





# Factors Influencing Generation Z Bachelor of Nursing Students' Decision to Choose Nursing as a Career: A Pilot Study

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## Abstract

**Introduction:** Despite nurses representing the largest healthcare professional group, the number is not enough for global health coverage. Understanding Generation Z students' intrinsic and extrinsic motivations, internal and external influences, and beliefs in choosing nursing education is crucial. This knowledge empowers universities to enhance nursing program enrollment through targeted promotion and recruitment strategies.

**Objective:** The aim was to understand why Italian students of Generation Z choose the Nursing Degree Course.

**Methods:** In this pilot study, a cross-sectional design was used. A survey with closed and open answers analyzing demographics, opinions, and motivations among new enrolled nursing students was administered on the first day of the Bachelor of Nursing Degree course. Descriptive statistics were used. Quantitative data were analyzed with Chi-square and ANOVA tests and qualitative data underwent content analysis and coding. Correlation analysis explored relationships between qualitative and quantitative results.

**Results:** Forty first-year students (85% female, average age 22) completed the questionnaire. The choice of the degree pathway, as the first or second option, is influenced by intrinsic and extrinsic motivations, the student's opinions, and family and social influences. Significant positive and negative associations were evidenced. Negative factors affecting choice included location and the responsibility for nursing care, while positive factors included role models, family advice, passion, curiosity for healthcare, the desire to help others, and family influences on decision-making.

**Conclusions:** Among Italian generation Z students, the choice of the nursing degree pathway is influenced by social models, family advice, passion, the desire to help others, and curiosity. Universities should be more proactive in their recruitment and promotion efforts, transforming these events into vibrant meeting points for professionals from diverse nursing specialties. They should also implement robust information policies that highlight career possibilities spanning clinical practice, management, education, and research areas within the field.

## Keywords

nursing students, choice behavior, undergraduate nursing education, motivation, bachelor in nursing.

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## Introduction

Nurses constitute the largest health professional group globally, accounting for 59% and totaling 27.9 million worldwide (McCarthy et al., 2020). However, there is a global shortage of nursing professionals, which is not aligned with universal health coverage and the Sustainable Development Goals. Recognizing this, the World Health Organization (WHO) has proposed increasing the annual intake of nursing students into university education to address this shortage (WHO, 2021; FNOPI, 2020). To successfully achieve the WHO's goal of increasing nursing student enrollment, it is crucial to understand the intrinsic and extrinsic motivations, as well as the internal and external influences, and the beliefs of Generation Z students regarding their choice of the nursing profession. This understanding can assist universities in promoting and enhancing student enrollment in nursing degree programs.

## Review of Literature

The density of nurses relative to the population varies across different regions, with significant gaps observed in Africa, Southeast Asia, the Eastern Mediterranean, and some countries in America. Europe has a mixed situation, with variations in nurse density across different countries. For example, in France, Switzerland, and the Scandinavian countries, the density of nurses is greater than 99/10,000 inhabitants, in European Russia the density of nurses is between 75 and 99/10,000 inhabitants and in Italy and Spain the density of nurses is between 50 and 74/10,000 inhabitants (WHO, 2021). These data underscore the urgent need for comprehensive strategies to alleviate the nursing shortage worldwide, emphasizing the importance of sustainable workforce planning.

To address this shortage of nurses, WHO has proposed targets for 2030 including increasing the total number of nursing graduates by 8% per year, implementing strategies to attract and retain new graduates and improving national training of nurses to meet and exceed the demand for personnel (WHO, 2021).

Several studies have explored the factors influencing the career choice of nursing students both in and out of graduate school (Hosseini Marznaki et al., 2021; Blay & Smith, 2020; Matarese et al., 2019). Particularly, among the incoming motivations are those related to family, social influences and models, and job prospects (Blay & Smith, 2020). Other researches explored the expectations of students toward the Nurse Degree Course, such as finding a job immediately after graduation and holding an altruistic role in society (Lindberg et al., 2020), or focused on the relationship between the reasons for nursing degree choice and status (Öncü et al., 2022), stereotypes of the nursing profession (Raymond et al., 2018), and the influence of sex on student career choice (Terry et al., 2020). However, only one qualitative study has directly explored the reasons for choosing

and completing a nursing degree. The first were associated with fulfilment and a desire to help others and interact with them, and the second were associated with an interest in professional nursing (Teresa-Morales, Rodríguez-Pérez & Ramos-Pichardo, 2023). Yet, a study specifically focusing on Italian students and integrating quantitative and qualitative data is still lacking.

