

## **Teenage Mothers' Graduation and Drop-out Rates in the Philippines**

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### **Abstract**

In adherence to UNESCO's millennium development goals, this study centers on the rights of women to higher education despite unexpected pregnancies. Using simulation modeling and validation of the results of simulation then comparing it into the actual data, this study assesses the extent to which teenage moms succeed in acquiring a college degree. Assumptions were formulated to measure different variables namely age and educational level which were found to be directly proportional to achieving success in education despite unexpected pregnancies. Findings reveal that the possibility of teenage mothers who succeed in acquiring a bachelor's degree is much lower than the chance of dropping out. A more mature age and a higher education level may surface as contributors of success. Finishing school as a teenage mother poses a serious challenge that extends beyond age and educational level.

**Keywords:** teenage mothers, higher education, unexpected pregnancies, simulation modeling, graduation and drop-out rates

## INTRODUCTION

The relationship between teenage pregnancy and education goes in both directions. Teens that get pregnant are likely to drop out of school and teenagers who drop out of school are likely to get pregnant (Mann, 2012). This is where education plays a vital role. However, in a conservative society where family planning is still not an open subject, teenage pregnancy is still a prevalent phenomenon in the Philippines. Therefore, support on teenage girls should not stop when they are unable to meet society's standards. In adherence to UNESCO's millennium development goals, this study centers on the rights of women to higher education despite unexpected pregnancies.

Evidently, one of the most important things a teenage mother can do is to finish school; however, most mothers drop out of high school and never complete their education. Parenthood is a leading cause of dropping out of school among girls. Despite the advantages of finishing school, teen mothers face serious obstacles due to several factors that make it more difficult for them to finish higher education. Left with very few options, not all women are aware that some local government units and school districts have programs to help teen mothers to be aware of these opportunities.

Domenico and Jones (2007) make a correlation between the lack of education and opportunities to early pregnancy through research which reveals that teenage mothers may become pregnant intentionally because they don't recognize other life goals within their reach. Moreover, without realistic plans about education, pregnancy is viewed as an alternative course to economic independence and adult status. It is estimated that having a child as a teenager reduces the chances of post-compulsory education by 12-24 % (Barn & Mantovani, 2007). Additionally, compromised education and career opportunities contribute to the lack of qualifications and an increased risk of social exclusion. Teens who become pregnant are also more likely to have experienced poverty, academic difficulties, and sexual abuse, risks that increase the likelihood of emotional distress (Coley & Chase-Lansdale, 1998).

It is then important for teen mothers to realize that finishing school is the best thing for themselves and their children. Inculcating among female students the idea that education helps them achieve financial success and independence in life which are essential to a bright future is a task educational institutions can fulfill especially to teen moms. To add, the economic value of an education is important to most people, but especially to teen parents. Raising a child is costly and jobs that don't require a college degree don't pay as well as

those that do. By assessing the extent to which teenage moms succeed in acquiring a college degree, this study aims to raise awareness about the rigors of teenage pregnancy in completing a higher education.

### **Conceptual Framework**

This study is anchored on the principle that education is a very important activity that people must engage. If a person wants to lead a happy life and enjoy the good things the world has to offer, he certainly needs to get educated. A great job, a good social reputation are few of the many benefits of being an educated person.

Education is a must for a promising, secure future and a stable life. However, it is noticeable nowadays that there are those students who cannot finish immediately their studies due to teenage pregnancy (Philippine Commission on Population, 2003). Though, they would want to finish their studies on time but they could not do it because they needed to become mothers to their child.

Teenage pregnancy as defined by Farlex in Segen's Medical Dictionary is pregnancy by a female, aged 13 to 19, which is understood to occur in a girl who has not completed her core education—secondary school and has few or no marketable skills, is financially dependent upon her parents and continues to live at home. Teenage mothers or women who become pregnant before the age 20, go on to raise their child and face difficulties in every aspect of their lives. Many teenage mothers feel overwhelmed by anxiety, guilt, and fears for the future (American Academy of Child & Adolescent Psychiatry [AACAP], 2012). Teenage mothers face the risk of not easily accepted by their peers, family, and their community (World Health Organization [WHO], 2012).

