

# Adolescent Childbearing and Associated Factors in Vietnam

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## Abstract

*This research examines the factors influencing adolescent girl childbirth in Vietnam by employing data from the 2019 Vietnam Population and Housing Census and socio-ecological theory. The research underscores the substantial impact of environmental systems on adolescent childbirth, encompassing age, marital status, educational level, living area, and ethnicity. Higher adolescent birth rates are observed among older adolescents, ethnic minorities, and those with lower levels of education; this highlights the significance of cultural norms, restricted healthcare access, and poverty in influencing these results. The study emphasizes the importance of education, access to healthcare, and community support in mitigating the occurrence of pregnancies among adolescents. It further advocates for focused interventions that enhance the development of human capital, with a specific focus on rural regions and ethnic minority populations. To lessen the hazards associated with adolescent pregnancy, the study recommends policies that reduce child marriage and early motherhood and enhance education and knowledge on sexual and reproductive health.*

**Keywords:** *Adolescence, Adolescent Childbearing, Vietnam*

## INTRODUCTION

Adolescence is a unique and crucial period in a person's life. Representing the transition between childhood and maturity, adolescence is marked by significant physical and behavioral changes that pose risks and opportunities for impacting the life prospects of adolescents (Liang et al., 2019). The adolescent issues have long-term health and social ramifications and demand special consideration. Approximately twelve million adolescents ages 15 to 19 give birth yearly (Sully et al., 2020). Most of these births occur in low- or middle-income nations (Neal et al., 2018).

The majority of adolescent births are unanticipated and have far-reaching consequences for both moms and children (Torres, 2015; Sullivan et al., 2011; Amato & Maynard, 2007). Children born to adolescent moms are at a larger lifetime risk for a variety of adverse behavioral and developmental outcomes. Internalizing and externalizing behavior issues are more prevalent among children born to adolescent moms (Pogarsky et al., 2006; Beers & Hollo, 2009; Cederbaum et al., 2020). Having lower reading and arithmetic scores throughout childhood, children with adolescent moms had weaker academic trajectories during adolescence (Duncan et al., 2018; Edin & Kefalas, 2011; Beers & Hollo, 2009). In addition, adolescent mothers are 35 to 55 percent more likely than older women to deliver preterm and low-birth-weight infants (Kabir et al., 2019). Pregnancy during adolescence is a risk factor for both the mother and future child. It is linked to dropping out of school, violence, termination of pregnancy under suboptimal settings, obstetric problems, and other outcomes that can jeopardize the quality of life of the woman and those around her. Pregnancy is also the second most significant cause of death among this group (Sedgh et al., 2015).

Women whose first birth occurred in their adolescent years tend to demonstrate worse social and economic outcomes than those who delayed childbearing or remained childless (Diaz & Fiel, 2016). It violates girls' rights, with life-threatening consequences in terms of sexual and reproductive health, and poses high development costs for communities, particularly in perpetuating the cycle of poverty (Loaiza & Liang, 2013). The Sustainable Development Goals, to which the world has newly committed, prioritize the needs of the most vulnerable and underserved, including young people. Their reproductive choices will have enormous repercussions for the trajectory of their own lives and the future of their countries (United Nations Population Fund, 2016).

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Adolescence is a critical developmental and formative period significantly impacted by various economic, cultural, and social factors (Blakemore & Mills, 2014; Coleman, 2010). Curiosity, peer influence on sexual topics, comprehension of conception and reproduction, and knowledge of contraception are inherent to adolescents (Moore & Rosenthal, 2007). Nevertheless, the impact of these variables on adolescents varies among societies.

Vietnam has recently entered the golden age of population growth. It presently boasts a sizable proportion of youthful laborers, which not only presents favorable prospects for economic progress but also presents obstacles. Vietnam's entire population comprises approximately 30 percent of young individuals aged 10-29, with teenagers comprising 13.7 million (General Statistics Office of Vietnam, 2020). The transitional period between childhood and maturity is known as adolescence. Not only is this age group sizable in Vietnam, but their sexual norms and practices also evolve in tandem with the country's rapid social transformation. Consequently, in some population groups, usually in rural areas, families are caught between traditional and modern norms and values, and early marriages and childbearing are still common (United Nations Children's Fund, 2001).

Drawing upon socio-ecological theory, the purpose of this study is to examine the determinants of adolescent female childbearing. This strategy empowers numerous barriers to girls' empowerment, thereby preventing adolescent pregnancies and aiding governments, policymakers, and stakeholders in comprehending the obstacles and developing more efficacious initiatives. The study utilized data from the 2019 Vietnam Population and Housing Census, an annual occurrence every ten years.

