

Research article

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Marriage and childbirth intention among final-year students at Pham Ngoc Thach University of Medicine in 2023

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Abstract

A cross-sectional study was performed between January and May 2023 to determine the intention of age at first marriage and childbirth among final-year undergraduate students at Pham Ngoc Thach University of Medicine, Ho Chi Minh City. A self-administered questionnaire was used for data collection. A total of 486 participants (female students make up about 60%) with an average age of 23.7 ± 1.2 years were included in this analysis. This study found that the % of students intending to marry in the future is 65.4%; most importantly, 12.8% of students have no intention of marriage. Students plan to get their first marriage at 29.5 ± 2.5 years old, with 30.3 ± 2.8 for males and 28.9 ± 2.2 for females. Factors associated with the age intention of first marriage include age, gender, having a lover status, and the number of desired children. In addition, more than two-thirds (78.2%) of the students in this study desired to have children. In addition, more than two-thirds (78.2%) of the students in this study were interested in having children. In particular, the expected age of first-time motherhood is 1.3 years lower than that of first-time fatherhood (29.8 years compared to 31.1 years).

Keywords: Marriage intention, age at first marriage, childbearing desire, student, childbirth intention.

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1. INTRODUCTION

According to the Ministry of Health of Vietnam, the estimated total fertility rate in 2023 was 1.95 children/woman. This shows that fertility has continued to decrease below the replacement level since 2019. The Southeast and the Mekong Delta regions have been rated as the most seriously affected by fertility decline in Vietnam, with some provinces such as Bac Lieu, Hau Giang, Ben Tre, Binh Duong, and Ho Chi Minh City continuing to decline rapidly. In Vietnam, urbanization has become increasingly rapid, international integration has become more profound and broader, and the trend of postponing marriage and childbirth is becoming increasingly popular. The prolonged low fertility will result in many consequences, such as rapid

population aging, labor shortage, and impacts on social security. 1 Research has shown that the ideal age of childbearing among females that is highly recommended ranges from 20 to 30 years old, and not over 35 years old; this ensures the health of mother and baby and reduces the rate of abnormal pregnancies and maternity complications. 2 In addition, fertility intention is an essential topic in population transition research because it directly affects fertility rate. Therefore, the study aimed to survey the age intention of the first marriage and first childbirth among final-year students at Pham Ngoc Thach University of Medicine. This study will provide a general picture of medical students' intention to marry and have children to propose appropriate interventions to improve fertility in Ho Chi Minh City.

2. MATERIALS AND METHODS

2.1. Research subjects

Inclusion criteria: Final-year students studying at Pham Ngoc Thach University of Medicine in Ho Chi Minh City, unmarried, present at the time of the study, and agree to participate.

Exclusion criteria: Students were absent when the study was conducted, did not respond to information about socio-demographic characteristics, and did not answer questions about plans to have children and get married.

2.2. Research methods

Research design: A Cross-sectional study was conducted from January to May 2023.

Sample size: we applied the one-mean estimation formula with a type I error rate of 0.05 and a marginal error rate of 0.25. According to research by Chan CH 3 and colleagues conducted in Hong Kong in 2014, the expected standard deviation of the intended age of having the first child of the students was 2.8. Therefore, the minimum sample size needed for the study was 482.

Data collection method: cluster sampling study using the probability proportional to population size method (PPS-probability proportional to size sampling) on final year students of Pham Ngoc Thach University of Medicine (Figure 1). After considering the representativeness of the sample and implementation resources, a total of 15 clusters were selected, with each cluster size of 32 students; students in each cluster were selected randomly. When the chosen classes had

sizes of 32 to 36 students, we asked all students in those classes.

2.3. Data collection tools

Collect data using a structured questionnaire consisting of three parts: (1) sociodemographic characteristics, (2) intention to get married, (3) intention to have children.

2.4. Main outcome variables

The two primary outcome variables of the study were age at first marriage intention and age at first childbirth intention among students. In particular, age at first marriage was based on the questions “Do you intend to get married in the future?” and “When do you plan to get married?”. Similarly, the intended age of the first childbearing was determined based on the questions “Do you plan to have children in the future?” and “How old do you want to have your first child?”.

