

FREQUENCY AND OUTCOME OF ADOLESCENT PREGNANCY IN POPULATION OF PESHAWAR

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ABSTRACT

Objective: To determine the frequency of adolescent pregnancy and its related maternal and fetal complications.

Study Design: Cross-sectional descriptive study

Place and Duration of Study: Outpatient Departments of Tertiary Care Hospitals of Peshawar from 1st January to 31st December 2016.

Patients and Methods: A total of 200 pregnant women (booked or unbooked) of age of 13-19 years, delivered at tertiary care hospital were included. All pregnant females of 13-19 years including primary or multiparous had any other medical illness except pregnancy associated problems were excluded.

Results: 41% adolescent mothers were primigravida and 59% were multigravida of the same group. Adolescent pregnant females were 21% between 13-15 years, 28% between 16-17 years and 51% between 18-19 years of adolescent mothers. Among ethnic groups adolescent pregnancy in Pashtuns were 48.5%, Hindko were 10%, Punjabi were 10.5%, Muhajirs were 20.5% and others were 10.5%. Maternal complications in adolescent mothers were anaemia 72%, caesarean section 7.5%, pregnancy induced hypertension 8%, post-partum haemorrhages 6.5% and instrumental delivery 6%. Foetal complications includes low birth weight 54.5%, pre-mature births 13%, still birth 9%, birth trauma 8.5%, respiratory infections 15%.

Conclusion: Adolescent pregnancies are quite prevalent in the District Peshawar. Most prevalent age group of adolescent mothers was 18-19 years. Most frequent maternal complication among adolescent mothers were anemia, while low birth weight was more frequent among fetal complications.

Keywords: Adolescent pregnancy, Low birth weight, Anaemia, Premature birth

INTRODUCTION

According to WHO, adolescents are people between 10-19 years of age.¹ About 13 million (11%) of all births are given by adolescent mothers of age 15-19 every years almost 95% of these occur in developing countries.² 10% of pregnant adolescent girls die due to pregnancy associated complications per year where as 82% of adolescent mortality occur in Sub-Saharan African and Asian countries³, whereas in Latin America⁴ frequency ranged up to 50% for adolescent mothers. Major complication were found to be increased risk of having low birth weight (LBW), and early neonatal deaths where as these young mothers are 40 times more prone to maternal anaemia, preeclampsia, eclampsia, puerperal sepsis, postpartum haemorrhage (PPH) and preterm births.

The problem of adolescent pregnancy is prevalent in developing countries. 2.5 million births are given by adolescent mothers of 16 years every year. One in every

5 adolescent females pregnant belong to developing countries.⁵

The world's highest rate of adolescent pregnancies occurs in African countries e.g. Nigeria, Mali, Guinea (122,172,146 per 1000 live births) whereas second highest rate observed in South Asia countries e.g. Bangladesh, Nepal, Afghanistan, Bhutan, Sri Lanka (113, 71, 51.9, 28.4, 20.3) respectively. The lowest rate found in the Maldives 13.7 per 1000 live births.⁶

In 2012, adolescents fertility rate in Iraq was 69 per 1000 women in aged 15-19 years where as in Syria (42), Iran (32), Turkey (31), Jordan (26), Kuwait (14) and Saudi Arabia (10).⁹ In 2014, Pakistan has a very high number of adolescents i.e. 22.3%⁸ of the total population, as compared to only 16% in the USA and Japan.⁹ In Pakistan common age of marriage was 17 years in which 5% got married under 14 years, 18.5% girls married between the age of 14-16 years, and 26.4% got married at the age of 18 years and 35% of the

girls married at 18 years and 8% of the girls deliver first baby before the age 15 years. The percentage of adolescent births varies across the provinces. The increased frequency of adolescent births rate observed in Khyber Pukhtoon Khwa (10.3%) and the decreased rate showed by Gilgit Baltistan (6.5%).^{10,11}

A very alarming situation prevailing in Pakistan because although the frequency of adolescent pregnancies is lower than Bangladesh and Nepal but higher fertility rate and lower contraceptive prevalence rate, are not favourable as compared to these countries.¹²

Pregnancy outcome are worse for Pakistani adolescent girls as compared to older mothers. Statistics showed that among Pakistani adolescent mothers 50% were primigravidas >32% were delivering second child, and 17% were delivering third or more.¹³

