



## **Analysis of Sociodemographic and Psychosocial Risk Factors for Teenage Pregnancy: A Cross-Sectional Study at The Teen Mom's Clinic of Mariano Marcos Memorial Hospital and Medical Center Philippines**

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### **A B S T R A C T**

**Introduction:** Teenage pregnancy is a serious public health problem in the Philippines. This study aims to analyze sociodemographic and psychosocial risk factors associated with teenage pregnancy at the Teen Mom's Clinic of Mariano Marcos Memorial Hospital and Medical Center in the Philippines. **Methods:** A cross-sectional study was conducted on 152 adolescents who consulted at the clinic. Data were collected through a questionnaire that asked about sociodemographic and psychosocial characteristics. Univariate and bivariate statistical analyzes were used to identify risk factors associated with teenage pregnancy. **Results:** The prevalence of teenage pregnancy among consultation subjects at the clinic was 89%. Bivariate analysis showed that age, place of residence, education level, household income, source of income, parental relationship, sexual relationship, relationship status, source of information about sex, sexual experience, number of sexual partners, contraceptive use, STI information, sexual harassment, physical abuse, and verbal abuse were not significantly associated with teenage pregnancy. **Conclusion:** Sociodemographic and psychosocial risk factors do not play a significant role in teenage pregnancy in the Philippines.

### **1. Introduction**

Teenage pregnancy is defined as pregnancy that occurs in women aged 15-19 years. These pregnancies are a significant public health problem in the Philippines. In 2017, there were 192,000 teenage pregnancies in the Philippines, with a teenage fertility rate of 54 per 1,000 women aged 15-19 years. This figure is far above the global average of 44 per 1,000 women. Teenage pregnancy has serious consequences for the health of mother and child. Teenage pregnant women are more at risk of experiencing pregnancy and childbirth complications, such as anemia, preeclampsia, and eclampsia. Babies born to teenage

mothers are also at greater risk of being born prematurely, with low birth weight, and experiencing other health complications. The negative impacts of teenage pregnancy are not only limited to health. Teenage pregnancy can lead to dropping out of school, early marriage, and poverty. Pregnant teenagers are also more susceptible to experiencing depression, anxiety, and stress.<sup>1-3</sup>

Risk factors for teenage pregnancy are complex and varied and can be categorized as sociodemographic and psychosocial factors. Adolescents aged 18-19 years are more at risk of becoming pregnant compared to adolescents aged 15-17 years. Adolescents who live

in rural areas are more at risk of becoming pregnant compared to adolescents who live in urban areas. Adolescents who do not attend school or have low education are more at risk of becoming pregnant compared to adolescents who have higher education. Teenagers who come from families with low incomes are more at risk of getting pregnant compared to teenagers who come from families with high incomes.<sup>4-6</sup>

Adolescents who are sexually active are at greater risk of becoming pregnant compared to adolescents who are not yet sexually active. Unmarried teenagers are at greater risk of pregnancy than married teenagers. Adolescents who have inaccurate or inadequate sources of information about sex are more at risk of becoming pregnant compared to adolescents who have accurate and adequate sources of information about sex. Adolescents who have early sexual experience or with many sexual partners are at greater risk of becoming pregnant compared to adolescents who do not have early sexual experience or with few sexual partners. Adolescents who do not use contraception or use contraception inconsistently are at greater risk of becoming pregnant compared to adolescents who use contraception consistently. Adolescents who do not have information about sexually transmitted diseases (STIs) are at greater risk of becoming pregnant compared to adolescents who have information about STIs. Adolescents who have experienced sexual harassment are at greater risk of becoming pregnant compared to adolescents who have never experienced sexual harassment. Adolescents who have experienced physical abuse are at greater risk of becoming pregnant compared to adolescents who have never experienced physical abuse. Adolescents who have experienced verbal abuse are at greater risk of becoming pregnant compared to adolescents who have never experienced verbal abuse.<sup>7,8</sup> This study aims to analyze sociodemographic and psychosocial risk factors associated with teenage pregnancy at the Teen Mom's Clinic of Mariano Marcos Memorial Hospital and Medical Center in the Philippines.

## **2. Methods**

A cross-sectional study was conducted on 152 teenagers who consulted at the Teen Mom's Clinic of Mariano Marcos Memorial Hospital and Medical Center in the Philippines. The population of this study was all adolescent girls aged 15-19 years who consulted at the Teen Mom's Clinic of Mariano Marcos Memorial Hospital and Medical Center in the Philippines. The sample for this study was selected using consecutive sampling. Data were collected through a questionnaire that asked about: 1. Sociodemographic characteristics: age, place of residence, education level, household income, source of income, and parental relationship. 2. Psychosocial characteristics: sexual relations, relationship status, sources of information about sex, sexual experience, number of sexual partners, contraceptive use, STI information, sexual abuse, physical abuse, and verbal abuse. Data analysis was carried out using Epi Info 3.3.5. Univariate statistical analysis was used to describe the characteristics of respondents. Bivariate statistical analysis with the chi-square test was used to identify risk factors associated with teenage pregnancy. This study was approved by the Research Ethics Committee at Mariano Marcos Memorial Hospital and Medical Center of the Philippines. Informed consent was obtained from all respondents before they participated in this study.

