

## Contraception knowledge and pregnancy outcomes in adolescent Pakistani mothers

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### Abstract

**Objective:** To assess frequency of maternal and perinatal complications in teenagers and to investigate their knowledge and use of contraceptive methods.

**Setting:** Department of Obstetrics and gynecology, Kemari Campus which is affiliated with Ziauddin University

**Period:** One year from 1st January 2013 to 1st January 2014.

**Study design:** This was a prospective cross sectional study.

**Methodology:** Teenagers aged 13-19 years with a singleton pregnancy who delivered during this period were interviewed during their stay in the post natal ward. They were asked regarding demographic information like ethnicity, educational status, age at marriage and delivery and antenatal care provision. Knowledge about contraception and use and the method of contraception if ever practiced were also assessed. Maternal and perinatal complications including perinatal death were recorded.

**Result:** According to our study results, the mean age at marriage of our study participants was 15 years and mean age of teenage mothers was 17.8 years. 73% had no knowledge about any contraceptive method, 20% had knowledge but never practiced contraception and only 5% practiced contraception. 71% delivered vaginally while 25% had cesarean section and 3.5% had miscarriage before 24 weeks. 28.5% teenagers had no complication during ante, intra and post partum period, 38.5% were anemic, 6% went in preterm labour, 4.5% had PIH, 1.5% were pre-eclamptic, placental abruption occurred in 2% and GDM in 5.5%. Post-partum depression complicated 18.5% of our teenagers.

**Conclusion:** Teenage pregnancies are high risk pregnancies with increased maternal and perinatal morbidity. Furthermore, they are not aware of appropriate contraceptive methods. Awareness thus needs to be created among teenagers regarding effective contraceptive use.

**Key words:** teenage pregnancy, contraception, marriage, maternal and perinatal complications

### Introduction

Teenage pregnancy is a global problem. About 16 million females between 15-18 years give birth each year which means that 11% of all births in the world are attributable to teenage females. Ninety-five per cent of these births occur in low- and middle-income countries<sup>1</sup>. The teenage death risk in females is double as compared to males and it's main contributor is pregnancy related complications.<sup>2</sup> Married adolescents generally lack awareness about their reproduc-

tive health issues and are unable to obtain basic health care which in turn results in increased maternal morbidity and mortality in these young teenagers.<sup>3</sup> The law of Pakistan states that according to the Child Marriage Restraint Act 1929, marriage of female under the age of 16 and that of male under 18 years is a penal offence.<sup>4</sup> It can be detrimental for the female's physical, mental and social health leading to significant health problems in the future. Neonatal morbidity is also tied to women married before the age

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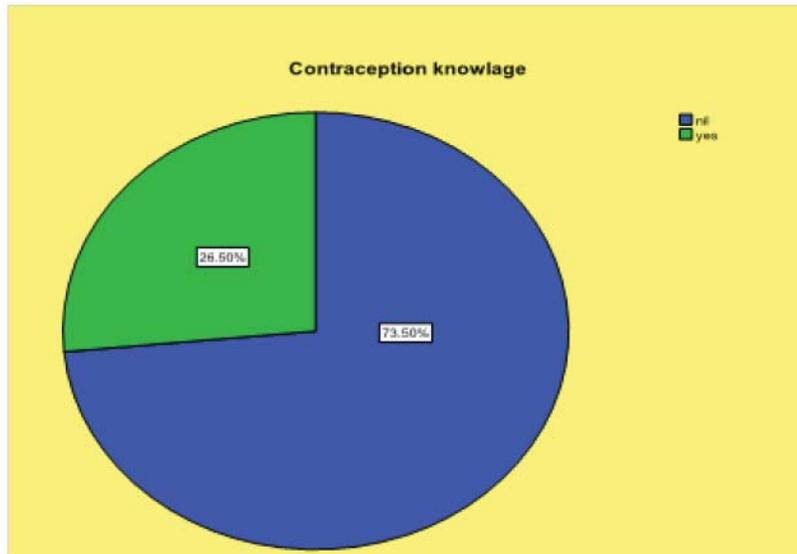
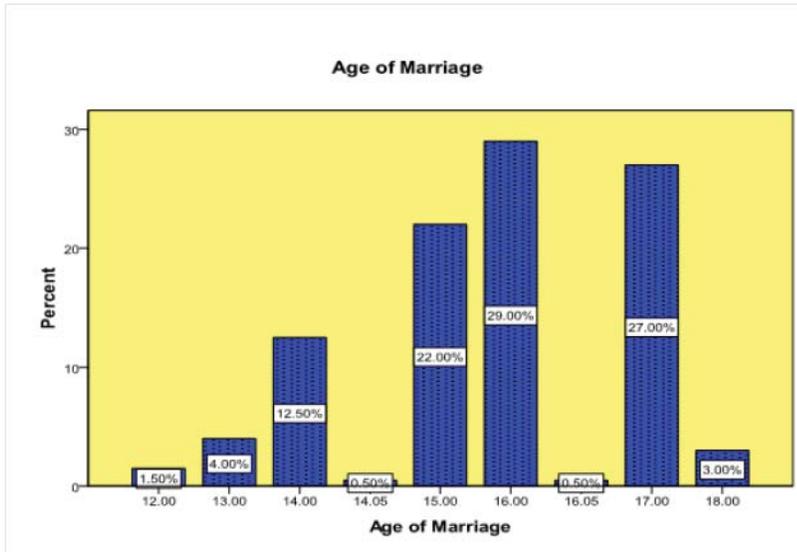
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of 18. Such marriages are generally arranged and sometimes even forced by parents or the family without prior consent from the youth. Moreover, these females are generally not given the knowledge or choice to practice contraception. There is limited awareness as well as unwillingness to opt for contraception.