## **LITERATURE REVIEW**

The social sciences have historically been intrigued by early adolescent childbirth. Considering the ethnic and cultural backgrounds of teenagers is also essential when examining the topic of adolescent motherhood, as the social environments in which they exist have an impact on adolescent birthing (Pantin et al., 2004; Deardorff et al., 2010; Yakubu & Salisu, 2018). A consensus hypothesis about adolescent childbearing has yet to be established despite the substantial body of research in the field (Goodson et al., 1997; Spear, 2004). While not inherently classified as a theory, Bronfenbrenner's (1979) ecological systems model can serve as a structure for organizing many perspectives and endeavors, most lacking their theoretical underpinnings. Most empirical research establishes connections between adolescent childbearing and other personal and societal issues (Schetter, 2011; Coley & Chase-Lansdale, 1998; Rodgers & Rowe, 1990).

According to Bronfenbrenner, human growth cannot be adequately comprehended or sustained apart from environmental settings. It is believed that individuals actively participate in their growth, exerting both influence and being impacted by the many strata of their surroundings. Adopting this holistic viewpoint promotes a more sophisticated methodology in examining human development and formulating interventions considering environmental and individual elements' intricate, interrelated characteristics (Bronfenbrenner, 1979). The application of Bronfenbrenner's theory enables researchers to investigate the influence of several environmental systems—including but not limited to immediate family, social networks, and broader societal and cultural norms—on the rates and results of adolescent pregnancy (Meade et al., 2008; Merrick, 1995). Bronfenbrenner delineated the distinct system levels as follows: (a) the microsystem, encompassing the attributes and responsibilities of an individual in the process of development; (ii) the mesosystem, comprising the environments in which the developing person engages; (iii) the ecosystems, comprising contexts beyond direct interaction that nonetheless exert an influence on the individual's progress; and (iv) the macrosystem, comprising cultural values and variables that impact individuals. Due to the extensive examination of various variables, this review will confine to the primary system levels - namely, the macro-, meso-, and microsystems levels—and provide a concise summary.

At the macrosystem level, living area and ethnicity are two critical variables. Adolescent childbearing is described to be more common in rural areas than in urban (Klingberg-Allvin et al., 2010; Orimaye et al., 2021). This result is also consistent with research by (Skatrud et al., 1998; Rosenberg et al., 2015), rural areas characteristically have high rates of teen pregnancy, low education levels, high unemployment, and poor health status compared with urban or metropolitan areas. Furthermore, there is substantial variation in adolescent

childbearing rates among ethnicities, whereby several ethnic groups exhibit comparatively elevated rates of teen pregnancy (Coley & Chase-Lansdale, 1998; Moore et al., 2021). Ethnicity is among the most essential social categories, stratifying people into groups with diverse histories and social experiences (Burton et al., 2010). Because of these experiences, adolescents from different racial and ethnic groups vary dramatically in their family, individual, and relationship characteristics (Martinez et al., 2011; Planty et al., 2009). Thus, ethnic differences may explain disparities in adolescent childbearing (Manlove et al., 2013).

Education has been the subject of the most research at the mesosystem level, where numerous aspects, including achievement (Yamaguchi & Kandel, 1987), grade level (Ralph et al., 1984), and educational expectations, have been evaluated (Abrahamse et al., 1988). A correlation exists between higher education and reduced rates of adolescent childbearing (Singh S., 1998; Penman-Aguilar et al., 2013). Multiple research indicates that poverty and inadequate formal education are substantial risk factors for a variety of health issues, including unfavorable pregnancy outcomes (Skatrud et al., 1998; Higginson, 1998). In contrast, adolescent motherhood has historically been linked to a diminished level of formal education, frequently resulting in impoverished circumstances (Meade & Ickovics, 2008; Merrick, 1995). The longer girls attend school, the lower their likelihood of becoming pregnant (Neal et al., 2015; Mohr et al., 2019). This is because education equips them with the necessary skills and knowledge to secure employment and sustain themselves while elevating their self-esteem and social standing within their families and communities (Barmao-Kiptanui et al., 2015; Singh & Darroch, 2000). Due to unwanted pregnancies, adolescents who are unable to complete their secondary education face restricted economic prospects. Certain families overcome this obstacle and achieve future prosperity even though it may set them on a cycle of poverty (Yakubu & Salisu, 2018).

