

Conference Paper

Postpartum Contraception in Indonesian Teenager

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Abstract

Background. Teenage pregnancy is a worldwide problem bearing serious social and medical implications relating to maternal and child health. Postpartum contraception in Indonesia teenager still being controversy issue in Indonesia, some opinion said contraception using in teenager will increase risk of sexual transmitted disease and against sociocultural. However, contraception is still important to prevent another unintended pregnancies. We aimed to evaluate the postpartum contraception preferences of teenagers. **Methods.** This is a cross sectional study performed over a period of 2 Years (January 1, 2013 to December 31, 2014) in Dr. Cipto Mangunkusumo Hospital as tertiary center and teaching hospital in Indonesia, 350 randomly selected teenage mothers (aged 12-19) were compared with 350 randomly adult primigravida mothers (20-39 years). Variables of interest were the demographic characteristics of the women, their obstetric complications and the outcome compare with contraception preferences. **Results.** There were a total of 5449 deliveries during the study period, out which 372 (6.8%) were teenagers. In teenage group, the mean of age was 17,3 years old, most of the teenage mother latest education were junior high school (78,3%), unemployed (55,1%), married < 6 month (40,8%), unintended pregnancy (56,6%), labor husband occupation (56%). The most commonly used postpartum contraceptive method was IUD (78,9%), DMPA injection (10%), implant (0,3%), and some of adolescent mothers did not use contraception (10,9%). There is significantly different contraception preferences between teenage mothers and adult primigravida mothers ($p = 0.009$). Post partum contraception preferences in teenage mothers were significantly correlate with mother occupation ($p = 0.002$), marital status ($p = 0.000$), marriage age ($p = 0.000$), unintended pregnancy ($p = 0.004$), husband occupation ($p = 0.000$), complications during pregnancy and delivery ($p = 0.000$), gestational age ($p = 0.000$), and babies birth weight ($p = 0.000$). Teenage mother were given information about contraception by doctor after she came at delivery room. The doctor offered several postpartum contraception that can be used after delivery. Teenagers select a contraceptive method with consider the benefits and risks. **Conclusion.** Providing adequate postpartum contraceptive education is therefore important for teenage mother.

Keywords: Teenage, postpartum contraception

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1. Introduction

Teenage pregnancy is a social problem distributed worldwide and has serious consequences on maternal and child health, especially in developing countries. Teenage pregnancy is defined as gestation in women before having reached the full somatic development, and refers to the period between ages 10 and 19 years [1]. Pregnancy in the very young women is generally considered to be a high risk event because of the additional by reproduction on a body which has still to grow [2,3,4]. Teenage pregnancies constitute major sociomedical and socioeconomic problems in developing countries and are becoming more prevalent in recent times [5]. The emergence of this teenage problem has been attributed to various factors such as early marriage, social permissiveness, unmet needs for contraceptives, maternal deprivation, no sexual health education in school, pre-existing psychosocial problems and in the family and general non-functioning family unit could be mentioned among others.

Contraception is important for the teenager mothers, but it still controversy, some opinion said contraception using in teenager will increase risk of sexual transmitted disease and against sociocultural [6]. The lack of information on contraception knowledge as well as the ovulation return time due to postpartum lactation amenorrhea and the limited contraception options for this age group lead to an increased frequency of unintended pregnancies, especially in developing countries [6,7,8]. The short interval for these unintended pregnancies is especially associated with serious maternal and fetal morbidity and mortality in adolescents [6,7].

The rate of teenage pregnancies in developing countries is still very high. Contraceptive education for teenage mothers may decrease the rate of postpartum unintended pregnancies. We aimed to evaluate the postpartum contraception in Indonesian teenagers.

2. Material and Methods

2.1. Study Setting and Design

This study is retrospective cross sectional study performed over a period of 2 years (January 1, 2013 to December 31, 2014) in Dr. Cipto Mangunkusumo Hospital as tertiary center and university teaching hospital in Indonesia, where data was retrieved from the hospital records. The study groups consists of women aged 19 years or less (teenage) that gave birth during the study period and primigravida aged 20 years and above (as control) that gave birth during the same period.