The latest Pakistan demographic and health survey (PDHS), that was conducted in 2007 revealed that 40% of Pakistani females are married by 18 years of age. However, fortunately teenage child bearing trend has declined from 16% in 1990-91 to 9% in 2007.<sup>5</sup> Teenage pregnancies are at higher risk of many adverse outcomes, including PIH, preterm delivery, low birth weight,

and neonatal and infant mortality.<sup>6</sup> Teenage mothers had low self esteem and more depressive symptoms<sup>7,8</sup> particularly in those who deliver by cesarian section.<sup>9</sup> The condition gets more complicated as teenagers stay away or default from clinic attendance.<sup>10,11</sup> Thus, there is a need for evidence based interventions like adolescent pregnancy clinics.<sup>12</sup>

Pakistan lacks evidence based research data in this area. Therefore, we conducted this study to assess the maternal and perinatal outcome of teenage pregnancies.

**Study design:** This was a prospective cross sectional study.

**Settings:** Ziauddin Hospital which is affiliated with Ziauddin University Karachi.

**Duration of study:** 1 year from 1st January 2013 to 1st January 2014.

**Methodology:**

A total of 200 teenagers aged 13-19 years with a singleton pregnancy who delivered during this period were included in our study. Women having a history of any medical illness prior to their current pregnancy e.g. hypertension, diabetes mellitus, cardiac, renal, endocrine or autoimmune disease were excluded from the study. Women who met the inclusion criteria were counseled about the study and consent was taken. The data regarding the demographic characteristics of the mother and clinical information about fetal and maternal outcomes were recorded on a structured questionnaire. All women were interviewed for demographic information like ethnicity, educational status and antenatal care, knowledge about contraception and use and the method of contraception if ever practiced. They were also asked about the age at marriage and their current age i.e age at delivery.

Information regarding maternal complications like anemia, hypertensive disorders of pregnancy, gestational diabetes, antepartum or postpartum hemorrhage, mode of delivery and postnatal depression were also recorded. A note

was also made of fetal and neonatal morbidities including pre or post term births, low birth weight, congenital malformations, admission in neonatal nursery and perinatal death.

All the completed questionnaires were pooled together and the collected data was entered. The data was analyzed using statistical software SPSS (version 16.0). Frequencies of demographic variables were generated.

#### **Result:**

All the participants in our study were married and none of the pregnancies was outside the legal wedlock.

The mean age of teenage mothers in our study was 17.8 years. The mean age at marriage was 15 years. Among the subjects 64% were primigravidae & 19% were second gravidae.

Regarding their knowledge about contraception 73 % had no knowledge about any contraceptive methods, 20% had a knowledge but had never practiced any methods and only 5% have practiced contraception.