Among young adolescent mothers, frequency of maternal anaemia was 3 times more as compare to non-adolescent mothers. Adolescent pregnancy are more prone to pre-eclampsia, eclampsia, pregnancy induced hypertension (PIH), gestational diabetes, prolonged and obstructed labour and increased rates of caesarean sections(C/S) and instrumental delivery, increase maternal and foetal mortality. Whereas problems associated with births of babies with adolescent pregnancy are preterm births, suffering Low birth weight (LBW), respiratory diseases, and birth trauma, intrauterine growth restriction (IUGR).¹⁴⁻¹⁶

Effort should be made to develop national educational policies designed to assist communities confronting this Problem and to produce awareness in the prevention of adolescent pregnancy and the consequences of adolescent parenthood. Adolescent pregnancy continues to be a nationwide concern so more active interventions should be developed to handle this widespread and problematic issue. Unfortunately very limited latest data is available regarding frequency and outcomes of adolescent pregnancy in Pakistan. The aim of the study was to determine the frequency and outcome of adolescent pregnancy in population of Peshawar.

PATIENTS AND METHODS

A cross-sectional study conducted from of one year from 1st January 2016 31st December 2016 at tertiary care hospitals of Peshawar. Two hundred women who delivered at the age of 13- 19years either booked or not, visiting tertiary care hospital was included. All pregnant females of 13-19 years including primary or multiparous delivered at tertiary care hospitals ,had any other medical illness except pregnancy associated

problems were excluded. The data was analyzed using SPSS-20.

RESULTS

The adolescent mothers (primigravida) were 41% where as in adolescent mothers (multigravida) were 59% in population of Peshawar (Table 1). Among 200 respondents, 42 (21%) of adolescent pregnant females were in an age group of 13-15 years,56 (28%) were in an age group of 16-17 years,102 (51%) were in an age group of 18-19 years after delivery (Table 2). According to ethnicity, adolescent mothers of Pashtuns family were 97(48.5%), Hindko were 20(10.0%), Punjabi 21(10.5%), Muhajirs 41 (20.5%) and others were 21 (10.5%) [Table 3]. Table 4 showed the maternal complications in adolescent mothers, anaemia in mothers were 144(72%), C section 15 (7.5%), PIH 16 (8%), PPH 13 (6.5%), instrumental delivery 12 (6%). Regarding fetal complications in adolescent mothers, low birth weight babies were 109 (54.5%), pre-mature were 26 (13%), still birth 18 (9%),birth trauma 17(8.5%), Respiratory infections 30 (15%) [Table 5].

Table 1: Frequency of adolescent pregnancy (n=200)

Respondents	No.	%
Adolescent pregnancy (primigravida)	82	41.0
adolescent pregnancy (multigravida)	118	59.0

Table 2: Age of adolescent pregnancy after delivery (n =200)

Marital age (years)	No.	%
13-15	42	21.0
16-17	56	28.0
18 -19	102	51.0

Table 3: Frequency of adolescent pregnancy according to ethnic group (n=200)

Ethnicity	No.	%
Pashtuns	97	48.5
Hindko	20	10.0
Punjabi	21	10.5
Muhajirs	41	20.5
Others	21	10.5

Table 4: Frequency of maternal complications in adolescent mothers (n=200)

Complication	No.	%
Anemia	144	72.0
C section	15	7.5
PIH	16	8.0
PPH	13	6.5
Instrumental delivery	12	6.0

Table 5: Fetal complications in adolescent mothers (n =200)

Complication	No.	%
Low birth weight	109	54.5
Premature babies	26	13.0
Still birth	18	9.0
Birth trauma	17	8.5
Respiratory infection	30	15.0

DISCUSSION

Adolescent pregnancy deleteriously influenced the physical, mental and social health of mothers as well as baby. It is an emerging public health issue because of its adverse effect on individual, family and community. It also affect reproductive life of a mother in a given community. Our study concluded frequency of adolescent pregnancy in multigravida is very high (59%) as compare to primigravida (41%). The most recent assessment indicates that almost 1 in 5 mothers of aged 20 to 24 were 19% delivered at 18 years of age. Statistics remain extremely high in Sub-Saharan Africa. In West and Central Africa 28% of mothers delivered prior than 18 years where as data showed reduced number (25%) in Eastern and Southern Africa as compare to sub-Saharan African countries.¹⁷ Adolescent pregnancy in neighbouring country like India is alarmingly high with 62 out of 1,000 women teens.¹⁸ A study conducted in 2015 in which rate of adolescent pregnancy was 2.93%. The frequency of adolescence pregnancy was (11.9) comparatively high in developing countries as for as their economic stability is concerned¹⁹. a wide variation in statistics of adolescent pregnancy existed due to various social standards prevailing in different countries of the world. Another important factor which plays an important role in increasing the frequency of adolescent pregnancy is social, traditional belief vary from country to country all over the globe.