There were a total of 5449 deliveries among the non-teenage mothers during the study period. Thereafter, a double blind random sampling technique was applied to select the samples, 350 teenage mothers (aged 12-19) were compared with 350 adult primigravida mothers (20-39 years).

Variables relating to the socio demographic characteristics of the women in the two groups, antenatal and intrapartum complications and neonatal outcome were obtained. Statistical analysis was performed with Statistical Package for Social Sciences

| | Teenager Mothers n(%) | Adult Primigravida Mothers n(%) | p* |
|---------------------|-----------------------|---------------------------------|-------|
| No contraception | 38 (10,9) | 18 (5,1) | 0,009 |
| Contraception | | | |
| Implant | 1(0,3) | 0 | |
| DMPA | 35 (10) | 25 (7,1) | |
| Intrauterine Device | 276 (78,9) | 307 (87,7) | |
| * Chi-Square test | | | |

TABLE 1: Postpartum contraception preferences in teenager mothers (n = 350) and adult primigravida mothers (n = 350).

(SPSS version 21) where nominal data were compared using chi-square and fisher test and the difference between means determined by the students with the level of significance set at $p = 0.05$.

3. Result

A total of 5449 deliveries in our tertiary hospital during 2013-2014 and the teenage birth ratio in the same period was 6,8%. The 350 randomly selected teenager mothers and 350 adult primigravida (aged 20-39) were included in the study. The mean of age in teenager mothers was 17,3 years old and adult primigravida mothers 26,5 years old. The latest education of teenager mothers were junior high, most of them were unplanned pregnancy and twenty nine percent of teenager mothers were not married.

Most of teenager mothers were come in active phase of labor and delivered vaginally (61,3 %), and it was significant difference in route of delivery between the groups ($p = 0.000$). The mean pregnancy week at birth was 36 weeks in the teenager age group and 38 weeks in the control group. There is statistically significant difference in mean pregnancy week at birth was found between the groups ($p = 0.000$). We did find find a statistically significant difference between the groups in terms of the complications during pregnancy ($p = 0.000$) and babies birth weight ($p = 0.008$).

The most commonly used method was intrauterine device use, with 78,9% (276 patients) of the teenager mothers group and 87,7% (307 patients) of the control group. The least commonly used method was progesterone implant, used by 0,3% (1 patient) of teenager mothers, and the DMPA injection, used by 7,1% (25 patients) of the control group (Table 1). A statistically significant difference was again found between the groups in terms of contraception preferences ($p = 0.009$) (Table 1). This difference was particularly marked in the rate of patients who used did not use contraception, which was 10,9% (38 patients) of teenager mothers and 5,1% (18 patients) of the control.

Postpartum contraception preferences were statistically significant difference between the group in mother occupation ($p = 0.002$), marital status ($p = 0.000$), marriage age ($p = 0.000$), husband occupation ($p = 0.000$), gestational age ($p = 0.001$),