Considering the objectives set by the WHO and the International Council of Nurses, it has become fundamental for the survival and success of this profession to understand why people choose to undertake a degree in nursing, particularly regarding recruitment and retention strategies among generation Z students (McClain et al., 2022). Generation Z (or Post-Millennials), born between the end of the 90s of the twentieth century and 2012 (Wikipedia, 2023), often referred to as “digital natives,” are the first generation to grow up with widespread access to the Internet, technology, and social media (Introini & Pasqualini, 2018; Prensky, 2005). This digital upbringing significantly influences their socialization process and should be considered when developing recruitment and retention strategies.

## Objectives

The general aim of this study was to understand why Italian students of Generation Z choose the Nursing Degree Course. The specific objectives were to: (a) understand whether this degree course is preferred as a first or second choice; (b) identify the personal and social variables that can influence the choice of career path; (c) explore student motivations, opinions, and beliefs on the profession and that can influence the choice of this degree path.

## Methods

### Design

This study has a cross-sectional exploratory design and presents pilot study data.

### Sample and Setting

Students enrolled in the first year of the Bachelor of Science in Nursing (BSN) of a public University of Rome were recruited at two teaching sites, one peripheral and one more central. *Inclusion criteria were:* belonging to the Z generation, being enrolled for the first time in the first year of a BSN, not having attended nursing theoretical courses or clinical internships. To investigate the choices of the academic entry path, it was necessary to recruit students who had not yet started the university education courses and the first-year internship, in order to avoid bias related to the influence on the answers.

*Exclusion criteria* include being a student with prior experience in caregiving or having a repeating student status.

**Table 1.** Survey Questions.

Questions	Answers options
Session 1: Sociodemographic data	
Q1: University Site	Closed
Q2: Gender	Closed
Q3: Age	Closed
Q4: Place of Residence	Closed
Q5: Working student	Closed
Q6: High school diploma	Closed
Session 2: Choice of university studies	
Q7: Was the Bachelor of Nursing your first choice?	Closed
Q8: What was your first choice in university studies?	Opened
Q9: Why did you decide to attend the Nursing Degree Course?	Opened
Session 3: Social and family influences	
Q10: Were you guided by your family in choosing the university studies?	Closed
Q11: Is someone a nurse among your connections?	Closed
Q12: Have you ever seen films, advertisements, documentaries, news that describe the figure of the nurse?	Closed
Q13: Is the view of the media regarding the figure of the nurse positive?	Closed
Q14: Is the view of the media regarding the figure of the nurse negative?	Closed
Q15: Have you had experiences in the health sector or illness that have influenced your choice?	Closed
Q16: Describe the previous experiences in the health sector that have influenced your choice both negatively and positively.	Opened
Session 4: Student beliefs and opinions	
Q17: In your opinion, who is the nurse?	Opened
Q18: Do you think that the nurse can make a career in his job?	Closed
Q19: In your opinion, can nurses make a career in the clinical practice and specialist fields?	Closed
Q20: In your opinion, can nurses make a career in the training-education sector?	Closed
Q21: In your opinion, can nurses make a career in the managerial field?	Closed
Q22: In your opinion, can nurses make a career in University Research?	Closed
Q23: In your opinion, can nurses make a career in the field of consultancy, technical and professional?	Closed
Session 5: Future projects	
Q24: Will you continue your studies after graduating with a Bachelor Degree in Nursing?	Closed
Q25: After graduating, in which setting would you like to work?	Closed
Q26: If in a hospital setting, in which specialist area?	Closed

## Ethical Considerations

The study was conducted in accordance with the standards and ethical principles of the Declaration of Helsinki (World Medical Association, 2013). The research was approved by the board of directors of each participating bachelor's degree site, after careful evaluation of all ethical aspects related to the research. Before participating in the study, all participants received information about the research. On the day set for data collection, the research assistants informed the students on the objectives of the study and that the participation had to be voluntary. The consent was considered implicit by completing the questionnaire. The questionnaires were anonymous, and the data were processed by research assistants not involved in the training of the interviewed students. Access to the data was restricted to the research team only.

