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Career Choice Factors and Clinical Performance among Health Sciences Students

Noor Halilah Buari 1*, Nurul Amni Zulkefley 2, Asmaa Jamal Abdalwahid 3

* Corresponding Author

¹ Centre of Optometry Studies, Faculty of Health Science, Universiti Teknologi MARA Cawangan Selangor, Kampus Puncak Alam, 42300 Bandar Puncak Alam, Selangor, Malaysia

² Metro Optical Group, Lot Ground Floor-23, KSL City, Jalan Seladang, Taman Abad, 80250 Johor Bahru, Malaysia
³ Qaiwan International University, Sulemani Heights, Sharbazher st. Sulaimaniyah City, Iraq

noorhalilah@uitm.edu.my; nurulamni97@gmail.com; asmaa.alwahid@uniq.edu.iq Tel: +6012 6121582

Abstract

The issue of youths' employment decisions has piqued the curiosity of many people because it could shape future life. The study explores the association between career choice factors and clinical performance among 112 final-year health sciences students. An online questionnaire found that educational qualifications, lifestyle, ability to interact with others, job availability, and parental advice significantly correlated with clinical performance. The career choice factor is crucial because it impacts academic achievement and future career prospects. Institutions of higher learning should provide information on job descriptions and career opportunities to aid career decision-making, particularly for the health sciences profession.

Keywords: Career Choice; Clinical Performance; Undergraduate; Health Sciences

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1.0 Introduction

Career choice is an individual's decision-making process of selecting a profession or occupation that aligns with an individual's interests, skills, values, and goals. The decision-making process is complex and influenced by multiple factors. It involves evaluating various job options and deciding which best matches one's personality, strengths, and aspirations (Kulcsár et al., 2020). Career choice is a critical decision that can significantly impact an individual's future success, job satisfaction, and overall well-being. It often requires careful research, planning, and self-reflection to ensure that the chosen career path fits the individual well (Fizer, 2013).

While previous research has explored the relationship between career choice and academic success, little is known about the impact of career choice factors on clinical performance among health sciences students. This knowledge gap is concerning, as clinical performance is a critical determinant of future employability and job satisfaction in the health sciences industry. Therefore, there is a need to investigate the determinants of career choice among health sciences students to better inform them on career counseling and educational interventions.

2.0 Literature review

2.1 Career Choice Factors

Three influences can affect career choice: intrinsic, extrinsic, and interpersonal (Chukwu et al., 2022; Griffin & Hu, 2019; Mashige & Oduntan, 2011; Selvanathan et al., 2016; Sharif et al., 2019). Intrinsic factors are best described as personal factors corresponding to an individual's interests, skills, attitudes, cultural identity, and satisfaction. Choosing a career based on their interest might drive people to engage and improve job performance (Dobre, 2013). Social connections, availability of resources, globalization, ethnic background, education level, choice of topics, and employment qualities are extrinsic variables, whereas interpersonal aspects include parental support, peer influence, and educator contact (Raabe et al., 2019). Extrinsic factors can also be classified into economic, social, and professional factors. It's important to realize that the economic cycle might impact the job market and employability rate (Alexander & Twinomurinzi, 2012; Quadri, 2018).

Social factors like digitalization and re-industrialization could change employment market patterns. Most students required greater exposure to the current market trend, which became the least important element in profession choice (Ausman et al., 2013). Parental and peer influence, work-related self-efficacy, career exploration, and cultural influences might impact a student's career. When counseling students about careers, these criteria are crucial. Parents and peers heavily influence high school students' employment choices (Griffin & Hu, 2019; Kulcsár et al., 2020; Santiago, 2013). Career exploration and career decidedness were strongly correlated among high school students (Lent et al., 2019). In Malaysia, gender stereotypes and cultural norms hindered girls' STEM job goals (Alam et al., 2021).