| Characteristics | Teenager Mothers n(%) | | | | Adult primigravida mothers n(%) | | | | p* |
|-----------------------------|-----------------------|----------|---------|------------|---------------------------------|-----------|---------|------------|-------|
| | No Contr | DMPA | Implant | IUD | No Contr | DMPA | Implant | IUD | |
| Age (years) | | | | | | | | | 0.213 |
| 12-18 | 38(10,9) | 35(10) | 1 (0,3) | 276(78,9) | 0 | 0 | 0 | 0 | |
| 19-25 | 0 | 0 | 0 | 0 | 9 (2,6) | 12 (3,4) | 0 | 143 (40,9) | |
| 26-32 | 0 | 0 | 0 | 0 | 5 (1,4) | 9 (3,6) | 0 | 117 (33,4) | |
| 33-39 | 0 | 0 | 0 | 0 | 4 (1,1) | 5 (1,4) | 0 | 47 (13,4) | |
| Educational status | | | | | | | | | 0.134 |
| Primary | 11 (3,1) | 8 (2,3) | 0 | 57 (16,3) | 0 | 0 | 0 | 0 | |
| Secondary | 27 (7,7) | 27(7,7) | 1 (0,3) | 219 (62,6) | 0 | 1 (0,3) | 0 | 12 (3,4) | |
| Tertiary | 0 | 0 | 0 | 0 | 16 (4,6) | 19 (5,4) | 0 | 222 (63,4) | |
| University | 0 | 0 | 0 | 0 | 2 (0,6) | 5 (1,4) | 0 | 73 (20,9) | |
| Mother Occupation | | | | | | | | | 0.002 |
| Unemployed | 28 (8) | 19 (5,4) | 1 (0,3) | 145 (41,4) | 0 | 0 | 0 | 0 | |
| Housewife | 10 (2,9) | 16 (4,6) | 0 | 131 (37,4) | 11 (3,1) | 20 (5,7) | 0 | 185 (52,9) | |
| Labour | 0 | 0 | 0 | 0 | 5 (1,4) | 4 (1,1) | 0 | 60 (17,1) | |
| Employee | 0 | 0 | 0 | 0 | 2 (0,6) | 1 (0,3) | 0 | 62 (17,7) | |
| Marital Status | | | | | | | | | 0.000 |
| Not Married | 11(3,1) | 1 (0,3) | 0 | 17 (4,9) | 0 | 0 | 0 | 0 | |
| Married | 27 (7,7) | 34 (9,7) | 1 (0,3) | 259 (74) | 18 (5,1) | 25 (7,1) | 0 | 307 (87,7) | |
| Marriage age | | | | | | | | | 0.000 |
| < 6 months | 16 (5) | 17 (5,3) | 0 | 110 (34,3) | 0 | 0 | 0 | 5 (1,4) | |
| 6 - 12 months | 7 (2,2) | 6 (1,9) | 1 (0,3) | 99 (30,8) | 1(0,3) | 1(0,3) | 0 | 17 (4,9) | |
| > 12 months | 4 (1,2) | 11(3,4) | 0 | 50 (15,6) | 17 (4,9) | 24 (96,9) | 0 | 285 (81,4) | |
| Intend or Unintended | | | | | | | | | 0.004 |
| Unintended pregnancy | 26 (7,4) | 22 (6,3) | 1 (0,3) | 149 (42,6) | 1 (0,3) | 1 (0,3) | 0 | 17 (4,9) | |
| Intend pregnancy | 12 (3,4) | 13 (3,7) | 0 | 127 (36,3) | 17 (4,9) | 24 (6,9) | 0 | 290 (82,9) | |
| Husband Occupation | | | | | | | | | 0.000 |
| Without husband | 10 (2,9) | 0 | 0 | 5 (1,4) | 0 | 0 | 0 | 11 (3,1) | |
| Unemployed | 8 (2,3) | 15(4,3) | 0 | 102 (29,1) | 0 | 0 | 0 | 0 | |
| Labour | 20 (5,7) | 20 (5,7) | 1 (0,3) | 169 (48,3) | 14 (4) | 23 (6,6) | 0 | 228 (65,1) | |
| Employee | 0 | 0 | 0 | 0 | 4 (1,1) | 2 (0,6) | 0 | 68 (19,4) | |