## Measurements

Inspired by the literature review, a series of questions (40 items) were designed. These questions were evaluated by a group of seven university adult education experts with decades of experience. Specifically, two members were Graduate Nursing Directors, four were Clinical Mentors and one was a Director of Health Professions. Through a group interview using qualitative and quantitative methods, the experts were asked to check whether the items were relevant, complete and understandable to evaluate the phenomenon in the target population.

A moderator, expert in adult education and research, encouraged a discussion when doubts were raised about some items. An observer kept track of the discussions and the scores assigned to the items. For relevance, each expert was asked to assign a score on a 4-step Likert scale (from 1 "completely irrelevant" to 4 "completely relevant"), and the validation index of the Content Validity Index (CVI) was calculated at the level of each item (Polit & Beck, 2006). Each item that reached an I-CVI score  $\geq 0.78$  was considered valid. For clarity and comprehensibility, each expert was asked to assign a score from 1 ("completely unclear" or "completely incomprehensible") to 4 ("completely clear" or "completely understandable"). The items that had reached a cutoff  $\geq 0.78$  were considered clear and understandable.

After the evaluations, 14 items were eliminated. The 26 remaining questions (22 with closed answers and 4 with opened answers), were organized within a questionnaire into sections: sociodemographic data (such as sex, age, place of residence, working, or nonworking student), choices, social and family influences, beliefs, opinions, and future intentions of students undertaking the BSN (see Table 1).

In the pretesting phase, the final form of the survey was administered to a sample of third-year students of the BSN (30 students), asking them to indicate whether the items were relevant and understandable and to verbally indicate to the interviewer if they needed to be modified. Since we had

a positive evaluation for all 26 items, a paper format of the survey was prepared for students in the first year of the course.

### Data Collection

The data were collected on the starting day of the BSN course for students admitted to the first year (Academic Year 2022/2023). This day was considered suitable for various reasons: the students had not yet attended the theoretical lessons, had not yet experienced their first clinical internship training and it would have been possible to obtain the highest response rate to the survey on the day the course started. The questionnaire was distributed during the first hour of class. After welcoming and explaining the purpose of the study, the students were asked to complete the questionnaire. The teachers left the classroom to avoid influencing the students' responses with their presence. A researcher remained in the classroom to clarify any doubts regarding the questionnaire. The students were free to choose if to complete the questionnaire or not and were allowed to leave the room if wanted.

### Data Analysis

Descriptive statistics (mean, standard deviation [SD], frequency, and percentage) were used to describe the opinions of the students,

the sociodemographic characteristics of the sample and the motivational forces that guided students in choosing the path.

The between group differences were tested by using the chi-square test for nominal variables and one-way ANOVA for continuous variables. In addition, fitted residuals were used to better understand the significance of chi-squared. From the open questions of the questionnaire, two researchers independently performed a content analysis and coding on the answers. Subsequently, on the basis of the codes, dummy variables were created (0 = absence or 1 = presence of the code) for each respondent. In this way, it was possible to relate the analysis of qualitative and quantitative data. A correlation of the study variables was also performed to identify the direction and significance of the relationship. Excel Program was used to make the tabulation of the quantitative data, the coding of the answers to the open questions and the creation of the dummy variables. Data analysis was performed using IBM SPSS, version 26.