In an international context, a report by the Centers for Disease Control and Prevention in the US states that only 50% of teen mothers have a high school diploma compared with 90 % of girls who did not have a teen pregnancy. Fewer than four in 10 teen girls who have a child before they turn 18 earn their high school diploma. Fewer than 2% of teens who have a baby before the age of 18 obtain a college degree by age 30 (Van Pelt, 2012). This survey considers age as a factor that may increase the probability of staying in school.

This phenomenon is not an isolated case in the Philippines where the percentage of young girls aged 15-19 who have begun childbearing had more than doubled within the past decade. This finding came from the fourth and latest round of the Young Adult Fertility and Sexuality (YAFS) Survey released last February 6, 2014 by the University of the Philippines

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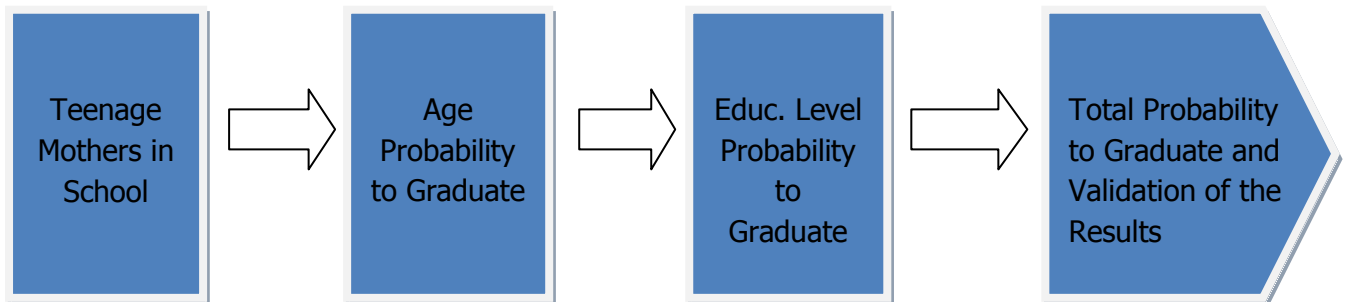
Population Institute and the Demographic Research and Development Foundation. Significantly, teenage pregnancy is on the rise in the Philippines.

In 2002, the last YAFS survey (YAFS) found that 6.3 percent of girls 15-19 years old were either pregnant for the first time or were already mothers. The latest survey done in 2013 shows that the percentage has climbed to 13.6 percent; 1 in 10 girls aged 15-19 was already a mother while 2.6 percent were pregnant with their first child when they were interviewed and has dropped out, as predicted. Among these girls aged 15 when interviewed in 2013, almost two percent had begun childbearing. This proportion increases as age increases such that among those who were aged 19 when interviewed in 2013, 1 in 3 had already begun childbearing (Singson, 2014).

Another indicator of teen mothers to stay in school or drop out is the educational level they are in (Shuell, 2013). Most literatures however, indicate drop-out rates but do not classify the educational levels. A significant example is a study published in Ghana about the effects of teenage pregnancy on the educational attainment of girls at Chorkor, a suburb in Ghana reveals teenage pregnancy limits the girls' educational opportunities. Thus, most of the teenage mothers drop out of school. Respondents of such study indicate that their academic performance before the pregnancy was relatively good. After the pregnancy however, the respondents of the study posited that their performance fell below the average level (Gyan, 2013). This result indicates a strong relationship between pregnancy and academic performance. Such result and the relationship of educational level to attainment are a few of the many findings this study aims to prove.

In this study, the percentage of teenage mothers who finish a higher education is simulated by identifying randomly 1000 teenage mothers in school. The age probability to graduate and educational level probability to graduate are also identified for these are the two important determinants in identifying the graduation indicators of these teenage mothers. After finding the abovementioned determinants, the total probability to graduate and graduation indicator can then be determined. After which, the results of the simulation will be validated by comparing it to the actual data of graduation and drop-out rates of teenage mothers in the Philippines.