* Fischer test

| | Teenager Mothers n(%) | | | | Adult primigravida mothers n(%) | | | | p* |
|---|-----------------------|----------|---------|------------|---------------------------------|----------|---------|------------|--------------|
| | No Contr | DMPA | Implant | IUD | No Contr | DMPA | Implant | IUD | |
| Route of Delivery | | | | | | | | | 0.936 |
| Vaginal delivery | 20 (5,7) | 19 (5,4) | 1 (0,3) | 175 (50) | 8 (2,3) | 12 (3,4) | 0 | 133 (38) | |
| Instrumental delivery | 1 (0,3) | 2 (0,6) | 0 | 8 (2,3) | 0 | 1 (0,9) | 0 | 8 (2,3) | |
| Cesarean section | 17 (4,9) | 14 (4) | 0 | 93(26,6) | 10 (2,9) | 12 (3,4) | 0 | 166 (47,4) | |
| Complications | | | | | | | | | 0.000 |
| Without complications | 2 (0,6) | 0 | 0 | 15 (4,3) | 1(0,3) | 1(0,3) | 0 | 32 (9,1) | |
| Preterm | 3 (0,9) | 4 (1,1) | 0 | 66(18,9) | 1 (0,3) | 2 (0,6) | 0 | 30 (8,6) | |
| Premature rupture of membranes | 12 (3,4) | 9 (2,6) | 0 | 75 (21,4) | 3 (0,9) | 6 (1,7) | 0 | 85 (24,3) | |
| Gestational Hypertension, Mild –Severe Preeclampsia | 3 (0,9) | 0 | 0 | 40 (11,4) | 5 (1,4) | 1 (0,3) | 0 | 56 (16) | |
| Eclampsia Gravidarum | 6 (1,7) | 0 | 0 | 7 (2) | 0 | 2(0,6) | 0 | 1 (0,3) | |
| Intrauterine infection | 4 (1,1) | 15 (4,3) | 1 (0,3) | 16 (4,6) | 4 (1,1) | 7 (2) | 0 | 7 (2) | |
| Dystocia | 0 | 0 | 0 | 12 (3,4) | 0 | 0 | 0 | 12 (3,4) | |
| Malpresentation | 0 | 0 | 0 | 13 (3,7) | 0 | 0 | 0 | 20 (5,7) | |
| Condyloma | 0 | 0 | 0 | 5 (1,4) | 0 | 0 | 0 | 0 | |
| Post term | 0 | 0 | 0 | 20 (5,7) | 0 | 15 (4,3) | 0 | 30 (8,6) | |
| Miscellaneous | 2 (0,6) | 7(2) | 0 | 13 (3,7) | 3 (0,9) | 6 (1,7) | 0 | 19 (5,4) | |
| Gestational age | | | | | | | | | 0.001 |
| < 32 wga | 10 (2,9) | 8 (2,3) | 1 (0,3) | 49 (14) | 8 (2,3) | 5 (1,4) | 0 | 26 (7,4) | |
| 32-36 wga | 15 (4,3) | 13 (3,7) | 0 | 106 (30,3) | 4 (1,1) | 6 (1,7) | 0 | 112 (32) | |
| ≥ 37 wga | 13 (3,7) | 14 (4) | 0 | 121 (34,6) | 37 (6) | 14 (4) | 0 | 169 (48,3) | |
| Birth Weight | | | | | | | | | 0.053 |
| < 2500 gr | 24 (6,9) | 20 (5,7) | 1 (0,3) | 136 (38,9) | 12(3,4) | 9 (2,6) | 0 | 120 (34,3) | |
| 2500 – 3500 gr | 14 (4) | 15 (4,3) | 0 | 130 (37,1) | 5 (1,4) | 16 (4,6) | 0 | 172 (49,1) | |
| > 3500 gr | 0 | 0 | 0 | 10 (2,9) | 1 (0,3) | 0 | 0 | 15 (4,3) | |

* Fischer test

TABLE 3: Postpartum contraception preferences and variables in teenager mothers and adult primigravida mothers.

| Complications | Adolescent Mothers n(%) | | | | Adult primigravida mothers n(%) | | | | p* |
|------------------------|-------------------------|----------|---------|------------|---------------------------------|----------|---------|------------|--------------|
| | No Contr | DMPA | Implant | IUD | No Contr | DMPA | Implant | IUD | |
| Gestational age | | | | | | | | | 0.001 |
| < 32 wga | 10 (2,9) | 8 (2,3) | 1 (0,3) | 49 (14) | 8 (2,3) | 5 (1,4) | | 26 (7,4) | |
| 32-36 wga | 15 (4,3) | 13 (3,7) | | 106 (30,3) | 4 (1,1) | 6 (1,7) | | 112 (32) | |
| ≥ 37 wga | 13 (3,7) | 14 (4) | | 121 (34,6) | 37 (6) | 14 (4) | | 169 (48,3) | |
| Birth Weight | | | | | | | | | 0.053 |
| < 2500 gr | 24 (6,9) | 20 (5,7) | 1 (0,3) | 136 (38,9) | 12 (3,4) | 9 (2,6) | | 120 (34,3) | |
| 2500 – 3500 gr | 14 (4) | 15 (4,3) | | 130 (37,1) | 5 (1,4) | 16 (4,6) | | 172 (49,1) | |
| > 3500 gr | | | | 10 (2,9) | 1 (0,3) | | | 15 (4,3) | |

