



Factors that Motivate High School Students of Generation Z in Northeast Thailand to Attend Medical School

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Abstract

Background: High schools are increasingly dominated by students from the new generation known as Generation Z (Gen Z). This study aimed to investigate why Gen Z students choose to study medicine and how they perceive their career futures.

Materials and Methods: This cross-sectional study has a descriptive and analytical design and was conducted using the available sampling method on fourth-sixth-grade high school students in Sakon Nakhon town and surrounding regions in upper northeast Thailand. A total of 74 students voluntarily enrolled in the study. The information was gathered throughout the 2023 academic year. They received a researcher-made questionnaire containing 33 questions about the demographic and motivational factors. The collected data were analyzed using Stata MP 14.0 software by the t-test and one-way analysis of variance (ANOVA).

Results: The students were aged 15 to 19 (average: 17.0 ± 0.914 years), with 12 males (16.2%) and 62 females (83.8%). Most students were from outside the municipality ($n=57$, 77%). Of the total participants, 68 (93.1%) students were in grades 5 and 6. They were well-motivated to attend. Male students were more professionally motivated than females (4.75 ± 0.178 vs. 4.46 ± 0.096 , $P=0.004$) and paid more attention to economic, social, and environmental aspects (3.88 ± 0.598 vs. 3.79 ± 0.636 , $P=0.003$). No significant difference was observed in the personal aspect (4.17 ± 0.419 vs. 4.07 ± 0.305 , $P=0.675$), and curriculum and institution aspects (4.70 ± 0.084 vs. 4.43 ± 0.102 , $P=0.841$) between the two sexes.

Conclusion: In contrast to earlier generations, Gen Z students representing the rural area of Thailand who wish to pursue medicine have higher levels of intrinsic drive, benevolence, and performance readiness. Due to the limitation of samples, the results may not be generalized to other populations.

Key Words: Generation Z, Medical School, Medicine, Motivation, Students.

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1- INTRODUCTION

Students from Generation Z (Gen Z), i.e., those born between 1997 and the present, are now the majority in high schools. Since their early years, members of this generation have stood out in surprising ways, e.g., as activists, leaders, international competition winners, or technology pioneers (1). There is promise that this group of freshmen students will turn into some of the best health professionals. The dire global circumstances that they have experienced throughout their lives could have motivated them to make a difference in the world. They are inspired to get engaged in and change their environment because of the turmoil and disarray that they witness in governments (2). This younger generation desires to be as prepared as they can be and to achieve their full potential in every aspect of their lives (3).

In recent years, low/middle-income nations have experienced significant advances in medicine (4). It is uncertain how appealing the medical field is to Gen Z high school students. The purpose of this study was to determine why Gen Z students (especially in rural areas) choose to study medicine and how they perceive their career futures.

2- MATERIALS AND METHODS

2-1. Study Design and Population

This cross-sectional study has a descriptive and analytical design and was conducted on fourth-to-sixth-grade high school students in Sakon Nakhon town and surrounding regions in upper northeast Thailand who attended the opening ceremony of the Faculty of Medicine, Kasetsart University, on August 24, 2023. The target population and sample size of the study were determined using the available sampling method.

2-2. Inclusion and Exclusion Criteria

The inclusion criteria were fourth-to-sixth-grade high school students who were willing to answer the questionnaire. The exclusion criteria were partial completion of the questionnaire and unwillingness to participate in the study.

2-3. Ethical Considerations

The aim of the study was presented to the participants before completing the questionnaire, and their informed consent was obtained. Writing the name and family name was not mandatory.

2-4. Measuring Tools

A research-made questionnaire was used for data collection. It consisted of nine multiple-choice questions about demographic and background data (age, gender, grade, grade point average, siblings, parents' job, domicile/residence, having physicians in the family, and family income) and 24 multiple-choice questions about motivational aspects, including personal factors (six items), professional factors (seven items), economic, society, and environment factors (six items), and curriculum and educational institution factors (five items).