Present study depicted that adolescent pregnancy is more (48.5%) in Pashtuns as compare to other ethnic groups residing in Peshawar. The increased frequency of adolescent births rate observed in Khyber Pukhtoon Khwa (10.3%) and the decreased rate showed by Gilgit Baltistan (6.5%).^{10,11} In 2011, adolescent pregnancy in non-Hispanic black were 92.6 /1,000 and non-Hispanic white 35.3 / 1,000 which clearly indicated increased prevalence of adolescent pregnancy in non-Hispanic black as compare to white.²⁰ But decreased frequency observed after 5 years (2016) but still remain high among non-Hispanic black (27.5) as compare to white (13.2). Frequency of adolescent pregnancy of American Indian/Alaska Native were 32.9% still remain high in all ethnic group.²⁰ Prevalence of adolescent pregnancies

were 13.3 % and in other studies fell in a range of 6-14 % in Sub-Saharan African countries.²¹ Suleiman et al²² and Shah et al²³ observed the lower rates. This high prevalence could be due low socioeconomic class, low educational status among population of Peshawar.

In our study 18-19 years was the most common age group (16.5%) for adolescent pregnancy. In 2013, females ages 18-19 years had a pregnancy rate of 76/1,000 population where as 21/1000 among mothers of age group of 15–17 years and 0.7 among females under age 15 in United States.²⁴ Statistics showed United Kingdom, frequency of adolescent pregnancy is higher among 18-19 year as compare to younger age group.²⁵ The reason of increased frequency of adolescent pregnancy was due to several factors. Among all socioeconomic and cultural environments in which the young mother is introduced and forced for early marriages. Low awareness regarding antenatal checkups and limited numbers of services to get contraceptive method whereas and traditional and cultural standards limit the use of contraception.

Adolescent women suffer from higher risk of complications during pregnancy and labour than their counterpart age group in twenties and usually associated with more frequent health and social adverse outcomes. Present study concluded that maternal anaemia was more (13%) in adolescent mothers. A retrospective cohort study was conducted in 2016 and observed that younger adolescents group had an increased risk of maternal anemia as compare to non-adolescent group.²⁶ Another study showed that maternal anemia is significantly higher (62.9%.) in adolescent group who become pregnant in early age.²⁷ Similar results has been concluded in another study conducted in Latin America⁴ study at Hyderabad showed high frequency of anaemia was due to dietary deficiency occur in adolescent group.²⁸ Main failures existed in availing quality of pre and post natal care. The negative approach of adolescent mothers to adopt contraceptives practices and delay in seeking care are the most important issues need to overcome to solve this problem in a society.

Regarding foetal outcomes, in this study the frequency of low birth weight were more (16%) and these findings are agreed with the findings of a study done by Walter Fernandes observed that the complications related with adolescent pregnancy were more often associated with the baby than with the mother emphasizing low birth weight, and prematurity.¹⁶ High frequency (38.9%) had low-birth weight babies as compared to adult mothers and revealed that the adolescent pregnancy is associated with higher incidence of prematurity, major congenital

defects and a perinatal mortality.²⁹ Another study observed increased frequency of risk of low birth weight babies delivered by adolescent mothers. Kuyumcuoglu et al also showed babies born with low birth weight in adolescent group.³⁰

Government should improve the reproductive consequence and reduce the incidence of adolescent pregnancy by increasing public awareness, ensuring female education and enforcing marriage law. Adolescent pregnancy needs to be tackled as a priority to ease the burden of socioeconomic and health problem.

CONCLUSION

Frequency of adolescent pregnancies is still remained high in multigravida. The most affected ethnic group were families belong to pathans/pukhtuns. Elderly adolescent group was exceedingly affected age group as compare to younger groups of adolescent mothers. Anemia was more common as compare to other maternal complication appeared soon after delivery. Most common fetal outcome includes low birth weight among all delivered babies.

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