2.2 Career Choice Among Health Sciences Students

The changing trends in the health industry create job opportunities for healthcare professionals. Healthcare providers need a strong education pipeline to satisfy rising demand. Reasoning in career choices and attitudes of health sciences students are important determinants to be analyzed. A combination of personal factors, job market demands, and social impact considerations influences the career choices of health sciences university students. Health sciences university students choose careers based on personal criteria, work market demands, and social effects. Many health sciences students follow their passions and want to help others (Hayes & Shakya, 2013). Personal interest in health care also appeared to influence career choice among nursing, dentistry, and public health courses (Buhat-Mendoza et al., 2014; Hasan et al., 2010; Nyamwange, 2016). The educational requirements for different medical and health science professions may also influence students' career choices (Abdul Aziz et al., 2016). When choosing careers, students may consider the job market demand for different health science professions. They seek a job that high in demand and offer good employment opportunities (Manzoor, 2011). Economic considerations, including employment autonomy, stability, financial reward, and working conditions, also impact healthcare profession choices. Previous studies reported that prestige, money, and personal development were significant factors that influenced medical and health sciences students in their career decision-making (Bernabé et al., 2006; Selvanathan et al., 2016). Peers, family, and healthcare experience are the least essential variables when choosing a healthcare job (Afridi et al., 2020).

2.3 Career Choice and Academic Performance

Career choice factors can improve or hurt academic success. Students that are motivated and passionate about their field of study perform better in school. However, their academic performance may decrease if they experience career pressure or stress (Oroujlou & Vahedi, 2011). Thus, students' academic success depends on their career decision, which showed in their passion (Aminu & Timothy, 2014). The same goes for students' clinical performance among health science students. Motivated students perform well in academics. Helping people has indirectly motivated medical students' academic pursuits (Torres-Roman et al., 2018). Health sciences students who clearly grasp their professional aspirations may more likely to develop clinical competence relevant to their specialty (Hasan et al., 2010). During clinical years and examinations, health science and medical students' clinical competency is evaluated as part of academic achievement. (Mirzaei-Alavijeh et al., 2018). However, the limited study reported the link between career choice factors and clinical performance among the students. Thus, the study intended to determine the factor contributing to career choices and its correlation with clinical performance among health sciences university students.

3.0 Materials and Methods

3.1 Sampling

The cross-sectional study design has opted for this study to simultaneously measure the outcome and the exposures. The study was approved by the University Research Ethics Committee (Reference no: 600-TNCPI (5/1/6)).

A purposive sampling among Health Science students was chosen due to specific characteristics or experiences needed in selecting the respondents. The sample size was calculated using Raosoft software from a total population of the local university's final-year students of the Health Science program. Based on a 5% margin error and 95% Confidence Interval (CI), 112 respondents were expected to participate in this study. The respondents must fulfill the inclusion and exclusion criteria. The inclusion criteria were the final year of health science students who undergo clinical training for the current semester. Respondents must be well-versed in English to answer the questionnaire. We also exclude incomplete forms.

3.2 Questionnaire

The questionnaire is a self-administered questionnaire adapted from the previous study on a survey of career choice among university students (Mashige & Oduntan, 2011). The questionnaire comprised two sections, and the first section collected the respondents' demographic data. Data includes age, gender, race, nationality, state, district, native's place, mode of entry, current program, current year of study, whether current course and institution was the first choice, and parents' education background.

The second section of the questionnaire consisted of 5 factors and was further detailed into 26 items. The 5 factors are personal, economic, environmental, social, and professional. Closed-ended questions for each item come with a five-point Likert scale to analyze respondents' responses, ranging from "Strongly Disagree' (score 1) to "Strongly Agree" (score 5). The descriptive factors and items in the questionnaire were tabulated in Table 1.

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Table 1. The Questionnaire				
Factors	Wordings			
Personal				
PER1	I think by participating in career day influence my career choice			
PER2	I make the choice to help others in the future			
PER3	I make the choice because I failed to secure a place in other degree			
PER4	I am capable of making my own career choice			
PER5	I base my career decision on the basis of my skills and abilities			
PER6	I make the decision based on the satisfaction I get from doing the job			
Economic				
ECO1	I make my career decision on the basis of the package offered for the job			
ECO2	I make the decision based on the career growth and opportunities provided by the job			
ECO3	I make the decision based on the image and brand value of the company in the society			
ECO4	I make the decision based on the job availability			
ECO5	I make the decision based on the potential salary of the job			
ECO6	I make the decision based on the stability of the job			
Environmental				
ENV1	I seek my parent's advice for career choice			
ENV2	I consult my friends before making any career choice			
ENV3	I seek advice from my seniors in making career choice			
ENV4	I consult my teachers in making any career choice			
ENV5	I make the decision on the basis of family background			
ENV6	I make the decision on the basis of my educational qualification and background			
ENV7	I make the decision based on the lifestyle associated with the job			
SOCIAL	·			
SOC1	I go by the trend in my class/campus in making career choice			
SOC2	I go by the market trend in deciding my career choice			
SOC3	I make the decision because I like to interact with other people			
PROFESSIONAL				
PRO1	I consult industry professionals before making career choice			
PRO2	I make the decision based on the social status and prestige associated with the job			
PRO3	I make the decision based on innovation and creativity in the job			
PRO4	I make the decision based on the perks and benefits associated with the job			