It is not unexpected to discover, at the microsystem level, that as adolescent age increases, so does the probability of experiencing pregnancy and childbearing (Finer & Philbin, 2013; Neal et al., 2012; Omoro et al., 2017). Early marriage, one of the determinants of early pregnancy, leads to increased fertility in most of the adolescent marriages (Shrestha, 2002; Warenus, et al., 2007). Early marriage, often followed by adolescent pregnancies, has an enormous harmful effect on women's health as they are not ready physically and psychologically, hence increasing the risk for different sexually transmitted diseases, obstetric fistulas, pre-term deliveries, miscarriage accompanied by mental depression, physical abuse, lack of social coherence and isolation and so on (Kabir et al., 2019). Marriage and childbearing during adolescence often limit young women's opportunities in life as they are expected to take on parental responsibility before social maturity and finishing their education (Cook et al., 2008).

An increasing body of research suggests that early childbearing, encompassing both itinerant and married individuals, is giving rise to adverse societal and economic consequences (Bledsoe & Cohen, 1993). The incidence of eclampsia and obstructed labor is significantly higher among pregnant teenagers compared to women who conceive in their early twenties. A female still develops throughout early adolescence; her pelvis has not yet reached its full adult size. Aside from increasing the body's dietary demands, pregnancy may also retard the girl's growth. Obstetric fistula is far more prevalent in adolescents than in older women who are also giving birth for the first time (Early sex – early motherhood: facing the challenge, 1996). Compared to older mothers, the risk of death during childbirth is greater among adolescents (Goodburn & Ross, 1995).

Family and parents play an essential role in the development of adolescents (Cherie & Berhanie, 2015; Howell & Huebner, 2003). Nonetheless, parents' greatest issue in educating their children is preventing immature behavior while fostering their children's comprehension (Howell & Huebner, 2003). Parental education has been demonstrated in numerous prior research to be effective in preventing adolescent pregnancy, the leading cause of risky sexual activities (Cherie & Berhanie, 2015; Howell & Huebner, 2003; Kohler et al., 2008; Lindberg & Maddow-Zimet, 2011), and in enhancing children's overall life satisfaction. Hence, the reproductive health education practices, attitudes, and knowledge of parents about their children will be pivotal determinants, exerting either a good or negative influence on the typical progression of sexual and reproductive health (East et al., 2007). Policymakers also need to understand the determinants of adolescent pregnancy in their context in order to design pragmatic interventional programs to reduce unintended pregnancies among adolescents (Yakubu & Salisu, 2018; Goesling et al., 2014; Heller, 2018).

## **METHODS**

### **Data**

The data in this paper is aggregated from the Vietnam Population and Housing Census (VPHC) at the time-point 00:00 on April 01, 2019, a national census collected basic information on population and housing throughout the territory of Vietnam by the General Statistics Office. This census is customarily conducted every ten years, following international standards to ensure a thorough snapshot of demographic, socioeconomic, and housing indicators (Moultrie et al., 2013). In addition to monitoring the nation's development goals and objectives, these indicators are vital for the government's planning, policy formulation, and implementation processes (Dizdaroglu, 2017). The VPHC contains valuable details on the background characteristics of respondents and questions on marriage and childbearing status. The data for the sampling survey was gathered from 264,280 children between the ages of 15 and 19. Inquiries about adolescents' socioeconomic status and occupation enable the generation of data and computations concerning factors such as age, education, religion, and professional domains that impact adolescent pregnancy.

### **Instruments**

Bronfenbrenner's (1979) ecological model addressed the complex and multidetermined nature of the social problem of adolescent childbirth with its conceptualization of the individual as being affected by the larger systems levels (Repucci, 1987). Based on a literature review, variables were chosen and categorized under the relevant ecological systems level according to Bronfenbrenner's conceptual framework to determine ecological factors associated with adolescent childbirth.

At the microsystem level, variables related to individual functioning were chosen: age and marital status. Although these states are affected by the immediate and the broader social environment, they are experienced at the individual level.

The mesosystemic variable—represented by educational level—involve direct interactions with these social systems.

Assignable to the broader social environment, macrosystem factors manifest a more indirect impact. Macrosystem variables exert an influence in terms of living area and ethnicity.

### **Analytic Approaches**

Descriptive statistics were first applied to estimate the prevalence rates of childbirth and distributions of selected variables among Vietnamese adolescent girls. A logistic regression model was further applied to estimate the relationships between adolescent childbirth and the selected variables. Logistic regression is a method used to determine the cause-effect relationship with independent variables in cases where the dependent variable is observed categorically, in binary (binary, dichotomous), triple, and multiple categories. In the logistic regression method, the effects of the independent variables on the dependent variable are calculated as probability, and the risk factors are determined as probabilities (Özdamar et al., 2004).

