found that most teenage pregnant mothers who gave birth with low Apgar Score agrees with <sup>(30)</sup> who mentioned most teenage pregnant mothers given birth with low Apgar score.

The table (4-7) show the result of the present study reveals that a high significant relationship between Socio-demographic data and complications of pregnancy: mother's ( Age, Education level, Occupation, Economic status, Residence, Type of family, Smoking, Crowded index ).

These results are supported by <sup>(31)</sup> in their study who mentioned that preeclampsia ( proteinuria ) was detected in young pregnant mothers. The relationship between educational level and preeclampsia are supported by <sup>(32)</sup>, who mentioned that pregnant mother with low education are more likely to developed preeclampsia than educated pregnant mother.

Also this result agrees with <sup>(33)</sup>, who indicate that the occupation as housewife is a risk factor that associated with severe preeclampsia. But this result disagrees with Ramesh K. et.al (2014) who mentioned that Low income act as numerous risk issues for pre eclampsia, low income are related with nutritional problems, reduced prenatal care and unhygienic hygienic conditions. In addition the relationship between residency( urban) and preeclampsia in this study are supported with another study made by <sup>(34)</sup>, who mentioned that preeclampsia occur in urban with high percentage than rural. <sup>(35)</sup> found that current tobacco smoking is associated with significantly increased risk of preeclampsia .

#### **ETHICAL CONSIDERATION:**

This is essential principle before gathering the data, to protect mother's values and self-respect. The researcher achieved this approval from the Ethical Committee at the Faculty of Nursing/ Kufa University (appendix B). The researcher promised to keep the mother's information confidential and use these data for this study only then explained the purposes of this study. In addition to above, the researcher told each participant that is an voluntary work and they can leave the interview process at any time.

#### **CONCLUSIONS:**

According to the results of the present study, they confirm the following conclusions:

- Most teenage pregnant mothers were illiterate and housewives.
- The majority of teenage pregnancies are within moderate economic status and secondary smoking.
- Majority of teenage mothers had negative past medical diseases.
- Most of teenage mothers neglected the antenatal care.
- Risk of preeclampsia and low Apgar score are higher among teenage pregnant mothers.
- Complications of pregnancy have strong relationship between Sociodemographic data; age, educational level, occupation, residency, type of family and smoking.

#### **RECOMMENDATIONS:**

**Based on the study results discussion and conclusions the study recommended that:**

- Confirming on pregnant teenager to have appropriate antenatal care as well as social support to avoid medical problems during pregnancy.
- Educational programs should be emphasized to pregnant teenage mothers for increasing their knowledge and interest about pregnancy.

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