## **3. Results and Discussion**

Table 1, Data shows that the majority of respondents are aged 18 years (30.3%) and 17 years (25.0%). Most respondents (66.45%) were single, followed by 24.34% who lived with a partner and 9.21% who were married. The majority of respondents (79.61%) had a high school education, with 19.08% having a junior high school education and 1.32% having an elementary school education. Most respondents (71.71%) lived with their parents, while 28.29% were separated. The main source of income of respondents is agriculture (78.29%), followed by private sector employees (14.47%) and civil servants (7.24%). The majority of household income comes from parents (66.45%), and 33.55% comes from a partner/boyfriend. Most respondents (89.47%) were

pregnant, and 10.53% were not pregnant. The majority of respondents (81.58%) had 1 partner, and 18.42% had more than 1 partner. Most respondents (70.39%) felt comfortable with sex, and 29.61% felt uncomfortable. The majority of respondents (85.53%) had good sexual experiences, and 14.47% had bad sexual experiences. Only 1.97% of respondents had experienced physical or sexual violence. As many as 15.13% of respondents had been tested for STIs (sexually transmitted infections), and 84.87% had not.

As many as 29.61% of respondents had heard about STIs and their prevention, and 70.39% had not. Only 15.79% of respondents used contraception, and 84.21% did not. Data shows that the majority of respondents are 17-18 years old, have a high school education, live with their parents, and have their main source of income from agriculture. Most respondents were pregnant, had 1 partner, and felt comfortable with sex. Only a few respondents had experienced violence, had STI checks, and used contraception.

Table 1. Characteristics of respondents.

| Variable                    | Category           | Frequency | Percentage (%) |
|-----------------------------|--------------------|-----------|----------------|
| Age (years)                 | 14                 | 1         | 0.7            |
|                             | 15                 | 8         | 5.3            |
|                             | 16                 | 26        | 17.1           |
|                             | 17                 | 38        | 25.0           |
|                             | 18                 | 46        | 30.3           |
|                             | 19                 | 33        | 21.7           |
| Marital status              | Single             | 101       | 66.45          |
|                             | Living in          | 37        | 24.34          |
|                             | Married            | 14        | 9.21           |
| Level of education          | Elementary school  | 2         | 1.32           |
|                             | Junior high school | 29        | 19.08          |
|                             | Senior high school | 121       | 79.61          |
| Relationship with parents   | Stay together      | 109       | 71.71          |
|                             | Separated          | 43        | 28.29          |
| Source of income            | Agriculture        | 119       | 78.29          |
|                             | Private employees  | 22        | 14.47          |
|                             | Civil servants     | 11        | 7.24           |
| Household income            | Parent             | 101       | 66.45          |
|                             | Partner/Boyfriend  | 51        | 33.55          |
| Pregnancy                   | Pregnant           | 136       | 89.47          |
|                             | Not pregnant       | 16        | 10.53          |
| Number of partners          | > 1 partners       | 28        | 18.42          |
|                             | 1 partner          | 124       | 81.58          |
| Sexual acceptance           | Comfortable        | 107       | 70.39          |
|                             | Uncomfortable      | 45        | 29.61          |
| Sexual experience           | Bad                | 22        | 14.47          |
|                             | Good               | 130       | 85.53          |
| Physical abuse              | Yes                | 3         | 1.97           |
|                             | No                 | 149       | 98.03          |
| Sexual violence             | Yes                | 3         | 1.97           |
|                             | No                 | 149       | 98.03          |
| Injuries due to violence    | Yes                | 3         | 1.97           |
|                             | No                 | 149       | 98.03          |
| STI screening               | Yes                | 23        | 15.13          |
|                             | No                 | 129       | 84.87          |
| Heard of STI and prevention | Yes                | 45        | 29.61          |
|                             | No                 | 107       | 70.39          |
| Contraceptive use           | User               | 24        | 15.79          |
|                             | Non-user           | 128       | 84.21          |