The items were scored based on a five-point Likert scale, with a score of 1 indicating "strong disagreement" and a score of 5 indicating "strong agreement". The perceptual interpretation of the mean was defined for five levels by requiring a score from 1 to 5 using the following criteria (5).

- 1.00 – 1.50: Poor
- 1.51 – 2.50: Fair
- 2.51 – 3.50: Moderate
- 3.51 – 4.50: Good
- 4.51 – 5.00: Excellent

2-5. Data Analysis

Statistical analyses were performed using Stata MP 14.0 software. A full explanation of numerous elements was provided by

descriptive statistics and calculating the percentage, mean, and standard deviation to characterize the general characteristics of the study population. The t-test and one-way analysis of variance (ANOVA) were the statistics employed. A p-value of 0.05 or less was considered statistically significant.

3- RESULTS

Section 1,

A total of 74 students were included in the study, consisting of 12 male (16.2%), and 62 female (83.8%) participants. They were aged between 15 and 19 years, with an average of 17.0 ± 0.914 years. The

participants were primarily from outside the municipality (57, 77%). Students were in grades 4 to 6, with 68 (93.1%) in grades 5 and 6. The cumulative GPAs of 70 (94.6%) students were higher than 3.00. Farmers, employers, and public workers made up the majority of the students' families, with 57 (77.0%). Of all households, 47 families (53.5%) had monthly incomes ranging from 5,000 to 20,000 Baht. The average number of children per family was ≤ 2 , and only nine (12.2%) of the minority family members were doctors (**Table 1**).

Table-1: General characteristics of students (n=74).

Variables	Number (%)
Gender	
<i>Male</i>	12 (83.8)
<i>Female</i>	62 (16.2)
Age)year(
15	5 (6.8)
16	12 (16.2)
17	29 (39.2)
18	27 (36.5)
19	1 (1.4)
Grade	
<i>Grade 4</i>	5 (6.8)
<i>Grade 5</i>	29 (39.2)
<i>Grade 6</i>	40 (54.0)
Grade point average (GPAs)	
2.51-3.00	4 (5.4)
3.01-3.50	10 (13.5)
3.51-4.00	60 (81.1)
Siblings	
<i>None</i>	20 (27.4)
1-2	48 (65.8)
3-4	5 (6.8)
≥ 5	1 (1.4)
Physician in family	
<i>Yes</i>	9 (12.2)
<i>No</i>	65 (87.8)
Domicile	
<i>Inside the municipality</i>	17 (23.0)
<i>Outside the municipality</i>	57 (77.0)
Occupation of parents' students	
<i>Military personnel</i>	14 (18.9)
<i>Agriculture</i>	19 (25.7)
<i>Trading</i>	5 (6.8)
<i>Civil servant</i>	14 (18.9)
<i>Teacher</i>	4 (5.4)

<i>Business</i>	9 (12.2)
<i>Others</i>	9 (12.2)
Average family income per month (baht)	
≤5,000	7 (9.5)
5,000-10,000	18 (24.3)
10,001-20,000	29 (39.2)
20,001-50,000	11 (14.9)
≥50,000	9 (12.2)

Section 2,

All students were found to have high to excellent motivation in four aspects. The highest scores were attributed to the professional aspect and curriculum and institution aspects. Male participants were more professionally motivated than females (4.75 ± 0.178 vs. 4.46 ± 0.096 , $P=0.004$), and paid more attention to economic, social, and environmental aspects (3.88 ± 0.598 vs. 3.79 ± 0.636 , $P=0.003$). No significant difference was found in motivation in the personal aspect (4.17 ± 0.419 vs. 4.07 ± 0.305 , $P=0.675$) and curriculum and institution aspects (4.70 ± 0.084 vs. 4.43 ± 0.102 , $P=0.841$) between the two sexes (**Tables 2, 3**).