## Results

### Sociodemographic Characteristics of the Sample

Overall, 40 first-year students (18 from the central and 22 from the peripheral site) completed the questionnaire,

**Table 2.** Sociodemographic Variables of Students (N = 40).

Variables	Mean (SD)	First choice (N = 21) N (%)	Second choice (N = 19) N (%)	p value
Site				<b>0.024</b>
Central		13 (61.9) <sup>+</sup>	5 (26.3) <sup>-</sup>	
Peripheral		8 (38.1) <sup>-</sup>	14 (73.7) <sup>+</sup>	
Sex				0.308
Male		2 (9.5)	4 (21.1)	
Female		19 (90.5)	15 (78.9)	
Age	22.4 (4.58)			0.332
Place of Residence				0.270
Local students		16 (76.2)	17 (89.5)	
Nonlocal students		5 (23.8)	2 (10.5)	
Working Student				0.366
Yes		7 (33.3)	9 (47.4)	
No		14 (66.7)	10 (52.6)	
High School Educational level and type				0.326
Diploma in hospitality		0 (0.0)	1 (5.3)	
Classical diploma		1 (4.8)	3 (15.8)	
Diploma of economic-administrative institute		1 (4.8)	1 (5.3)	
Linguistic high school diploma		1 (4.8)	0 (0.0)	
Agricultural institute diploma		1 (4.8)	1 (5.3)	
Accounting institute diploma		3 (14.3)	1 (5.3)	
Scientific diploma		2 (9.5)	4 (21.1)	
Diploma in human sciences		9 (42.9)	4 (21.1)	
Social-health professional diploma		1 (4.8)	4 (21.1)	
Computer technician diploma		2 (9.5)	0 (0.0)	

Note: SD = standard deviation; + and - signs refer to adapted residual equal to 2; p values refer to analysis of variance tests, in bold are the significant effects.

**Table 3.** Frequencies of Quantitative Motivational Variables and Students' Opinions.

Variable	First choice (N = 21)	Second choice (N = 19)	p value
<i>Session 3: Social and family influences</i>			
N (%)			
Were you guided by your family in choosing the university studies?			
Yes	14 (66.7) <sup>+</sup>	5 (26.3) <sup>-</sup>	<b>0.011</b>
No	7 (33.3) <sup>-</sup>	14 (73.7) <sup>+</sup>	
Is someone a nurse among your connections?			
Yes	17 (81.0)	10 (52.6)	0.056
No	4 (19.0)	9 (47.4)	
Have you ever seen films, advertisements, documentaries, news that describe the figure of the nurse?			
Yes	15 (71.4)	13 (68.4)	0.836
No	6 (28.6)	6 (31.6)	
Is the view of the media regarding the figure of the nurse positive?			
Yes	10 (47.6)	10 (52.6)	0.752
No	11 (52.4)	9 (47.4)	
Is the view of the media regarding the figure of the nurse negative?			
Yes	5 (23.8)	3 (15.8)	0.527
No	16 (76.2)	16 (84.2)	
Have you had experiences in the health sector or illness that have influenced your choice?			
Yes	6 (28.6)	2 (10.5)	0.154
No	15 (71.4)	17 (89.5)	
<i>Session 4: Student beliefs and opinions</i>			
Do you think the nurse can make a career in his job?			
Yes	21 (100.00)	19 (100.00)	n.a.
No	0 (0.00)	0 (0.00)	
In your opinion, can nurses make a career in the clinical practice and specialist fields?			
Yes	20 (95.2)	15 (78.9)	0.120
No	1 (4.8)	4 (21.1)	
In your opinion, can nurses make a career in the training-education sector?			
Yes	7 (33.3)	8 (42.1)	0.567
No	14 (66.7)	11 (57.9)	
In your opinion, can nurses make a career in the managerial field?			
Yes	4 (19.0)	5 (26.3)	0.583
No	17 (81.0)	14 (73.7)	
In your opinion, can nurses make a career in University Research?			
Yes	9 (42.9)	7 (36.8)	0.698
No	12 (57.1)	12 (63.2)	
In your opinion, can nurses make a career in the field of consultancy, technical and professional?			
Yes	6 (28.6)	5 (26.3)	0.873
No	15 (71.4)	14 (73.7)	
<i>Session 5: Future projects</i>			
Will you continue your studies after graduating with a Bachelor Degree in Nursing?			
Yes	21 (100.00)	19 (100.00)	n.a.
No	0 (0.00)	0 (0.00)	
After graduating, in which setting would you like to work?			
Hospital	1 (4.8)	2 (10.5)	0.228
Community	20 (95.2)	15 (79.0)	
Everywhere	0 (0.0)	2 (10.5)	
If in a hospital setting, in which specialist area?			
Surgery	6 (28.6)	5 (26.3)	0.965
Medicine	1 (4.8)	1 (5.3)	
Geriatrics	1 (4.8)	1 (5.3)	
Pediatrics	6 (28.6)	6 (31.6)	
Psychiatry	1 (4.8)	1 (5.3)	
Emergency/Urgency	6 (28.6)	5 (26.3)	
Other (specify)	0 (0.00)	0 (0.00)	