3.3 Study Procedures

The questionnaire was transformed into an electronic survey using Google Forms. The survey included the study's purpose, informed consent, confidentiality terms, and instruction on how to respond to the surveys. The survey was conducted among respondents who underwent clinical training in the current semester. The online questionnaire link was distributed to the potential respondent through emails and WhatsApp applications, mainly among the final-year health sciences students. The clinical performance was obtained in the form of a grade point average (GPA) grade for the clinical course registered in the current semester from the academic registrar.

3.4 Statistical Analysis

Data from the questionnaires were analyzed using Statistical Program for Social Sciences (SPSS) Version 25. The analysis was divided into two categories which were descriptive and inferential statistics. Descriptive statistics highlighted the demographic variables in mean, standard deviation, percentage, and frequency. The inferential statistics were conducted to explore the association of each factor and item in career choice with clinical performance among Health Science students.

4.0 Results

4.1 Demographic data of career choice factors among Health Sciences students

A total of 112 respondents participated in this study, with ages ranging from 22 to 27 years old (Mean: 23.69±1.06 years). The majority were females, with only 8.9% being males. The majority indicated that the current institution was their first choice. The distribution of respondents was quite similar for the current program as the first choice of course. The highest number of respondents were from physiotherapy (45) courses, followed by optometry (38), occupational therapy (27), and medical imaging (2). Clinical performance measured by GPA showed that more than half of the respondents (74.1%) had a GPA of 3.50 and above, while 20.5% obtained a 3.00

to 3.49 GPA. Regarding educational level, over half of the respondent's parents were high school leavers, followed by degree and diploma holders.

The distribution of the career choice questionnaire responses among health sciences students is charted in Fig. 1. The results charted the responses for 5 factors in the career choice questionnaire, including personal, economic, environmental, social, and professional. For each factor, there were 3 to 7 items. In personal factors, it was exhibited that most students strongly agreed that they choose to help others in the future. Regarding economic factors, the survey showed that students choose a career based on job availability and the stability of the job. The economic factor strongly agreed upon by the health sciences students were seeking a career based on parents' advice and making a career decision based on academic qualifications. Regarding social factors, the students agreed to choose a career in health sciences because they like interacting with others. Making a decision based on the perks and benefits associated with the job was the professional factor that the health sciences strongly agreed with.

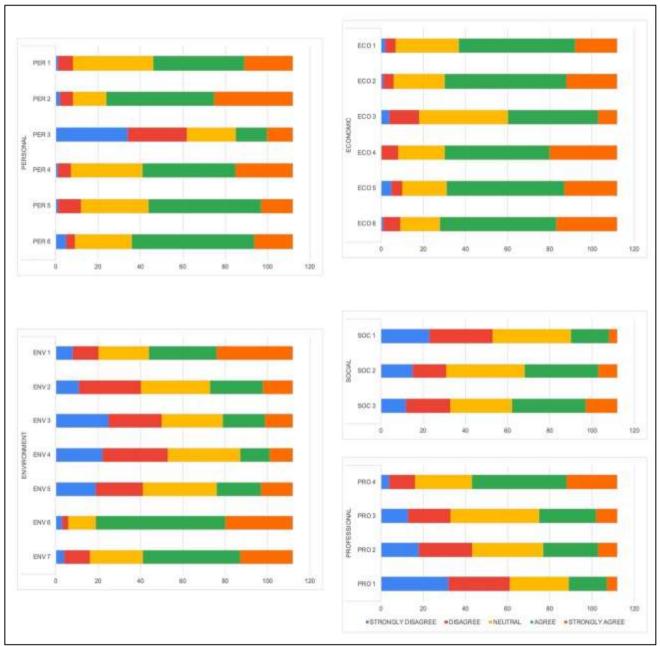


Fig. 1: Distribution of responses in 5 factors of career choice survey among health sciences students

4.2 The correlation of career choice factors with clinical performance

Further investigations were made on the association of career choice factors with clinical performance among health sciences students. Table 2 presented the average scores for each item and the correlation analysis for overall respondents and respondents whose current choice was the first choice of program. The main reason to choose a health sciences program according to career choice factors was

to help others in the future (PER 2), job availability (ECO 4), educational qualification and background (ENV 6), like to interact with other people (SOC 3) and perks and benefits that associated with the job (PRO 4).

