

Inhibiting and Facilitating Factors in the Career Decision-Making Process of Japanese High School Students

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1. Introduction

In Japan, the percentage of women in Science, Technology, Engineering, and Mathematics (STEM) fields among students enrolled in higher education institutions is significantly lower than in other countries [1]. In response, a study on how high school students choose their careers was conducted. Previous studies have shown the effects of choosing science and humanities (*rieki* and *bunkei*) at an early age, the influence of fathers/mothers, and the influence of stereotypes, such as “women tend to be liberal arts-oriented [2].” However, other nonhuman factors, such as the influence of mass media or social media influence on career selection, have not been adequately investigated.

2. Methods

In this study, we investigated the factors involved in high school students' career decisions. In addition to human factors such as parents and teachers, which have been the focus of attention in previous studies, we focused on the several types of media, including digital media, that are involved in decision-making. A questionnaire was sent to Japanese high school students with the help of an internet research firm. We eventually received responses from 107 high school male students and 108 female students in Japan. The questions asked were as follows.

- Q1 Career path currently considered after graduating from high school
Options: employment, vocational school, junior college, university, other, not yet decided
- Q2 Fields of study currently under consideration
Options: Humanities/Social Sciences, Science/Engineering/Agriculture, Medicine/Dentistry/Pharmacy/Veterinary Medicine, Nursing/Health/Hygiene, Education/Home Economics/Welfare, Arts/Sports, Other, Not decided yet
- Q3 Reasons for choosing a career path (free answer)
- Q4 Views on the division of roles between men and women
- Q5 People or things that influenced your career path

Options: School teachers, cram school teachers, father, mother, family members other than parents, friends, results of tests or mock exams, TV programs, newspapers, SNS, games, cartoons, famous people, hands-on learning, information on the internet, open campus experience, family financial situation, other

- Q6 People or things that have influenced your career path the most
- Q7 Changes in thinking about a career path
- Q8 Experience of being guided in your career path based on gender
- Q9 If you answered “Yes” in Q8, what did you do?
- Q10 Effect of gender on career decision
- Q11 Methods of researching career paths
- Q12 Duration of smartphone use
- Q13 What are you worried about or confused about?

3. Results

3.1 Differences in career choice between genders

A statistically significant difference (SSD) was observed between male and female students at the 5% level ($p = .0188$) for career paths. For instance, female students were approximately three times more likely than male students to express interest in attending a vocational school (Table 1).

Table 1. Career path currently considered after graduating from high school

	Males	Females
Employment	15	12
Vocational school	8	25
Junior college	0	3
University	66	61
Other	1	0
Not yet decided	17	7

Additionally, SSD was found at the 1% level ($p < .01$) for study fields (Table 2). For example, the number of female students who chose Nursing/Health/Hygiene was four times more than that of male students. Female students were twice as likely as male students to choose a career in medicine, dentistry, pharmacy, or veterinary medicine. However, compared to female students, roughly twice as many male students were interested in science, engineering, and agriculture.

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Table 2. Fields of study currently under consideration

	Males	Females
Humanities/Social Sciences	17	16
Science/Engineering/Agriculture	18	10
Medicine/Dentistry/Pharmacy/ Veterinary Medicine	5	10
Nursing/Health/Hygiene	4	16
Education/Home Economics/ Welfare	7	8
Arts/Sports	4	6
Other	19	22
Not decided yet	16	13

3.2 Factors that influence students' career choice

The most significant influences on male students' career decisions were schoolteachers ($M = 3.1$), mothers ($M = 3.4$), fathers ($M = 3.5$), friends ($M = 3.2$), test and exam results ($M = 3.2$), and open campus experience ($M = 3.2$). Female students were influenced by their mothers ($M = 3.6$), fathers ($M = 3.2$), test and exam results ($M = 3.1$), social networking services (SNS) ($M = 3.1$), the internet ($M = 3.1$), open campus experience ($M = 3.4$), and their family's financial situation ($M = 3.2$) (5 meant "very influential" and 1 meant "no influence"). The differences in responses between boys and girls for the influence on SNS (2.52 for male and 3.10 for female students, $p < .01$) and TV programs (2.45 for males and 2.81 for female students, $p = .0378$) were statistically significant.

3.3 Differences in career guidance received by male and female high-school students

It was thought that distinct career advice might still be given based on a person's gender (for example, female students are instructed by their parents or teachers that they should pursue a liberal arts degree because they are girls). A total of 10% of male and 19% of female students reported that they had ever been advised to pursue a different career path than they wanted to pursue or denied the career path they were considering because of their gender. Double the number of boys than girls reported having this experience, but of those, 7 (4 boys and 3 girls) stated they had chosen their career based on this instruction and were happy with it, whereas 6 (3 boys and 3 girls) indicated they were not happy and 3 said they had no other option. (1 boy and 2 girls). This finding implies that women are not always pressured to choose a job path they do not want to pursue.

3.4 Effect of family finances on career paths

SSD was observed at the 5% level in career path and field of study for males who responded "there is an effect of family financial situation" compared to those who responded "no effect." However, a higher proportion of respondents who said "there is an effect of family financial position" said they planned to attend college. Therefore, it cannot be argued that the respondents' ability to pursue their career goals is hindered by their family's financial status. However, there was no SSD

between the career paths and fields of study of females who responded "there is an effect of the family financial situation" and those who responded "no effect of family financial situation." Instead, a greater proportion of individuals who said that the financial circumstances of their family had an impact chose college as their future professional route. As a result, it can be assumed that the effect of family financial situation on career paths, if any, is not a major change (e.g., giving up a college education and getting a job), but a minor change (e.g., not a change in the career path itself, but a change in the choice of colleges one wants to go to). The study did not delve into the respondents' more specific choices. Future research is needed to address this problem.

3.5 Influence of media

Interestingly, 16% of all respondents (11% of male and 21% of female students) showed that they were most influenced by some form of media (including TV programs, newspapers, SNS, games, cartoons, famous people, and information on the Internet). Although not the majority, it may be a modern occurrence that certain people are impacted by these media. Here are some intriguing remarks that were made by respondents:

- "I wanted to be able to speak Korean because of the influence of K-POP idols." (a female student)
- "I have received a lot of energy from my favorite artists, YouTubers, and actors, so I am interested in the entertainment industry because I want to be in a position to support them." (a female student)

4. Conclusion

In summary, male students were likely to be influenced by their immediate surroundings (teachers, mothers, fathers, and friends) and other nonhuman factors (tests and open campus) when deciding on their career path. Female students are likewise influenced by those around them (mothers and fathers, particularly mothers) but are more likely than male students to determine their career path based on various nonhuman factors (test results, SNS, internet, university open campus events). A higher percentage of female students than male students indicated that they were influenced by their family's financial situation. However, the actual influence was considered to be limited.

The survey results clearly showed that nonhuman factors, such as family financial situation and different kinds of media, which have not been the focus of much attention in the past, are impacting high-school student's career decisions to some extent.

Reference

- [1] OECD, Education at a Glance 2021.
- [2] Ikkatai, Y. *et al.*, (2020). 'Gender-biased public perception of STEM fields, focusing on the influence of egalitarian attitudes toward gender roles'. *JCOM* 19 (01), A08. <https://doi.org/10.22323/2.19010208>.