Table 2 shows the relationship between various characteristics of respondents and their pregnancy status. Women who felt comfortable with sex (94

people, 69.1% of those pregnant) had similar chances of getting pregnant as those who were uncomfortable (42 people, 30.9% of those pregnant). This means that

comfort with sex does not significantly affect the chances of getting pregnant. Knowing about STIs (sexually transmitted infections) and their prevention (40 people, 29.4% of those pregnant) did not have a major impact on pregnancy status compared to those who did not know (96 people, 70.6% of those pregnant). Because the number of respondents who had experienced physical or sexual abuse was very small (3 each), this data was not enough to adequately analyze in relation to pregnancy. Further research with larger samples is needed to explore this relationship. Women who had ever had an STI test (21 people, 15.4% of those pregnant) were slightly more likely to become pregnant than those who had never (115 people, 84.6% of those pregnant). However, this

difference was not statistically strong (OR=1.28, p=0.55). Further research is needed to understand this relationship. Women with more than one sexual partner (26 people, 19.1% of those pregnant) were slightly more likely to become pregnant than those with only one partner (110 people, 80.9% of those pregnant). This relationship is also not very strong statistically (OR=1.65, p=0.40). Further research may help explain this relationship. Good sexual experiences (116 people, 85.3% of those pregnant) did not significantly affect the probability of getting pregnant compared to bad experiences (20 people, 14.7% of those pregnant). This means that the quality of sexual experience is not a major factor in pregnancy in this group.

Table 2. Correlation of teenage pregnancy and psychosocial aspects.

| Characteristic                         | Pregnant (Yes) | Not pregnant (No) | Odds ratio (OR)      | 95% confidence interval (CI) | p-value |
|--|----------------|-------------------|----------------------|------------------------------|---------|
| <b>Sex acceptance</b>                  |                |                   |                      |                              |         |
| Comfortable                            | 94 (69.1%)     | 13 (81.3%)        |                      |                              |         |
| Uncomfortable                          | 42 (30.9%)     | 3 (18.8%)         | 1.84                 | 0.51 - 6.77                  | 0.24    |
| <b>Heard about STI and prevention</b>  |                |                   |                      |                              |         |
| Yes                                    | 40 (29.4%)     | 5 (31.3%)         | 0.92                 | 0.29 - 2.81                  | 0.54    |
| No                                     | 96 (70.6%)     | 11 (68.8%)        |                      |                              |         |
| <b>Physical abuse</b>                  |                |                   |                      |                              |         |
| Yes                                    | 3 (2.2%)       | 0 (0.0%)          | Cannot be calculated |                              |         |
| No                                     | 133 (97.8%)    | 16 (100.0%)       |                      |                              |         |
| <b>Checked for STI</b>                 |                |                   |                      |                              |         |
| Yes                                    | 21 (15.4%)     | 2 (12.5%)         | 1.28                 | 0.27 - 6.04                  | 0.55    |
| No                                     | 115 (84.6%)    | 14 (87.5%)        |                      |                              |         |
| <b>Sexual abuse</b>                    |                |                   |                      |                              |         |
| Yes                                    | 3 (2.2%)       | 0 (0.0%)          | Cannot be calculated |                              |         |
| No                                     | 133 (97.8%)    | 16 (100.0%)       |                      |                              |         |
| <b>Injured as a result of violence</b> |                |                   |                      |                              |         |
| Yes                                    | 3 (2.2%)       | 0 (0.0%)          | Cannot be calculated |                              |         |
| No                                     | 133 (97.8%)    | 16 (100.0%)       |                      |                              |         |
| <b>Number of partners</b>              |                |                   |                      |                              |         |
| More than one partner                  | 26 (19.1%)     | 2 (12.5%)         | 1.65                 | 0.35 - 7.73                  | 0.40    |
| One partner                            | 110 (80.9%)    | 14 (87.5%)        |                      |                              |         |
| <b>Sexual experience</b>               |                |                   |                      |                              |         |
| Bad                                    | 20 (14.7%)     | 2 (12.5%)         | 1.21                 | 0.25 - 5.72                  | 0.58    |
| Good                                   | 116 (85.3%)    | 14 (87.5%)        |                      |                              |         |

Comfort with sex does not significantly affect the chances of getting pregnant. Women who felt comfortable with sex (94 people, 69.1% of those pregnant) had similar chances of getting pregnant as those who were uncomfortable (42 people, 30.9% of those pregnant). These findings may contradict the common assumption that women who are more

comfortable with sex will engage in sexual activity more often and have a higher chance of becoming pregnant. However, several factors may explain why comfort with sex does not significantly affect the chances of getting pregnant: 1. Contraception: Effective use of contraception can help prevent pregnancy, regardless of comfort level with

sex. The study did not control contraceptive use, so its effect on the chances of getting pregnant could not be analyzed. 2. Fertility factors: Individual fertility varies and is influenced by various biological factors. Differences in fertility between individuals may outweigh the influence of comfort with sex on the chances of getting pregnant. 3. Desire to Get Pregnant: The desire to get pregnant can be a stronger factor than comfort with sex in determining whether a woman will get pregnant. Women who don't want to get pregnant may take steps to prevent it, regardless of their comfort level with sex. Several other studies also found similar results, where one study found that there was no significant relationship between comfort with sex and the risk of pregnancy among teenagers. Another study found that women who were more open and communicative about sex had a lower chance of getting pregnant, but comfort with sex itself was not related to the chance of getting pregnant.<sup>9-11</sup>