A few career choice factors that showed a significant correlation with the clinical performance of health sciences students were environmental and social factors. Within the environmental factor, educational qualification and background (ENV6) were revealed to correlate positively with clinical performance (r=0.19, p=0.04). Apart from that, lifestyle associated with the job (ENV7) was also revealed to have a positive and significant correlation with clinical performance (r=0.26, p=0.01). Within social factors, interaction with other people (SOC3) also showed a positive and significant correlation (r=0.30, p=0.001) with clinical performance.

Analysis of correlation was made among the health sciences students whose current enrolled course was their first choice during university application. Referring to Table 2, half of the respondents (49.1%) chose the current course as their first choice, while another half (50.9%) enrolled in courses that were not their first choice. The highest reason to choose a health sciences program was to help others in the future (PER 2). While in economic factors, job stability (ECO 6) obtained the highest reason in choosing the course among those whose current program was their first choice. Meanwhile, educational qualification (ENV6), interaction with other people (SOC3), and perks and benefits associated with jobs (PRO4 were the main reason for choosing a health sciences program for environment, social and professional factors, respectively.

Some of the career choice factors correlated with clinical performance within the subgroup of the current course choice. Economic factors significantly correlated with clinical performance (r=0.29, p=0.03) among those who made health sciences their first choice. Within economic factors, job availability'(ECO4) moderately correlated with clinical performance among health sciences (r=0.31, p=0.02). The reason to interact with other people (SOC3) (r=0.47, p<0.01) was significantly correlated with clinical performance among health sciences.

Table 2: The correlation between career choice factors and clinical performance

Factors influencing career choice	Overall (n=112)		Current course 1st choice (n=55)	
, , , , , , , , , , , , , , , , , , ,		Correlation analysis		Correlation analysis
	Mean score ± S.D	(R-values, p-values)	Mean score ± S.D	(R-values, p-values)
PERSONAL		((
PER1	$3.73 \pm (0.89)$	r=-0.09; p=0.76	3.69 ± 0.99	r=0.03; p=0.80
PER2	$4.03 \pm (0.93)$	r=-0.06; p=0.51	4.09 ± 0.99	r=0.01; p=0.99
PER3	$2.48 \pm (1.33)$	r=-0.08; p=0.40	2.09 ± 1.24	r=0.04; p=0.76
PER4	$3.81 \pm (0.91)$	r=0.07; p=0.46	3.89 ± 0.98	r=0.23; p=0.10
PER5	$3.63 \pm (0.87)$	r=0.02; p=0.85	3.75 ± 0.89	r=0.05; p=0.71
PER6	$3.71 \pm (0.93)$	r=0.12; p=0.21	3.78 ± 0.88	r=0.17; p=0.22
Total score	21.39±(2.85)	r=-0.03; p=0.72	21.29±3.36	r=0.15; p=0.28
ECONOMIC	,	· ·		, i
ECO1	$3.78 \pm (0.87)$	r=0.06; p=0.54	3.87 ± 0.90	r=0.20; p=0.14
ECO2	$3.90 \pm (0.83)$	r=0.05; p=0.58	3.99 ± 0.89	r=0.22; p=0.10
ECO3	$3.35 \pm (0.93)$	r=0.04; p=0.72	3.35 ± 1.00	r=0.07; p=0.64
ECO4	$3.96 \pm (0.88)$	r=0.16; p=0.09	3.98 ± 0.89	r=0.31; p=0.02*
ECO5	$3.81 \pm (0.98)$	r=0.11; p=0.24	3.85 ± 1.01	r=0.16; p=0.24
ECO6	$3.93 \pm (0.89)$	r=0.15; p=0.13	4.07 ± 0.84	r=0.24; p=0.08
Total score	22.72±(4.05)	r=0.14; p=0.16	23.11±3.99	r=0.29; p=0.03*
ENVIRONMENTAL	, ,	.,		
ENV1	$3.68 \pm (1.23)$	r=0.10; p=0.29	3.71 ± 1.32	r=0.14; p=0.30
ENV2	2.99 ± (1.18)	r=0.09; p=0.37	2.98 ± 1.30	r=0.09; p=0.52
ENV3	$2.74 \pm (1.31)$	r=0.10; p=0.28	2.67 ± 1.42	r=0.15; p=0.28
ENV4	$2.63 \pm (1.22)$	r=0.10; p=0.28	2.47 ± 1.30	r=0.14; p=0.30
ENV5	2.91 ± (1.28)	r=-0.07; p=0.47	2.80 ± 1.39	r=-0.07; p=0.62
ENV6	$4.04 \pm (0.86)$	r=0.19*; p=0.04*	4.05 ± 1.03	r=0.12; p=0.39
ENV7	$3.68 \pm (1.05)$	r=0.26 p=0.01**	3.71 ± 1.26	r=0.42; p<0.01**
Total score	22.68±(5.31)	r=0.17; p=0.07	22.40±5.84	r=0.21; p=0.13
SOCIAL				
SOC1	$2.54 \pm (1.10)$	r=0.03; p=0.73	2.47 ±1.25	r=0.05; p=0.72
SOC2	$3.06 \pm (1.16)$	r=-0.16; p=0.10	2.91 ±1.18	r=-0.05; p=0.74
SOC3	3.19 ± (1.21)	r=0.30; p=0.001*	3.29 ±1.21	r=0.47; p<0.01**
Total score	$8.79 \pm (2.46)$	r=0.07; p=0.47	8.67 ±2.53	r=0.15; p=0.27
PROFESSIONAL				
PRO1	2.40 ± (1.19)	r=0.02; p=0.83	2.20 ±1.31	r=0.07; p=0.63
PRO2	2.85 ± (1.20)	r=0.02; p=0.84	2.69 ±1.35	r=0.15; p=0.28
PRO3	3.00 ± (1.12)	r=0.03; p=0.74	2.87 ±1.26	r=0.15; p=0.28
PRO4	$3.64 \pm (1.05)$	r=0.03; p=0.77	3.78 ±1.11	r=0.10; p=0.47
Total score	11.89±(3.61)	r=0.05; p=0.63	11.55±3.99	r=0.15; p=0.27