Among factors affecting the decision to attend in the personal aspect, most students valued the subtopic “ability to develop themselves to advance” at the excellent level for studying at the medical school (4.75 ± 0.621 vs. 4.51 ± 0.793 , $P=0.319$). In descending order, the subtopic “need help and sacrifice for others” was scored at a good level by both male and female students (4.50 ± 0.674 vs. 4.40 ± 0.806 , $P=0.687$) (**Table 3**).

Regarding professional factors affecting the decision to attend, it was found that there were differences between genders. The motivation was at an excellent level among male participants in all subtopics, with “stable and progressive profession” being the highest-rated subtopic by

everyone (5.00). For female students, an “honorable and respected profession” (4.58 ± 0.704), “stable and progressive profession” (4.57 ± 0.684), and “generation of high income” (4.51 ± 0.709) contributed to three excellent levels of motivation. There were also significant differences between genders in the subtopic “finding jobs easier than other fields” (4.93 ± 0.288 vs. 4.40 ± 0.702 , $P=0.014$) and “stable and progressive profession” (5.00 vs. 4.57 ± 0.684 , $P=0.033$) (**Table 3**).

Regarding factors in the curriculum and institution aspects, it was found that male students considered all subtopics excellently motivated, with an “interesting and different curriculum” receiving the highest scores (4.83 ± 0.389). The majority of female students were motivated at a good level in the subtopics, and only an “accredited curriculum by World Federation for Medical Education (WFME)” was considered excellently motivated (4.58 ± 0.634) (**Table 3**).

Factors related to economic, social, and environmental aspects scored the least in consideration, especially “studying with friends” (3.08 ± 1.621 vs. 2.76 ± 1.627 , $P=0.54$), which was scored at a moderate level by both genders. The subtopic that received the highest scores among male students was “building a better family position” (4.67 ± 0.492). For females, it was the “job market being in high demand” (4.61 ± 0.604) (**Table 3**).

Table-2: Main factors affecting the decision to attend Medical school.

Factors	Male		Female		P-value
	Mean	SD	Mean	SD	
Personal aspect	4.17	0.419	4.07	0.305	0.675
Professional aspect	4.75	0.178	4.46	0.096	0.004*
Curriculum and Institution aspects	4.70	0.084	4.43	0.102	0.841
Economic, social and environmental aspects	3.88	0.598	3.79	0.636	0.003*

*P-value < 0.05 significant (By ANOVA), SD: Standard deviation.

Table-3: Subtopics affecting the decision to attend in each aspects.

No.	Subtopic	Male		Female		P-value
		Mean	SD	Mean	SD	
Personal aspect						
1.	It's a profession that interests you	4.25	0.965	4.14	0.949	0.710
2.	Suitable for knowledge and abilities	3.58	0.996	3.66	0.906	0.787
3.	Dream profession since childhood	3.67	1.302	3.88	1.152	0.570
4.	Matching own habits and personality	4.25	0.753	3.85	0.814	0.114
5.	Need help and sacrifice for others	4.50	0.674	4.40	0.806	0.687
6.	Ability to develop themselves to advance	4.75	0.621	4.51	0.793	0.319
Professional aspect						
7.	Finding jobs easier than other fields	4.93	0.288	4.40	0.702	0.014*
8.	Working with personnel of many professions	4.51	0.797	4.29	0.785	0.403
9.	Stable and progressive profession	5.00	0	4.57	0.684	0.033*
10.	Generation of high income	4.67	0.492	4.51	0.709	0.460
11.	Honorable and respected profession	4.92	0.288	4.58	0.704	0.113
12.	Ability to work in many fields	4.67	0.492	4.40	0.702	0.213
13.	Ability to operate own businesses	4.58	0.668	4.45	0.750	0.556
Curriculum and Institution aspects						
14.	Accredited curriculum by WFME [#]	4.75	0.452	4.58	0.634	0.392
15.	Interesting and different curriculum	4.83	0.389	4.50	0.615	0.081
16.	Location in an easily accessible area	4.66	0.651	4.30	0.846	0.167
17.	Reputation and quality of the university	4.58	0.668	4.35	0.855	0.382
18.	Reputation and quality of professors	4.66	0.492	4.38	0.743	0.211
Economic, social and environmental aspects						
19.	Job market is in high demand	4.58	0.514	4.61	0.604	0.863
20.	Able to work part time while studying	4.00	0.852	3.83	1.193	0.640
21.	Building a better family position	4.67	0.492	4.52	0.687	0.492
22.	Study according to the advice of parents/relatives	3.58	1.443	3.60	1.308	0.968
23.	Study with friends	3.08	1.621	2.76	1.627	0.540
24.	Study according to the advice from the school guidance department	3.33	1.557	3.43	1.357	0.823