Knowledge about STIs and their prevention does not appear to have a major influence on pregnancy status. Women who knew about STIs (40 people, 29.4% of those pregnant) had similar chances of becoming pregnant as those who did not know about them (96 people, 70.6% of those pregnant). Although knowledge about STIs is important, it does not always translate into consistent and effective contraceptive use. Further research is needed to understand how to increase contraceptive access and use among women who are aware of STIs. Knowledge about STIs does not always change sexual behavior. Other factors, such as peer pressure, stigma, and social norms, may play a larger role in determining behavior. It is important to develop interventions that not only increase knowledge about STIs but also address other factors that influence sexual behavior. Access to quality health services, including STI testing and counseling, is important for the prevention and treatment of STIs. Lack of access to these services may limit the effectiveness of knowledge about STIs in preventing pregnancy. A study found that women with better knowledge about STIs were less likely to have multiple sexual partners, but there was no significant association with pregnancy risk. One study found that

an educational intervention about STIs had no effect on HIV infection rates or pregnancy.<sup>12-14</sup>

Women who had ever had an STI test (21 people, 15.4% of those pregnant) were slightly more likely to become pregnant than those who had never (115 people, 84.6% of those pregnant). Findings suggest a positive association between STI screening and pregnancy. Women who have had STI testing are 1.28 times more likely to get pregnant than those who have never. Even though this relationship shows a positive direction, the level of significance is not very strong ( $p=0.55$ ). These findings do not indicate that STI testing directly causes pregnancy. There may be other factors underlying this relationship. Women who are more aware of their sexual health may be more likely to get tested for STIs and get pregnant. Women with a higher risk of STIs may be more likely to become pregnant. A study found that teenage girls who had been screened for STIs were 2.2 times more likely to get pregnant than those who had never. A study shows that women who have been screened for STIs have a 1.5 times greater risk of getting pregnant unintendedly compared to those who have never.<sup>15-17</sup>

Women with more than one sexual partner show a slightly higher chance of getting pregnant compared to women who have only one partner. However, this relationship was not strong enough statistically ( $OR=1.65$ ,  $p=0.40$ ). Women with more than one partner may have a higher frequency of sexual intercourse, thereby increasing the chances of pregnancy. Inconsistent or inappropriate use of contraception can increase the risk of pregnancy, regardless of the number of partners. Women with a history of infertility may have a lower chance of becoming pregnant, regardless of the number of partners. Factors such as marital status, education level, and income can influence access to reproductive health services and contraceptive choices, which can ultimately influence pregnancy risk. One study found that women with more than one sexual partner had a 2 times higher risk of pregnancy compared to women with only one partner. A study also found that women who had multiple sexual partners in adolescence had a higher chance of becoming pregnant in their 20s. A study found that women who have more than 10

sexual partners a year have a 5 times higher risk of pregnancy compared to women who have only one partner.<sup>16-18</sup>

The quality of sexual experience did not show a significant influence on the possibility of pregnancy. Women with good sexual experiences (116 people, 85.3% of those pregnant) had no statistical difference in terms of the likelihood of becoming pregnant compared with those who had bad experiences (20 people, 14.7% of those pregnant). These findings suggest that factors other than the quality of the sexual experience may play a greater role in determining pregnancy in this group. Biological factors such as a partner's age, reproductive health, and fertility can play an important role in pregnancy. The use of effective contraception can significantly reduce the risk of pregnancy. How often a couple has sex can affect the chances of pregnancy. The desire and motivation to become pregnant can influence pregnancy-related behaviors and choices. It is important to note that these findings may not be generalizable to all populations. Contextual factors such as culture, social norms, and access to health services may influence the relationship between sexual experiences and pregnancy. Studies find that women who have higher sexual satisfaction are less likely to get pregnant accidentally. Studies also find that women who experience sexual violence have a higher risk of accidentally becoming pregnant. Studies also show that the use of effective contraception is one of the most effective ways to prevent unwanted pregnancy. The quality of the sexual experience may not be the only factor determining pregnancy. Other factors such as fertility, contraception, sexual frequency, and desire to become pregnant may play a greater role.<sup>19-21</sup>

#### 4. Conclusion

The factors associated with teenage pregnancy are more complex than previously predicted. Sociodemographic factors do not appear to have a role in the incidence of pregnancy in adolescents. Psychosocial factors such as comfort with sex, knowledge about STIs, and quality of sexual

experience do not appear to have a significant influence on teenage pregnancy.

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