4. Discussions

4.1 Career choice factors among Health Science Students

This study identified career choice factors among health science students using five factors, i.e., personal, economic, environmental, social, and professional. It was found that most students choose health science courses because of educational qualifications (ENV6), the desire to help others (PER2), job availability (ECO4), job stability (ECO6), and interest in interacting with others (SOC3). Most students said employment benefits (PRO4) also affected their health sciences profession decision.

The findings supported that health sciences students choose careers based on their educational background and qualifications. It was because, before enrolling in university, students should have an acceptable educational background related to the course. Abdul Aziz et al. (2016) found that Bangladeshi science, business, and arts undergraduates considered educational levels a major career criterion. Many health sciences degrees, such as medicine, nursing, and pharmacy, have specific academic requirements. Thus, students interested in health sciences may take relevant courses to fulfill these admissions requirements to increase the chances of being accepted into their desired programs (Liaw et al., 2016; Torres-Roman et al., 2018). Helping others is an important trait when indulging oneself in the healthcare field. Our finding aligned with previous research that students rated the desire to help others as essential in pursuing a career in physiotherapy and medicine (Baboolal & Hutchinson, 2007; Mkondo et al., 2007). It was because the primary goal of healthcare professionals is to provide patient-centered care that focuses on meeting the patient's needs. Therefore, a student interested in working as a healthcare professional requires a high degree of compassion, empathy, and understanding toward the occupation.

Within the economic factor, job availability was rated the highest in a career choice factor among health sciences students. This result suggested that students might have considered few options and matched their interest to potential future employment opportunities. This was also observed in optometry students who prioritized job availability in career choice (Mashige & Oduntan, 2011). The students were concerned about securing a good job upon graduation. If job opportunities are available in a particular field, it may be easier for individuals to find employment and maintain a steady income. Interest in interacting with people was the highest social factor, suggesting that health sciences students value communication skills in their career choice. Interest in communicating with the people surrounding them was shown to play an important role when determining their career preferences. Comparably, dental students viewed the dentist nature of work as being able to treat people's teeth and having a caring personality with their clients by interacting with them for the treatment to be done effectively (Bernabé et al., 2006). That was the reason to choose the dentistry program as their career.