Note: + and - signs refer to adapted residual equal to 2; p values refer to analysis of variance tests, in bold are the significant effects; n.a. = not applicable.

representing 100% of the sample. The sample consisted of 85% of females and of average age of 22.40 years old (SD 4.58). Table 2 shows the sociodemographic characteristics

of the sample. The results are presented based on the preference of the degree program as the student's first or second choice. The results show how location influences the

**Table 4.** Frequencies of Qualitative Coding on Motivational Aspects and Students' Opinions.

Variable	First choice (N = 21)	Second choice (N = 19)	p value
	N (%)	N (%)	
Why did you decide to attend the Nursing Degree Course?			
Desire for professional growth	3 (14.3)	1 (5.3)	0.342
Follow Models and/or family advices	11 (52.4) <sup>+</sup>	4 (21.1) <sup>-</sup>	<b>0.041</b>
Experiences as caregiver in the family	3 (14.3)	0 (0.0)	0.087
Desire to have new experiences	3 (14.3)	0 (0.0)	0.087
Desire for contact with people	3 (14.3)	0 (0.0)	0.087
Job opportunity	2 (9.5) <sup>-</sup>	17 (89.5) <sup>+</sup>	<b>0.000</b>
Previous experience in healthcare	5 (23.8)	5 (26.3)	0.855
Passion for the healthcare sector	13 (61.9) <sup>+</sup>	1 (5.3) <sup>-</sup>	<b>0.000</b>
Curiosity for the health sector	10 (47.6) <sup>+</sup>	1 (5.3) <sup>-</sup>	<b>0.003</b>
Desire to help others	9 (42.9) <sup>+</sup>	0 (0.0) <sup>-</sup>	<b>0.001</b>
What was your first choice in university studies?			
Dietitian	0 (0.0)	1 (5.3)	<b>0.000</b>
Economy	0 (0.0)	1 (5.3)	
Physiotherapy	0 (0.0) <sup>-</sup>	4 (21.0) <sup>+</sup>	
Speech therapy	0 (0.0)	1 (5.3)	
Medicine/Surgery	0 (0.0)	4 (21.0)	
Neuropsychomotor skills	0 (0.0) <sup>-</sup>	4 (21.0) <sup>+</sup>	
Obstetrics	0 (0.0)	1 (5.3)	
Podiatry	0 (0.0)	2 (10.5)	
Radiology Techniques	0 (0.0)	1 (5.3)	
Nursing	21 (100.0)	0 (0.0)	
In your opinion, who is the nurse?			
A person who can help people	19 (90.5)	18 (94.7)	0.609
A good person	2 (9.5)	1 (5.3)	0.609
The patient care manager	10 (47.6) <sup>-</sup>	18 (94.7) <sup>+</sup>	<b>0.001</b>
An empathic person	4 (19.0)	3 (15.8)	0.787
A person who works to reach the end of month	1 (4.8)	1 (5.3)	0.942
A person who works with the healthcare team	2 (9.5)	3 (15.8)	0.550
A person who is passionate about his work	5 (23.8)	2 (10.5)	0.270
A figure not valued enough	0 (0.0)	1 (5.3)	0.287
Describe the previous experiences in the health sector that have influenced			

(continued)