2.5. Data Analysis

Input data using Epidata 3.1 software and analyze data using Stata 14.0 statistical software. Descriptive statistics using frequency and proportion distribution by gender of students. The linear regression model determines the slope coefficient of independent variables explaining the change in the intended age to marry and have children in students with an error probability threshold of alpha of 0.05.

2.6. Ethical issues

The study was approved by the Ethics Council in Biomedical Research of the University of Medicine and Pharmacy at Ho Chi Minh City, decision number 906/HDDD-DHYD, dated November 22, 2022.

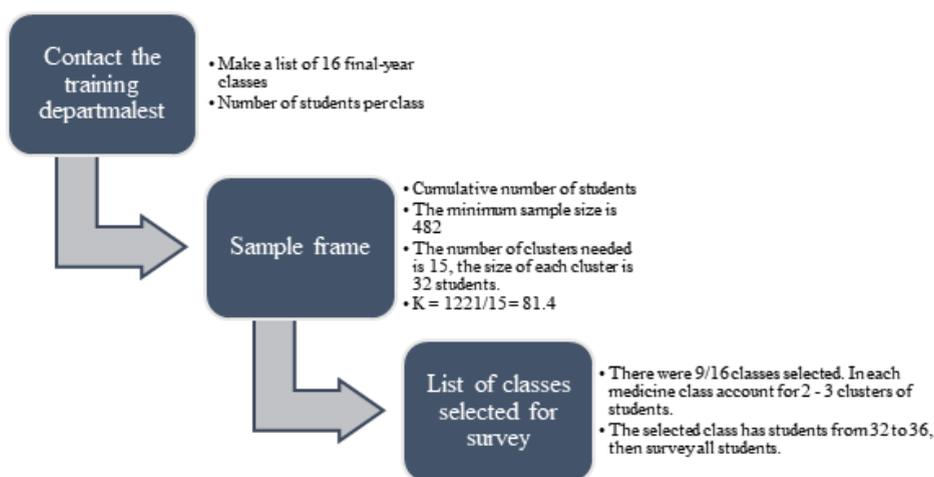


Figure 1. Sampling frame

3. RESULT

3.1. Socio-demographic characteristics of the participants

There were two selected classes with a total of 35 students, and no case was excluded from the study; therefore, the ultimate sample size of the study was 486. The results below are presented on 486 students. The average age of students was 23.7 ± 1.2 years old, of which the average age for males was 24.1 ± 1.1 years old and for females 23.5 ± 1.3 years old. The majority of students, 60% participating in the study, were female, and the predominance were single (99.6%). In addition, more than half of the students in the study lived in Ho Chi Minh City, and there was no difference in this ratio between the two genders. Regarding their self-economic status, most students were entirely dependent on family, accounting for 3/4, and female students had a higher rate of economic dependence on family than males, with 81.3% and 70.7%, respectively. Nearly 90% of students participating in the study were born into families with two or more children, and 10.5% were from families with one child. Regarding the relationship status of students, out of ten students, three had ever been in love, three had never been in love, and four students are currently in love. Regarding the length of the program, nearly 2/3 of the students participating in the study belong to a 6-year program such as medicine or dentistry. (Table 1).

Table 1: Socio-demographic characteristics of students (N = 486)