Next, students also agreed that the perks and benefits associated with the job within the professional factor had influenced them in choosing a career in the health science field. It can be deduced that students perceived the expected benefits linked to the job could be a motivation to help them to reach their full potential when working in the future. For instance, bonuses, salary, and employee benefits have indirectly allowed employees to continue improving their work even under stressful conditions (Manzoor, 2011; Selvanathan et al., 2016). It could also be supported by a study among undergraduate students in Malaysia which showed a positive association between financial incentives and career choice (Selvanathan et al., 2016). These students considered the financial incentives as an attraction for them to pursue a particular career.

4.2 Correlation of career influencing factors with clinical performance

The correlation of career choice factors was analyzed with clinical performance. The current study found that educational background and qualifications, lifestyle associated with the job, and interest in interacting with other people were significantly correlated with the respondents' clinical performance. It could be inferred that when students choose a career based on their educational qualifications and background, students tend to perform better in their higher learning education, including clinical performance for health science courses. It was evident in a previous study that students who possessed academic ability tended to perform in clinical settings (Buhat-Mendoza et al., 2014). This was because those students who performed well academically managed to practice more than poor performers, which led them to be readily prepared to perform clinical skills on actual patients.

The lifestyle associated with the job also showed a significant correlation with students' clinical performance. It could be presumed that students were more inclined to choose a career with a good lifestyle and work-life balance. That could be a drive to be better in academics, mainly clinical performance. A similar finding was reported among final-year medical students in Pakistan, which is a more excellent clinical performance among students who consider work-life balance than those who do not (Beckett et al., 2015). It was because these medical students found that having greater control of their schedules and working hours could lead them to greater satisfaction, especially in terms of their clinical work. Besides that, interacting with others correlated significantly with clinical performance. The results suggest that students who enjoyed interacting with people would do well during clinical practice as they perceived Health Science as a field that deals with people. The nature of health sciences courses is dealing with patients or clients. When respondents are interested in interacting with other people, they will be able to perform well in clinical practice during the learning of the course in health sciences. A similar finding was reported by Mkondo et al. (2007), which stated that most Zimbabwean physiotherapists students were not keen to interact with people. Still, since it was part of their nature of work to communicate with patients, they would instill the interest to interact with people within themselves.

Further analysis was made to the subgroup of whether the current course of the students enrolled was their first choice. Interestingly, the students that chose the current course as their first choice showed a significant correlation between career choice factors and clinical performance. The factors significantly correlated with their clinical performance included job availability, interaction with others, and economic factors. A study among microbiology students reported that those who initially chose microbiology as a career tend to perform better academically (Aminu & Timothy, 2014). The reason to interact with other people in career choice factor also tended to be well performed in clinical training. The possible explanation of this finding might be because students keen to work in the health science field understand that interactions with people are much needed to understand patients' needs through communication skills which they need

to have beforehand. The finding was supported by a study that showed medical students were motivated to choose a doctor as a career as they felt suited for the profession and enjoyed working with people (Girasek et al., 2011). Hence, it became a significant factor of motivation for these medical students to choose their career in the medical field and do well in academics. Within the economic factor, most students from the subgroup of the first choice of the current course chose job stability as an important factor when choosing a career. Previous studies also supported that job security upon graduation and job stability were among the reasons for selecting the profession (Choi & Kim, 2013; Mashige & Oduntan, 2011). Job accessibility was an intrinsic motivation for Korean students to obtain higher academic achievement as they paid more attention to their future challenges in the working world rather than focusing on their challenges during undergraduate studies (Choi & Kim, 2013).

5.0 Conclusions & Recommendations

Thus, the career choice factors that influence career choice among health sciences students can be seen in the aspect of lifestyle associated with the job, ability to interact with other people, job availability and stability, educational qualification, background, and parental advice. These factors were correlated with students' clinical performance in the Health Sciences course. Nevertheless, this study has some limitations: the respondents being final-year students, could be biased in recalling the reason for choosing the course during the pre-university period. For future research, it is recommended to investigate among a larger sample of first-year students and relate career choice factors with a continuous academic and clinical performance to improve the accuracy of the findings.

In conclusion, a deep understanding of the reason to choose a health sciences program in higher education institutes enables academicians and counselors to determine any effect on academic performance, particularly the clinical aspect. It might help to reduce the dropout rate in every intake beneficial for admission officers. The institutions of higher learning should provide information on job descriptions and career opportunities to aid career decision-making, particularly for health sciences.

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Paper Contribution to Related Field of Study

This paper contributes to the health sciences education field of study and career counseling.

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