**Table 4.** Continued.

Variable	First choice (N = 21)	Second choice (N = 19)	p value
your choice both negatively and positively			
User aggression toward the staff	1 (4.8)	0 (0.0)	0.335
Rude Unfriendly/Impolite healthcare staff	2 (9.5)	0 (0.00)	0.168
Insensitive staff	2 (9.5)	0 (0.00)	0.168
Waiting in the emergency room	1 (4.8)	0 (0.00)	0.335
Feeling helpless in front of sick family members	1 (4.8)	0 (0.00)	0.335
Helplessly witness the desperation of patients and family members	0 (0.0)	1 (5.3)	0.287
Trained healthcare staff	3 (14.3)	1 (5.3)	0.342
Healthcare staff available	3 (14.3)	1 (5.3)	0.342
Family model	1 (4.8)	0 (0.00)	0.335

Note: Multiple codes can be associated with the same respondent; + and - signs refer to adapted residual equal to 2; p values refer to analysis of variance tests, in bold are the significant effects.

course choice: more students who attend the central location choose the course as their first-choice option.

### *Motivations for the Choice and Students' Beliefs and Opinions on the Figure of the Nurse*

The choice of the degree pathway as first or second option is affected by the intrinsic and extrinsic motivations, by the opinions the student has about the figure of the nurse, and by the family and social influences that the student may have.

Table 3 analyzed the answers to the closed questions, while Table 4 shows the frequencies and percentages associated with the codes extrapolated by two researchers independently from the answers to the open questions. A total of 37 codes were extracted from the four open questions (see Table 4).

Among the reasons for choosing the degree course in Nursing, five appear to be significant: (a) having a family model or advice from a family member; (b) the possibility of finding a job; (c) having a passion for everything related to the healthcare; (d) being curious about the medical world; and (e) nursing and having a desire to help others. From the analysis of the adjusted residuals, almost all the interviewed people, who have one of these motivations, mostly choose to undertake the BSN as their first choice. On the other hand, those who have the extrinsic motivation of finding a job choose this degree path more as a second choice. Among the social and family influences, having a family member who advises you on the

**Table 5.** Correlations with the Choice of the Path ( $N = 40$ ).

Variable	Choice of training course	$p$ value
Sociodemographic characteristics of the student		
University site	-0.357**	<b>0.024</b>
Age	-0.004	0.978
Gender	0.161	0.320
High School educational level and type	0.174	0.283
Place of residence	-0.175	0.281
Working student	-0.143	0.378
Internal and External motivations		
Desire for professional growth	0.150	0.355
Followed Models and/or family advices	<b>0.446*</b>	<b>0.004</b>
Experiences as caregiver in the family	0.271	0.091
Desire to have new experiences	0.271	0.091
Desire for contact with people	0.271	0.091
Job opportunity	-0.218**	<b>0.000</b>
Previous experience in healthcare	0.208	0.197
Passion for the healthcare sector	<b>0.593**</b>	<b>0.000</b>
Curiosity for the health sector	<b>0.474**</b>	<b>0.002</b>
Desire to help others	<b>0.513**</b>	<b>0.001</b>
Family and social influences		
Family-choice guide	<b>0.404*</b>	<b>0.010</b>
Professional nurse acquaintances	0.302	0.058
Social media	0.033	0.841
Previous experience in health care or of illness	0.225	0.162
Student beliefs and opinions		
The nurse is: a person able to help people	-0.081	0.620
The nurse is: a good person	0.081	0.620
The nurse is: responsible for patient care	-0.513**	<b>0.001</b>
The nurse is: an empathic person	0.043	0.793
The nurse is: a person who works to reach the end of month	-0.011	0.944
The nurse is: a person who works with the healthcare team	-0.095	0.561
The nurse is: a person who is passionate about his work	0.175	0.281
The nurse is: a figure not valued enough	-0.168	0.299
Opportunity to pursue a nursing career	0.246	0.126
Future student projects		
Intention to continue in studies	0.271	0.091
Preferred work setting	-0.003	0.984

Note: The correlation values refer to point biserial scores for the dummy variables;  $p$  values refer to analysis of variance tests, in bold are the significant effects.

choice of the nursing profession is significant for choosing this path as a first choice. Having among the connections a person who carries out the profession has a high frequency in the first choice, however, even if slightly insignificant ( $p = 0.056$ ).