These concepts are schematically represented below:



## METHODOLOGY

The study made use of an experimental design using simulation modeling. The experimental criterion measure is the total probability that the teenage moms can graduate while the simulated experimental treatments are age probability to graduate and educational level probability to graduate. The design was validated using real data showing graduation rate and teenage pregnancy cases in higher education.

The simulation was started by identifying 1000 teenage moms in school using random data and with Bernoulli probability distribution. The probability of success identified is 34 % chance of continuing school taken from the percentage released from the National Demographic Health Survey that 66% chance of dropping out of school (Natividad, 2014). Secondly, the age of these teenage moms were randomly identified using the integer distribution and the age probability to graduate was also identified. Thirdly, the educational level was identified using the integer distribution assigning the minimum value of one and maximum value of eight representing the eight steps or educational levels from first year high school to college. Lastly, the total probability to graduate was then identified. After all these, the results of the simulation is validated by comparing it to the actual data of graduation and drop-out rates of teenage mothers in the Philippines.

### Assumptions:

The simulation model is based on the following assumptions:

1. That out of 34% chance of teenage moms to continue to school, some may graduate in high school or college and others may not;
2. That age is a factor in continuing education and that age is directly proportional to the probability that teenage moms most likely will graduate;

3. That educational level is another determinant to the probability of the teenage moms to graduate and that the higher level they got while pregnant, the higher their chance to continue their education; and
4. That there is a high percentage of teenage moms not to graduate than to graduate considering graduation indicator.
5. That the results of the simulation data is nearly the same of the actual data of graduation and drop-out rates of teenage mothers in the Philippines.

## RESULTS AND DISCUSSION

Table 1: Simulation run for N=1000 teenage mothers who finish school

Teen Moms in School	Age	Age Probability to Graduate	Educational Level	Ed. Level Probability to Graduate	Total Probability to Graduate	Graduation Indicator
0	17	0.809524	4	0.5	0.404762	0
0	16	0.761905	1	0.125	0.095238	0
0	12	0.571429	1	0.125	0.071429	0
1	15	0.714286	1	0.125	0.089286	0
0	18	0.857143	6	0.75	0.642857	1
1	13	0.619048	5	0.625	0.386905	0
0	18	0.857143	8	1	0.857143	1
1	12	0.571429	6	0.75	0.428571	0
1	17	0.809524	1	0.125	0.10119	0
0	15	0.714286	7	0.875	0.625	1
0	13	0.619048	1	0.125	0.077381	0
1	12	0.571429	3	0.375	0.214286	0
0	13	0.619048	8	1	0.619048	1
1	17	0.809524	5	0.625	0.505952	1
0	16	0.761905	8	1	0.761905	1
1	12	0.571429	3	0.375	0.214286	0
0	16	0.761905	7	0.875	0.666667	1
0	17	0.809524	5	0.625	0.505952	1

0	17	0.809524	6	0.75	0.607143	1
0	16	0.761905	3	0.375	0.285714	0
1	18	0.857143	2	0.25	0.214286	0
0	12	0.571429	4	0.5	0.285714	0
0	12	0.571429	7	0.875	0.5	0
0	15	0.714286	4	0.5	0.357143	0
0	12	0.571429	3	0.375	0.214286	0
1	16	0.761905	6	0.75	0.571429	1
0	18	0.857143	1	0.125	0.107143	0
1	17	0.809524	4	0.5	0.404762	0
1	17	0.809524	1	0.125	0.10119	0
0	17	0.809524	5	0.625	0.505952	1
0	12	0.571429	2	0.25	0.142857	0
0	17	0.809524	3	0.375	0.303571	0
1	12	0.571429	8	1	0.571429	1
0	18	0.857143	8	1	0.857143	1

Table 1 reveals the results of the simulation model for teenage mothers enrolled in school and their chances of finishing a higher education. Further, it shows a random data of 1000 teenage mothers that have a 34% chance of continuing school. This percentage draws bearing from statistics released by the National Demographics Health Survey of 2012 that teenage mothers have a 66% percent chance of dropping out of school since parenthood can become a taxing job that takes their minds off education.