Characteristic	Total N = 486	Male N = 198	Female N = 288	p-value
Age Mean \pm SD* Min – Max***	23.7 ± 1.2 22 - 33	24.1 ± 1.1 22 - 29	23.5 ± 1.3 22 0 - 33	< 0.001 ^a
Marital status Single Living together	484 (99.6) 2 (0.4)	197 (99.5) 1 (0.5)	287 (99.6) 1 (0.4)	1.000 ^c
Place of residence Ho Chi Minh City Thu Duc City Other provinces	256 (52.7) 19 (3.9) 221 (43.4)	113 (57.1) 7 (3.5) 78 (39.4)	143 (49.6) 12 (4.2) 133 (46.2)	0.274 ^b
Self-economic status Completely independent Completely dependent Partly dependent	17 (3.5) 374 (76.9) 95 (19.6)	8 (4.0) 140 (70.7) 50 (25.3)	9 (3.1) 234 (81.3) 45 (15.6)	0.023 ^b
Birth order Only child First child Second child Third child and over	51 (10.5) 205 (42.2) 168 (34.6) 62 (12.7)	26 (13.1) 80 (40.4) 68 (34.4) 24 (12.1)	25 (8.7) 125 (43.4) 100 (34.7) 38 (13.2)	0.462 ^b
Have a lover Used to Never Having	154 (31.7) 147 (30.2) 185 (38.1)	70 (35.4) 50 (25.2) 78 (39.4)	84 (29.2) 97 (33.7) 107 (37.1)	0.115 ^b
Length of program 4 years 6 years	133 (27.4) 353 (72.6)	31 (15.7) 167 (84.3)	102 (35.4) 186 (64.6)	< 0.001 ^b

* Mean \pm Standard Deviation; ** Median (quartile) a t-test with equal variance; ^b Chi-square test; ^c Fisher exact test

3.2. Percentage of students planning to get married and have children

Survey results on 486 students showed that nearly 65.4% of students intend to get married in the future, about 1/5 of students did not think about getting married at the time of the survey, and 12.8% did not want to get married. The average intended age for first was 29.5 ± 2.5 years old, of which males' intended marriage age was 30.2 ± 2.7 years old and females was 28.9 ± 2.1 years old. More than two-thirds of the students in the study planned to have children in the future (accounting for 78.2%). Among them, male students have the same rate of intention of having children as females (78%). Most students intended to have two children in the future (74.9%). The desired age to have the first child was 30.4 ± 2.3 years old. In particular, the expected age of females to have their first child was 1.3 years lower than that of males planning to have their first child (29.8 years compared to 31.1 years). Regarding the age at which one wants to have a child, there was also a difference in both sexes; the average age is 33.9 ± 3.1 years old. Among them, males expected to have their last child at age 35.0 ± 3.3 and females at age 33.2 ± 2.7 .

Table 2. Marriage and childbirth intention among students by gender (n = 486)

Characteristic	Total N = 486	Male N = 198	Female N = 288	p-value
Marriage intention				
Yes	318 (65.4)	135 (68.2)	183 (63.5)	0.173 ^a
Not	62 (12.8)	28 (14.1)	34 (11.8)	
I have not thought about it	106 (21.8)	35 (17.7)	71 (24.7)	
Age intention at first marriage (n=402)				
Mean \pm SD*	29.5 ± 2.5	30.3 ± 2.8	28.9 ± 2.2	< 0.001 ^b
Min - Max**	22 - 40	22 - 40	24 - 40	
Childbirth intention (n=424)				
No	106 (21.8)	43 (21.7)	63 (21.9)	0.967 ^a
Yes	380 (78.2)	155 (78.3)	225 (78.1)	
Desired number of children (n=364)				
1	56 (14.8)	15 (9.7)	41 (18.3)	0.007 ^a
2	284 (74.9)	117 (75.5)	167 (74.6)	
> 2	39 (10.3)	23 (14.8)	16 (7.1)	
Desired age at first childbirth (n=375)				
Mean \pm SD*	30.4 ± 2.3	31.1 ± 2.6	29.8 ± 2.0	< 0.001 ^b
Min - Max**	23 - 40	23 - 40	23 - 40	
Desired age at last childbirth (n=366)				
Mean \pm SD*	33.9 ± 3.1	35.0 ± 3.4	33.2 ± 2.7	< 0.001 ^b
Min - Max**	25 - 50	25 - 50	27 - 45	

* Mean \pm Standard Deviation; ** Minimum - Maximum; ^a chi-square test; ^b t-test with unequal variances