Finally, based on the student's opinions on the professional figure of the nurse, by considering the professional nurse the person in charge of taking care/assisting the patient, it seems that this negatively affects their choice of this degree path as their first one.

### Variables Related to the Choice of the BSN as First Choice and Second Choice

To explore correlations of study variables with path choice, bivariate correlation analysis was conducted using the point biserial coefficient. To make the results easier to read, the research group has reported the variables for homogeneity of meaning: sociodemographic characteristics of the sample, internal and external motivations, family and social influences, student beliefs and opinions, and future intentions (see Table 5).

The analysis revealed some significant correlations, both negative and positive. Among the negative ones are the location and the nurse being responsible for nursing care. Among the positive ones are role models and/or family advice, passion and curiosity for healthcare, the desire to help others and the influences by a family member in taking choices/decisions.

### Discussions

This study was conducted to evaluate the sociodemographic characteristics, motivations, influences, beliefs, and opinions of Generation Z in BSN Degree program preferences as a first or second choice.

In this study, the greater presence of female students was immediately evident. However, this is not a limitation of the study because it is in line with the traditional trend toward feminization in the nursing profession which is more attractive to women than to men (Prensky, 2005). The data provided by the WHO (2021) also show that 90% of nurses are female. This influence of gender in the profession derives from stereotypes relating to the sex identity of nursing professionals which could however negatively influence the application for access to the BSN (Lundell Rudberg et al., 2022; Teresa-Morales et al., 2022; Nogueira et al., 2021; Terry et al., 2020).

In this study, the choice to attend BSN as the first ( $n = 21$ ) and second choices ( $n = 19$ ) was not statistically different, unlike in the Spanish study where the first choice is greater than the second choice (Teresa-Morales, Rodríguez-Pérez & Ramos-Pichardo, 2023). The differences observed are more related to the motivations for the choice. In fact, among the intrinsic motivations, the passion and curiosity for the health and nursing world and the desire to help others, have a great influence on preferring the nursing profession as a first choice. This partly aligns with Macdiarmid's study (Macdiarmid et al., 2021), in which

participants' reasons for choosing a nursing degree were related to the desire to feel good about themselves by helping others through their profession that contributes to the society and provides personal satisfaction.

Younger members of Generation Z, the first to have experienced the era of legalized same-sex marriage, the European migrant crisis and the war on ISIS, are also more likely than previous generations to help others without any form of discrimination toward ethnic, religious and gender fluid groups (Francis & Hoefel 2018). However, the motivation to "do good," which is characterized as a vocational drive to the profession, might be influenced by an idealized and inaccurate perception of the figure of the nurse operated by the mass media. Indeed, students report the presence of positive, rather than negative images in commercials, newspaper articles, and movies (Teresa-Morales et al., 2022). In addition, this study adds as internal motivations, those triggered by curiosity and passion for a world "as interesting, but little known and all to be explored, as nursing" (female).

Among the extrinsic motivations was evidenced the possibility of finding a job, which leads to choosing the course to become a professional nurse instead of another degree course. The difference is also made by the presence of models and family advice, which lead to choosing this profession as a first choice. Furthermore, following family and social influences, students report that having a family member who guides them in choosing a profession affects their first choices. Even in literature, the influence of relatives, friends and one's social class can interfere, both positively and negatively, in the choice of a three-year degree in nursing (Teresa-Morales et al., 2022; Lindberg et al., 2020). Indeed, there is evidence that the possibility of having emotional and practical support from a family member who works in healthcare tends to influence student choice (McLaughlin, Moutray & Moore, 2010). In Sweden, for example, 13% of nursing students aged 30–34 have at least one parent who is a registered nurse (Lundell Rudberg et al., 2022).

Being advised by a family member in choosing the course or having an acquaintance who works in the healthcare context are associated with deciding to take the course as a first choice. The literature confirms that having family members pertaining to health professions affects students in two different ways. In fact, students find it natural to follow the same path as their parents, or they decide not to follow the example right from the start, but then change their mind (McLaughlin, Moutray & Moore, 2010).