The second column of Table 1 presents the range of age the respondents belong to. These are 12 years old to 18 years old, respectively. Age is an important factor in the study since it is directly proportional to the teenage mother’s probability in finishing higher education. As illustrated in Columns 2 and 3, the older the age, the higher the chance of finishing a college education. To be more specific, a 15-year old teenage mom has only a 71% chance of graduating. A 17-year old however, has an 81% probability of finishing a college degree, as revealed in the data. This means that a 12-year old has a 29% disadvantage compared to an 18-year old pregnant woman.

This is supported by Mann (2012) in an article about teenage pregnancy and education. She states that only 38% of teen mothers who have a child before the age of 18 graduate from high school, compared to approximately 75% of women who delay child bearing until 20-21. For pregnant teens to drop out of school, may be attributed to many possibilities. Some of the reasons could be embarrassment for the situation they are in, health concerns, lack of childcare support, the need to work and provide for their babies' needs.

Despite the many obstacles of finishing a college education, still it is evident that pregnant teens that belong to the 16-18 years old bracket are able to pursue higher education. A contributing factor is the level of education they have reached at the certain age they are in. As shown in the data, the higher the educational level, the bigger their chances of graduating. This is to say that educational level, like age, is directly proportional to the probability of graduating. A pregnant 18-year old teen who belong to the 8<sup>th</sup> level, herein coded as the highest level of college education, may as well carry on with educational requirements than dropping out. This situation is relatively different for a pregnant teen at the 1<sup>st</sup> level who has a larger tendency of quitting school since finishing is still a long way, and the demands of pregnancy and motherhood become imminent and trying, which sets off the need for education.

Column 6 highlights the total probability of teenage mothers to graduate, given their age and level of education. It proves that age and educational level are contributing factors to finishing a college degree. A striking 60% difference in achieving a college degree is illustrated between a 12year old teenage mom and an 18 year old. Thus, 12 year olds have a 21% chance of finishing while 18 year olds have 64%. The data herein stated shows coherence to the findings revealed in the previous columns. A tally of the graduation indicators is shown below:

Graduation Indicator	
Count	
0	664
1	336
N= 1000	



This reveals that out of the 1000 respondents, only 336 are able to graduate and 664 did not finish a college education. These findings are parallel with the NDHS report that 7 out of 10 will drop out of school before completing high school (Singson, 2014). Incidentally, this research finding further reveals that despite the probabilities that involve the age and educational level factors which may contribute to educational success, in reality, most teenage mothers are still unable to finish college.

Table 2: Validation of the Simulation Modeling of the Graduation and Drop-out Rates of Teenage Mothers in the Philippines

Total Percentage of Teen Mothers in 2011	Graduation Rate of 2011	Teen Mothers who Graduated
19.9 %	56.75 %	2.85%

Sources: <http://www.asean-endocrinejournal.org/index.php/JAFES/article/view/49/477>  
<http://www.ched.gov.ph/index.php/higher-education-in-numbers/graduates/>

In this table, it is noticeable that a very low percentage of teen mothers are able to graduate with at least 2.85%. It has been found that the total percentage of teen mothers in 2011 is 19.9% provided by the National Demographics Health Survey and with 56.75% of graduation rate illustrated by Commission on Higher Education.

This means that the simulation model done has a parallel result to the actual data given by the two agencies namely National Demographics Health Survey and Commission on Higher Education. Furthermore, this simply proves that teen mothers have the lesser capability of graduating.

## CONCLUSION

Based on the foregoing findings, it is concluded that the possibility of teenage mothers who succeed in acquiring a bachelor's degree is much lower than the chance of dropping out. A more mature age and a higher education level may surface as contributors of success, but still these will not prove otherwise. Finishing school as a teenage mother poses a serious challenge that extends beyond age and educational level.

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