#### **Discussion:**

This is a preliminary study which has aimed to evaluate the maternal and fetal risks associated with adolescent pregnancies. Although some studies report that teenage pregnancy in later teen years can be a positive experience<sup>13,14,15</sup> it is generally considered to be linked to adverse health outcomes.

In our study, we found that only 26.5% females had knowledge about contraception while 73.5% were unaware of its use. Several studies report that one of the common reasons leading to inappropriate use of contraception was unawareness of the risks of pregnancy<sup>16,17</sup> and education has a positive influence on the risk of teenage pregnancy.<sup>18,19</sup> Even in those adolescents who have some contraception awareness many may not have contraception access, because of embarrassment to seek access to contraceptive methods. Missing pills is also common in this age group.<sup>20</sup> Thus proper use of contraceptive

services is required to reduce unwanted teenage pregnancies.<sup>21</sup>

70% of marriages in our study were arranged and 6% were forced. The percentage may be under reported as many females might not have disclosed their forced marriages out of fear of their husbands and in laws. The reasons for forcing girls into marriage may be linked to the need to preserve their dignity, the traditions of the community, and to overcome poverty. The mean age at marriage and pregnancy was 15yrs and 17.8 years respectively. Similar results are reported by Amber and Halima in their study.<sup>22</sup>

Adolescent pregnancies impose health risks to both the mother and the baby. In our study we found that 38.5% of our teenage mothers had anemia. This is in accordance with other local as well as international studies where anemia is found to be a common occurrence in teenage mothers.<sup>23-25</sup>

PIH was found in 4.5% and preeclampsia in 1.5% of our study population. These figures are almost same as adult pregnancies. This contrasts with other studies where PIH and preeclampsia are seen with increased frequency in teenagers.<sup>25,26</sup> However, Saqili also didn't find any difference in incidence of hypertensive complications in adolescents.<sup>27</sup>

Miscarriage was found in 3.5% and preterm labor in 13% of our patients. This is because of general unawareness among the teenagers regarding nutrition and hygiene, which predisposes them to infections including urinary and genital tract infections. Emotional stress can also lead to endocrine disturbances and preterm birth.<sup>28</sup> Other studies also report a similar association of teenagers with preterm labor.<sup>24,29,30</sup> However Nusrat Shah did not find increased risk of preterm labor and reports post maturity in her study.<sup>22</sup> Placental abruption was found in 2% of our study population. Previous studies have mentioned that placental abruption is less common among adolescents.<sup>22</sup>

Although rates of GDM are generally lower in

adolescent populations, GDM was found in 5.4% of our patients. Similar figures are reported in another study.<sup>31</sup>

Mode of delivery was SVD in 63.5% of our study subjects, while 25.5% underwent cesarean section, instrumental delivery was conducted in 6.5% of our teenage mothers. Similar results were reported in other studies.<sup>25,27,32</sup> Although adolescents specially those in early teens have pelvis that are not fully mature, these findings are most likely explained by the generally small size of the babies in teenagers. Babies of teenage mothers were more likely to have infants of low birth weight (40.5%), poor apgar scores (11%) and neonatal intensive care admissions (10.5%).

Fetal and perinatal death was found in 2.5% and 6% respectively. Other studies also affirm our findings.<sup>29,30,33-35</sup> The poor obstetric performance in teenagers is linked likely to the fact that they are not physically developed enough to sustain a healthy pregnancy or to give birth.<sup>36</sup> Moreover, their nutritional status is generally poor.

We found postnatal depression in 18.5% of our subjects. Several studies report a higher incidence of postpartum depression in adolescent mothers.<sup>7,8,9</sup> The psycho social immaturity and inability to cope with the stress of taking care of the newborn may be a contributing factor for this.

### Conclusion:

Teenagers are not aware of appropriate contraceptive practices and these pregnancies are high risk pregnancies with increased maternal and perinatal morbidity.

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**Conflict of interest:** None

### Role and contribution of authors:

Dr Shahina Ishtiaq, FCPS, MRCOG, Associate Professor, Ziauddin University Karachi did concept writing and design

Dr Urooj Malik, MCPS, FCPS, Assistant professor Ziauddin University Karachi, did data analysis

Dr Qurat Ul Ain Bugio, Post graduate trainee, Ziauddin University Karachi, did data collection

Dr Sumbul Gajani, Post Graduate Trainee, Obst & Gynae, Ziauddin University Karachi, did data collection

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