This study indicates how the perception of the great responsibility of the nurse's work, functions as a deterrent to the nursing degree path as a first choice for some students. In fact, from sentences extracted from the open question, some students reported to be "scared by this enormous responsibility of the nurse in care," that they "have been afraid during the pandemic" and of "not feeling ready to be invested with this responsibility" (students who preferred

the nursing profession as a second choice). In a digital age, where social networks offer models of success that are unattainable to those who look beyond the screen, mostly an illusion made up of filters and nonexistent locations, develops in young people a sense of inferiority, performance anxiety, and heavy weight, which compromise both the course of study and one's identity, diminishing the sense of self-efficacy (Davis & Weinstein, 2017; Miller et al., 2016). Probably the effects of the digital age on the self-efficacy and self-esteem of generation Z combined with the media diffusion of the challenges faced by nurses during the pandemic may have triggered fear in those who "do not choose" this profession as their first choice to deal with the responsibilities associated with the role of nurse.

The students, who participated in this study, are all of the idea that in this profession it is possible to make a career above all in the clinical practice and specialist fields, but they have confused ideas about how to evolve in their career in the training and education field, managerial field, research, technical, and professional consultancy fields. This does not match the study of Teresa-Morales and colleagues (2023), but is aligned with the study of Suluhan and colleagues (2020), which analyzed students' perceptions of career opportunities, working conditions, and job security, as the main reasons for choosing this course of study. In our student sample too, the stereotyped image of the nurse by the mass media has its impact, portraying the nurse as a specialist in the clinical-care area, as a "valid collaborator of the doctor" or part of the "care team," but do not link this figure to other career areas as is the case for the medical health professions.

In Italy, there is currently a decline in enrolments in nursing degree programs, and this can be attributed to orientation issues both at the entry (such as the lack of comprehensive information about career opportunities and negative stereotypes about the profession) and during the course (including the high study workload and associated stress, as well as the limited visibility of various specialization and career opportunities within the nursing profession) (Glerean et al., 2019; Glerean et al., 2017). To promote more informed choices both at the entry and during the course, the literature suggests, for example, entry orientation programs, mentoring by professional nurses, better communication about career opportunities, and support throughout the degree program (Rubbi et al., 2019). In Italy, multicenter project planning among universities could play a significant role in optimizing orientation and providing more comprehensive information to students, encouraging more informed and conscious decisions in the nursing career.

### *Limitations*

One of the main limitations of this study is the sample size. Such a small sample made it impossible to investigate, with a logistic regression, the associations between the variables



that correlate significantly with the choice of the student's degree path. Furthermore, the results, both quantitative and qualitative, may not be representative of all nursing students in Italy and capture the situation and the variability of human ideas only of a subset of students in a public university in Rome.

### Implications for Practice

This study brings out preliminary results and specific aspects related to the motivations, beliefs, opinions, influences, and stereotypes that lead Generation Z to choose the nursing profession, either by first or second intention, aspects that need to be further explored in larger samples and in different sociocultural, ethnic, and geographic contexts. University educators may use these findings to project orientation sessions both at the entry and during the course. To promote nursing degree choices among Generation Z future students, universities should implement stronger information policies, encouraging collaborations between educators and nurse practitioners in promotion campaigns and focus not only on professional skills and variety of employment but rather on career possibilities across clinical practice, management, education, and research areas. This will facilitate a more conscious decision-making in the nursing career choice.

### Conclusions

A Bachelor in Nursing Degree was the first-choice degree program for about half of the students participating in the study. In the light of the motivations, opinions, influences, and stereotypes identified, Universities should commit their energies in being more proactive in the days of recruitment and promotion of students ("open days"), making them a meeting point for the main professionals of different areas of nursing and scientific maturity diplomas, students, and teachers. This would increase prospective students' prior knowledge of the profession, painting a more realistic and less stereotypical portrait of nursing. Furthermore, it is hoped that universities can redirect their programs toward the needs of Generation Z and make them more attractive and implement the self-esteem and sense of security of potential students.

### Data Availability Statement

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

### Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.





### Ethics Approval Statement

The study was conducted in accordance with the standards and ethical principles of the Declaration of Helsinki and was approved by the board of directors of each participating degree site.

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