3.3. The relationship between age intention at first marriage and socio-demographic characteristics

To determine the factors related to the age intended for marriage and childbearing among students, we consider the relationship between each socio-demographic characteristic and the desired number of children with the age of intended marriage. Then, we selected factors significantly related ($p < 0.05$) to the age of intended marriage and childbearing to consider in the multiple regression model and presented the results in Tables 3 and 4. Multiple model results showed that factors related to the age of first birth and marriage intention among students included current age, gender, partner status, and desired number of children. Specifically, regarding the intention of age

at first marriage, students with at least one year of enrolment intend to delay marriage for 0.31 years ($p = 0.033$). Male students planned to get married 1.23 years later than female students ($p < 0.001$). Students who have never had a lover and have had a lover planned to get married by 0.96 and 1.28 years later than those who currently have a lover, respectively ($p < 0.001$). Students who wished to have two or more children planned to get married 1.66 and 2.18 years earlier than those who did not plan to have children in the future ($p \leq 0.001$). Besides, male students intend to marry and have children 1.23 years later than females ($p < 0.001$). Students who have had a lover and have never had a lover also plan to have their first child 0.94 years and 0.98 years later than those who currently have a lover ($p < 0.001$). Students who wished to have two or more children plan to have children approximately one year earlier than students who do not plan to have children ($p < 0.05$).

Table 3: Factors related to first marriage intention among students

Characteristics	Simple Regression Model			Multiple Regression Model		
	Coefficient	95% CI	p-value	Coefficient	95% CI	p-value
Age	0.51	0.32 - 0.70	< 0.001	0.31	0.03 - 0.60	0.033
Gender (Male)	1.35	0.87 - 1.84	< 0.001	1.23	0.75 - 1.72	< 0.001
Love status						
Used to	1			1		
Never	1.25	0.68 - 1.81	< 0.001	1.28	0.72 - 1.83	< 0.001
Having	0.83	0.23 - 1.43	0.007	0.96	0.45 - 1.47	< 0.001
Length of program (6 years)	1.27	0.72 - 1.82	< 0.001	0.54	(-0.24) - 1.33	0.176
The desired number of children					(-2.07) - 0.24	
0	1			1	(-0.63) -	
1	-0.86	(-1.82) - 0.10	0.080	-0.91	(-0.70)	0.122
2	-1.55	(-2.30) - (-0.81)	< 0.001	-1.66	(-3.34) -	0.001
> 2	-1.87	(-2.93) - (-0.82)	0.001	-2.18	(-1.02)	< 0.001

Table 4: Factors related to childbirth intention among students

Characteristics	Cruden index			Adjusted index		
	Coefficient	95% CI	p-value	Coefficient	95% CI	p-value
Age	0.51	0.29 - 0.72	< 0.001	0.30	(-0.09) - 0.68	0.134
Gender (Male)	1.31	0.84 - 1.77	< 0.001	1.23	0.75 - 1.71	< 0.001
Love status						
Used to	1			1		
Never	0.96	0.41 - 1.50	0.001	0.94	0.43 - 1.45	< 0.001
Having	0.82	0.23 - 1.41	0.006	0.98	0.44 - 1.52	< 0.001
Length of program (6 years)	1.24	0.70 - 1.78	< 0.001	0.39	(-0.52) - 1.29	0.400
The desired number of children						
1	1			1		
2	-0.97	(-1.64) - (-0.30)	0.005	-1.05	(-1.73) - (-0.38)	0.002
> 2	-1.47	(-2.43) - (-0.51)	0.003	-1.75	(-2.67) - (-0.84)	< 0.001

4. DISCUSS

In our study, it was found that students planned to get married for the first time at 29.5 ± 2.5 years old (males were 30.2 ± 2.7 years old and females were 28.9 ± 2.1 years old), more than three years later compared to the country level. It was further observed that 65.4% of students intend to marry in the future, while 78.2% intend to have children. This rate was higher than the results from Doan Phuong Linh's study 4 among 116 young people in Vietnam, highlighting that 61% of the participants intended to have children before 30. The higher rate of students intending to have children than the rate of those intending to get married may suggest a shift in future family forms among young people in Vietnam, as concepts such as "cohabitation" arise and single parenthood become increasingly common.⁵ In addition, the Ministry of Health has also organized seminars and programs on the alarmingly low fertility rate in Vietnam to forecast labor shortages in 2055. This may affect the awareness of students in the health sector about their plans to have children. In addition, the study has shown differences in the age of intended marriage and first childbirth among male and female students. Accordingly, the age at which males intend to get married and have their first child was 1.3 years higher than that of females, as shown in Table 2.