## **RESULTS**

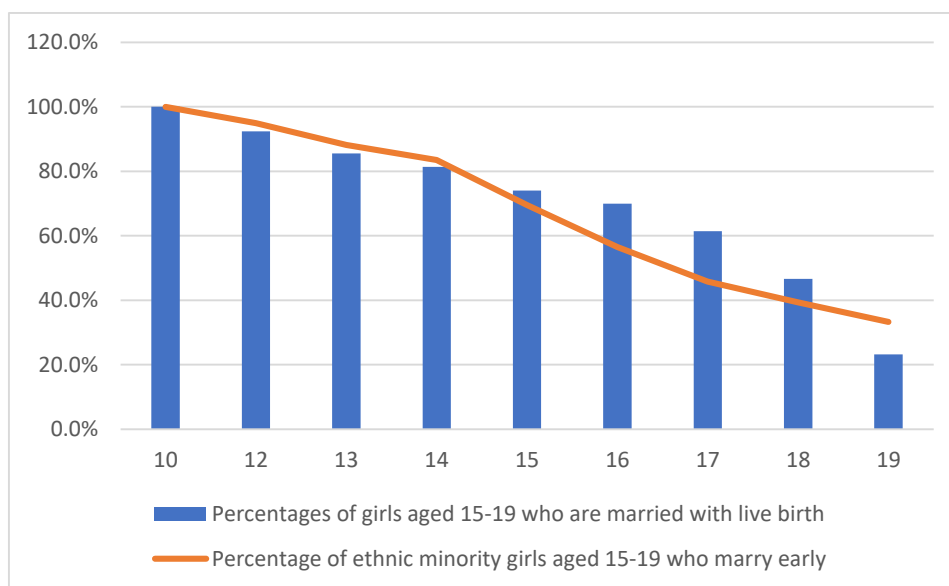
Vietnam recorded an adolescent birth rate of 46 per 1,000 in 2019. This rate is greater among ethnic minorities, older adolescents, and those with lower levels of education (see Table 1). Multiple factors contribute to the higher incidence of adolescent childbearing among ethnic minority communities: poverty, prejudice, limited access to sexual and reproductive health care, and early marriage (Information and External Relations Division of UNFPA and United Nations Population Fund, 2013; Le & Yu, 2021). In addition, as part of the tradition for women to become brides, they are frequently required to marry young, return to her husband's family, bear children, and care for his family. Cultural practices and norms, such as the matriarchy that dictates gender roles and the unequal distribution of power between men and women, contribute to the encouragement of adolescent girls to enter childbirth and early marriage (UNICEF Viet Nam and UNPFA Viet Nam, 2018).

**Table 1. Numbers and percentages of girls aged 15-19 with live birth, 2019**

Variables	Number of girls	Percentage of girls
<i>15-19 years of age</i>	140,784	4.6%
<i>Age</i>		
15	2,202	0.3%
16	6,858	1.1%
17	17,669	2.9%
18	42,415	6.9%
19	71,640	12.8%
<i>Educational level</i>		
Under primary	14,922	20.3%
Primary	39,256	8.6%
Lower secondary	67,211	3.5%
Upper secondary	18,453	3.9%
Pre-intermediate	445	0.3%
Intermediate	331	5.4%
Collage	116	2.0%
University	49	6.7%
<i>Ethnicity</i>		
Kinh	64,165	2.5%
Minority	76,618	14.4%
<i>Marital status</i>		
Married	127,438	57.5%
Unmarried	13,345	0.5%
<i>Urban/rural area</i>		
Urban	20,346	1.9%
Rural	120,437	6.0%

Source: GSO

The birth rate of women who enter matrimony prior to reaching the age of 20 is 115 times that of unmarried women. Women who marry young and belong to ethnic minorities have a greater likelihood of becoming pregnant during adolescence, as seen in Figure 1. Most women married prior to the age of seventeen are members of ethnic minorities, according to survey data indicating that the adolescent birth rate for women married before the age of 18 exceeds 60 percent. The high rate of adolescent childbearing among ethnic minorities in Vietnam appears to be primarily attributable to the continuance of child marriage in this population (Jones, 2011).



**Figure 1.** Early marriage and childbearing of adolescent girls, 2019

Source: GSO

The adolescent birth rate in rural regions is 60 births per 1,000 women, over three times the rate observed in metropolitan areas (19 children per 1,000 women). This result is also consistent with research indicating that urban residents marry and have children at a later age than those with fewer contemporary attributes (Pettay et al., 2021).