*P-value < 0.05 significant (By T-test), WFME: World Federation of Medical Education.

4- DISCUSSION

This study aimed to evaluate how appealing the medical field is to Gen Z high school students. Section 1 contains information about the fundamental traits of the students and families. It was found that students were aware of their skills and would like the chance to enroll in medical school. Most students had GPAs > 3.00, and their interest in studying in the medical sector began in grade four, as it is a professional field that requires students to be good at a specific level. Regarding the family component, no evidence was found that the place of residence, family size, income, or lack of a doctor in the family would be barriers to enrolling in medical school. In summary, demographic and familial factors should not affect the choice to study in medical school.

Information from Section 2 addresses elements influencing medical students' motivation. It was found that professional factors were among the primary driving reasons for both male and female students, while economic, social, and environmental factors ranked the lowest. It suggests that Gen-Z students' values and ideologies are what drives them to pursue a career in medicine. Advice from parents, family, friends, and even the guidance counselor holds considerably less weight today than in the past (6, 7). According to the results of the subtopic scores, "stable and progressive profession", and "honorable and respected profession" are the driving forces behind the new generation of male and female students interested in attending medical schools. Male students were significantly more motivated by professional, economic, social, and environmental aspects than female students, as can be seen from the motivational differences between the sexes. In terms of professional aspects, it can be seen that the two subtopics "finding jobs easier than other fields", and "stable and progressive profession" are the key

sub-factors that inspire male students above female students.

Many people are interested in learning more about how to begin a career in medicine. Finding the reason or driving force is the first step in identifying (8, 9) some of the social variables that drive members of the younger generation to choose a career in medicine (10, 11). This survey demonstrates that Gen-Z students, both male and female, continue to have a good to excellent level of enthusiasm in deciding to attend a medical school.

Northeast Thai students still strive to meet their basic requirements and ensure their safety, security, and well-being. Similar to citizens of other low/middle-income countries, they lie in the first two pyramidal tiers of Maslow's hierarchy of needs, comprised of fundamental requirements and safety, stability, and protection (12, 13). As a result, the group's main motivators are humanitarian in nature. The higher segment of self-esteem also enters the picture in some locations when these demands are met, and sociocultural variables are also observed in these countries (14). Respect in a profession and financial incentives, respect in society, high societal status, and a desire to help the sick were the main factors influencing students in low/middle-income nations to choose medical study (15,16). This community has a strong tradition of helping the underprivileged.

4-1. Study Limitations

The number of participants in the questionnaire was small, and an imbalance existed in the male and female population. Moreover, differences in demographic, economic, social, and familial conditions could affect motivational factors. Therefore, the findings of this study cannot be generalized to other groups and populations, and it is suggested to conduct further studies on other populations and rural areas.

5- CONCLUSION

Students from Generation Z in northeast Thailand who wish to attend medical schools had high levels of intrinsic desire, altruism, and performance readiness, while having many of the same values as older generations. However, because of sample limitations, these findings cannot be generalized to other groups and populations. For a healthy work-life balance for both men and women, motivational coaching should concentrate not only on the professional career but also on personal life goals.

6- CONFLICT OF INTEREST: None.

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