The current age of students and age intention at first birth were correlated, as is the case that was proven in previous studies. For example, in the study by Talukder et al.⁶ in 2021, among females in Albania, there was a correlation between participants' age and age at first intended birth, with a positive correlation at $r = 0.289$ ($p < 0.001$). In this study, there was no significant relationship between the current age of students and the intended age to have their first child ($r = 0.30$, $p = 0.134$). However, there was a relationship between the age of intended childbearing and their gender ($p < 0.001$). Specifically, male students intend to have children later than female students (31.1 years old compared to 28.9 years old).

These findings were similar to those found in a study by Lampic et al.⁸ conducted on medical students at a Ukrainian university in 2016. The findings highlighted that female students expected to have their first child at an average age of 24.4 years and male students at 26.8 years old. Although the research results show a significant difference between the prevalence of planning to get married and the prevalence of planning to have children (table 2), it may suggest a change in family forms among young people in the future. However, the difference in age at marriage and intended age to have children in both sexes (the intended age to give birth is higher than the intended age to get married) explains the common phenomenon in the current population in Vietnam as in Southeast Asian countries, couples often have children after marriage. Regarding the number of children they intend to have, more than 2/3 of the participants reported wanting to have two children in the future, and only 10% plan to have three or more children. This was consistent with the current prevailing fertility rate in Vietnam. In other words, on average, each couple in Vietnam has two children, and the popularity of this family size may somewhat affect the fertility intention of the students and young adults.

In this study, the status of having a current lover is related to the age at which students intend to get married and have their first child ($p < 0.001$). Accordingly, students with a lover plan to get married and have children earlier than other groups (tables 3 and 4). At the time of the study, the relationship status of students appeared to have an impact on fertility and family size intentions, with partners and stable relationships intending to get married and have children earlier than students who have never been in a relationship. In addition, a significant correlation was also found between the age at which students intend to get married for the first time and have their first child in the future and the desired number of children. Accordingly, students who wish to have two or more children plan to get married and have children sooner than students who only plan to have one child.

The study showed several factors that influence the intention of age at first marriage and childbearing, such as current age, gender, partner status, and length of the academic program of the participants. However, the study also has some limitations. First, because this is a cross-sectional study, some variables may not reflect the complete picture of future marriage and childbearing. For example, for the relationship status (having a lover), the student's response was only temporary and was based on the student's subjective feelings at the time of the survey. Second, the target population of the study was medical students who have access to information about reproductive health, which may partly affect the age at which they intend to have children. Thus, future studies need to be conducted on a different target population to have a more general picture of the birth intentions of young people in Ho Chi Minh City and Vietnam. Third, although the study was conducted at a university with a high proportion of citizens in Ho Chi Minh City with the desire to generalize and see a future picture of marriage patterns and fertility levels of young people in Ho Chi Minh City, in this study, only more than 50% of students have permanent residence in Ho Chi Minh City. Thus, future studies on young people in Ho Chi Minh City should consider this ratio to generalize the results better.

5. CONCLUSION

The percentage of students intending to get first marriage among male students was 68.2%, and 63.5% among female students. The proportion of students intending to have children was 78.3% among male students and 78.1% among female students. The proportion of students who intended to have at least two children in the future was 74.9%. The intended age at first marriage for male students was 30.3 years old, and for female students, it was 28.9 years old. The intended age for having the first child for male students is 31.1 years old, and for female students, it is 29.8 years old. In addition, the study found a relationship between the intended age to get first married and the number of children intended with gender, love status, and the desired number of children of the students.

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