* Fischer test

TABLE 4: Postpartum contraception preferences and perinatal outcome in teenager mothers and adult primigravida mothers.

complication during pregnancy and delivery ($p = 0.000$) (Tables 2-3). There were 26 unintended pregnancies in the teenage group, and 2 in the control group were found within the specified time, the unintended pregnancies was significantly correlate with post partum contraception preferences ($p = 0.004$) (Table 2).

4. Discussion

Teenage Pregnancy is a public health problem that should be considered in a comprehensive manner, in order to involve the teenager mother and the problems that surround her [1]. The frequency of teenage pregnancy in Indonesia as a developing country is very high compared to other developed countries. The reasons for this difference could be cultural and religious norms. Many women in teen age were married due to cultural factors. Women who married after 17 years old is considered taboo for their family. And also low sexual education in school lead to unprotected sexual behavior resulting unintended pregnancy and sexual transmitted disease. Majority of them were married less than 6 months, unbooked case with poor antenatal care, lower educational status and unintended pregnancy. Regarding the World Health Organization (2005) approximately 210 million pregnancies occur each year worldwide of which 87 million are unplanned and 41 million continue to birth. This study shown that about 56% of the pregnancies in this teenage group are not desired, the ongoing unintended pregnancies are associated with serious maternal and fetal complications [9].

Postpartum contraception is generally required after the third month postpartum because the beginning of ovulation after delivery is not known [10]. In these study, long term used contraception is recommended to teenager group. Nowadays in RSUPN DR. CiptoMangunkusumo as tertiary centre and teaching hospital in Indonesia, post placental intrauterine device (IUD) is recommended since it has some advantages i.e. it

can be inserted right afterbirth; therefore, it reduces missed opportunity and develops cost effectiveness including the cost of reinsertion. It also provides better convenience as clients can be discharged from health care facility after giving birth and they are already equipped that their client is not pregnant during insertion [11]. In these study most of teenager mothers and primigravida mothers were using IUD as postpartum contraception. The role of Indonesia government nowadays supporting IUD as long contraception. In these teenager mothers group, by giving education about the risk and benefit of IUD, they agreed to use IUD as postpartum contraception method.

Depot medroxyprogesterone acetate (MPA) injection is a long-term contraceptive method known to be effective. In these study, using DMPA injection was the second preferences after IUD. The most significant problems are weight gain and irregular bleeding. Metrorrhagia-type bleedings can lead to amenorrhea in the future [12]. These contraception is the most popular contraception used among Indonesian people, as reasonably practical and inexpensive.

In Indonesia, we did not recommend to use lactation amenorrhea only as a postpartum contraception, because it has high failure rates and require compliance from the patient, so are calendar method ,the ovulation time not being known with certainty is a significant problem for the calendar method.

However, problems such as limited access to healthcare institutions and sociocultural restrictions, as well as possible complications such as pain and bleeding restrict their use [13]. The IUD use rate was 78.7% in the teenager mothers in our study. It proves that by giving enough education by health services, clients will agreed to use postpartum contraception. We realized that teenage pregnancy have many complications are a major public health problem in every country. About 56% of teenage pregnancy is unintended pregnancy, we hope that by inserted IUD post placenta will protect another unintended pregnancy.

However, teenage pregnancy are still widespread in undeveloped and developing countries for socio-cultural reasons, so the teenage pregnancy rate has not yet declined to the desired level [14].

5. Conclusion

Teenage pregnancy is a major health problem, and insufficient knowledge about contraceptive methods leads to unintended teenage pregnancies and complications. Providing education to client during pregnancy and delivery about adequate contraceptive education are important for public health.

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