The findings of the Logistic model estimation, which illustrate the influence of ecosystem analysis framework component factors on the likelihood of adolescent girls in Vietnam having children, are displayed in Table 2.

**Table 2. Logistic regression with adolescent childbearing in Vietnam, 2019**

	Coef.	Std. Err.	z	P> z	Odds Ratio
Urban	-.2491485	.0364993	-6.83	0.000	0.7794642
Age	2.512227	.3244468	7.74	0.000	12.33237
Age2	-.0573343	.0092842	-6.18	0.000	0.9442783
Education	-.3026435	.0131779	-22.97	0.000	0.7388625
Race	.6759607	.026722	25.30	0.000	1.965921
Marriage	4.678848	.0318543	146.88	0.000	107.646
_cons	-30.48547	2.824301	-10.79	0.000	5.76E-14

Note: The significance level at 1%

All variables included in the sample are statistically significant predictors of adolescent childbearing (see Table 2). The model exhibits strong predictive capability, as indicated by the noteworthy values of the coefficients.

Their negative coefficients indicate the protective nature of 'Urban' and 'Education' against adolescent pregnancy. Conversely, 'Race' and 'Marriage' are correlated with increased probabilities of adolescent childbirth. A negative 'Age2' coefficient indicates the possibility of a maximum age at which the probability of adolescent childbearing diminishes, after which the odds decline.

## CONCLUSION AND RECOMMENDATIONS

The study establishes a correlation between adolescent girls giving birth and component components in the ecosystem analysis framework for adolescent development, utilizing data from the 2019 population census. Consequently, there is a correlation between adolescent female childbirth and factors such as marital status, age, education, ethnic heritage, and rural-urban residence.

The lack of anticipated effectiveness of the national-level protection factor for adolescent girls giving birth indicates that human capital development, particularly in the areas of education and health, continues to receive inadequate investment, including reproductive and sexual health. Investing in human capital is a highly prudent and economically efficient endeavor that nations can undertake to enhance the standard of living (Thangavelu & Wang, 2021). Furthermore, economic underdevelopment and poverty are additional national protective factors that can restrict the chances available to young people. When a girl has limited employment opportunities, means of subsistence, and a low standard of living, she will inevitably be susceptible to untimely marriage and motherhood. It is of the utmost importance that programs to decrease child marriage and inbreeding, particularly among ethnic minorities, continue to be adequately implemented.

Norms, values, and attitudes of each group impact the degree of autonomy and mobility of adolescent girls. Girls may or may not have the ability to exercise their rights and may be coerced into early marriage and childbearing within their societies. There is evidence between ethnic variables and adolescent girls giving birth, according to the investigation results. The influence of ethnic minority norms and beliefs on adolescent childbearing and early marriage is especially significant. It is critical to increase community knowledge regarding the topic of restricting adolescent marriage and births. When executing propaganda and education programs about adolescent pregnancy, childbearing, and early marriage in rural and ethnic minority groups, this is decisive and significant. Additionally, attitudes, habits, and community norms regarding marriage that are detrimental to girls must be eradicated.

Attending school provides numerous advantages for children as a whole, and for girls in particular, by enhancing their human capital, which enables them to seize fantastic possibilities in social life. Due to early marriage and motherhood, prospects are lost if a child does not attend school. Educational institutions can aid

in the prevention of childbirth and early marriage among adolescent females through the dissemination of information about sexuality, reproductive health, and life skills.

Families and parents must increase their knowledge and awareness regarding the dangers that child marriage and motherhood pose to adolescent girls. Apart from serving as the initial educators, parents significantly influence the development of their children's demands and sense of accountability. Human resource development policies consistently prioritize communication tactics to increase awareness, invest in education, and enhance educational standards for the general populace and young females. Additionally, women's empowerment and gender equality inside the family must constantly be ensured. Family investments and expectations in the development of human resources for girls must be directed toward averting harm to the child and safeguarding them against precarious circumstances.

Significant at the individual level, the married status of women in Vietnam is positively correlated with adolescent childbearing. Preventing pregnancy at an exceptionally early age not only serves to restrict early marriage but also mitigates the danger of maternal exhaustion and mortality for both the mother and child. As a result, this research provides substantial support for stricter regulations on child and early marriage, which would decrease the number of adolescent pregnancies.

### DATA AVAILABILITY

The datasets generated during and analyzed during the current study are available from the corresponding author upon reasonable request.

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