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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 populated by students from the new generation known as Generation Z (Gen Z). This study aims to investigate why Gen Z students choose to study medicine and how they perceive their future careers.

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

Results: The students were aged 15 to 19 (mean: 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 differences were observed in the personal aspect (4.17 ± 0.419 vs. 4.07 ± 0.305, P=0.675) or curriculum and institution aspects (4.70 ± 0.084 vs. 4.43 ± 0.102, P=0.841) between the sexes.

Conclusion: In contrast to earlier generations, Gen Z students from the rural area of Thailand who wish to pursue medicine demonstrate higher levels of intrinsic drive, benevolence, and performance readiness. Due to the study's sample limitations, the results may not be generalizable 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 distinguished themselves in surprising ways, such as being activists, leaders, international competition winners, or technology pioneers (1). There is promise that this group of freshmen students will become some of the best health professionals.

The challenging global circumstances they have experienced throughout their lives could have motivated them to make a difference in the world. They are inspired to engage with and transform their environment, driven by the turmoil and disarray they witness in governments (2). This younger generation aspires to be as prepared as possible 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). However, it remains 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 future careers.

2- MATERIALS AND METHODS

2-1. Study Design and Population

This cross-sectional study employed 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, 2022. The target population and sample size were determined using convenience sampling.

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. Providing names and family names was optional.

2-4. Measuring Tools

A researcher-developed 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, social, and environmental factors (six items), and curriculum and educational institution factors (five items).

The items were scored using a five-point Likert scale, with 1 indicating "strong disagreement" and 5 indicating "strong agreement". The perceptual interpretation of the mean was defined for five levels, requiring a score from 1 to 5 using established 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. Descriptive

statistics were used to provide a comprehensive explanation of the study population, calculating percentages, means, and standard deviations to characterize general characteristics. The t-test and one-way analysis of variance (ANOVA) were employed for statistical analysis. 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 a mean age of 17.0 ± 0.914 years. The participants were primarily from outside the municipality (n=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 comprised the majority of the students' family occupations (n=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	
Male	12 (83.8)
Female	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	
Grade 4	5 (6.8)
Grade 5	29 (39.2)
Grade 6	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	
None	20 (27.4)
1-2	48 (65.8)
3-4	5 (6.8)
≥5	1 (1.4)
Physician in family	
Yes	9 (12.2)
No	65 (87.8)
Domicile	
Inside the municipality	17 (23.0)
Outside the municipality	57 (77.0)
Occupation of parents' students	
Military personnel	14 (18.9)
Agriculture	19 (25.7)
Trading	5 (6.8)
Civil servant	14 (18.9)

Teacher	4 (5.4)
Business	9 (12.2)
Others	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 demonstrated high to excellent motivation across four aspects. The highest scores were observed in 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 showed greater attention to economic, social, and environmental aspects (3.88 ± 0.598 vs. 3.79 ± 0.636, P=0.003).

No significant differences were found in motivation for 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 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 medical school (4.75 ± 0.621 vs. 4.51 ± 0.793, P=0.319). In descending order, the subtopic "need to 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, differences were observed between genders. Male participants demonstrated excellent motivation across all subtopics, with "stable and progressive profession" receiving the highest rating (5.00). For female students, the top three motivational subtopics at excellent levels were "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).

Significant gender differences were found in two subtopics: "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, 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, with only an "accredited curriculum by World Federation for Medical Education (WFME)" 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 receiving the highest scores among male students was "building a better family position" (4.67 ± 0.492), while for females, it was "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	0.٠١٤*
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	0.٣٩٢
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 the appeal of the medical field to Gen Z high school students. Section 1 provides insights into the fundamental characteristics of students and their families. The findings revealed that students were self-aware and motivated to enroll in medical school. Most students

had GPAs > 3.00, and their interest in the medical sector emerged as early as grade four, recognizing it as a professional field requiring specific skills and competencies. Regarding family factors, the study found no evidence suggesting that residence, family size, income, or the absence of a doctor in the family would impede medical school enrollment. In summary, demographic and familial factors appeared unlikely to significantly influence the students' choice to pursue a medical education.

Information from Section 2 addresses elements influencing medical students' motivation. The study 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. This suggests that Gen Z students' values and ideologies primarily motivate their pursuit of a medical career. Advice from parents, family, friends, and guidance counselors now holds considerably less weight compared to the past (6, 7).

According to the subtopic scores, "stable and progressive profession" and "honorable and respected profession" emerged as the driving forces behind the new generation of male and female students interested in attending medical schools. Male students demonstrated significantly higher motivation across professional, economic, social, and environmental aspects compared to female students. Specifically in professional aspects, the subtopics "finding jobs easier than other fields" and "stable and progressive profession" were key motivational factors that inspired male students more than female students.

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

Northeast Thai students continue to prioritize meeting their basic requirements and ensuring safety, security, and well-being. Similar to citizens of other low/middle-income countries, they primarily occupy the first two tiers of Maslow's hierarchy of needs, focusing on fundamental requirements, stability, and protection (12, 13). Consequently, the group's primary motivators are humanitarian in nature.

In locations where these basic needs are met, the higher segment of self-esteem becomes relevant, and sociocultural variables become more prominent (14). Respect in a profession, financial incentives, 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 maintains a strong tradition of supporting the underprivileged.

4-1. Study Limitations

The study had limitations due to the small number of participants and an imbalance in the male and female population. Additionally, variations in demographic, economic, social, and familial conditions could potentially influence motivational factors. Consequently, the findings cannot be generalized to other groups and populations. It is suggested to conduct further studies with larger sample sizes, ensure more balanced gender representation, explore motivational factors across different populations, and expand research to include diverse rural areas to provide more comprehensive insights into Gen Z students' motivations for pursuing medical careers.

5- CONCLUSION

Students from Generation Z in northeast Thailand who wish to attend medical schools demonstrated high levels of intrinsic desire, altruism, and performance readiness, while sharing many values with older generations. However, due to sample limitations, these findings cannot be generalized to other groups and populations. To support a healthy work-life balance for both men and women, motivational coaching should focus on professional career development and personal life goals.

6- CONFLICT OF INTEREST: None.

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