

Engagement of Final-Year Nursing Students in the Research Process: A Sequential Explanatory Mixed-Method Study

Emmanuelle Natali^{1*}, Rita George Nohra², Ian-In Vong³, Monique Rothan-Tondeur^{3,4}

¹Nursing Training Institute Raymond-Poincaré, Assistance Publique-Hôpitaux de Paris (AP-HP), Garches, France

²Nursing Sciences Departement, Paris Cité University, Paris, France

³Nursing Sciences Research Chair, Laboratory Educations and Health Promotion (LEPS), Sorbonne Paris Nord University, Bobigny, France

⁴Nursing Sciences Research Chair, Assistance Publique-Hôpitaux de Paris (AP-HP), Paris, France

Email: *emmanuelle.natali@aphp.fr

How to cite this paper: Natali, E., Nohra, R. G., Vong, I.-I., & Rothan-Tondeur, M. (2025). Engagement of Final-Year Nursing Students in the Research Process: A Sequential Explanatory Mixed-Method Study. *Creative Education*, 16, 535-554.

<https://doi.org/10.4236/ce.2025.164032>

Received: December 15, 2024

Accepted: April 24, 2025

Published: April 27, 2025

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Abstract

In nursing education, students are introduced to the research process and are required to produce a thesis. This paper investigates factors influencing students' engagement in this process. A sequential explanatory mixed-method study was conducted. It combines quantitative data from 446 with qualitative interviews of 12 participants from institutes across Ile de France participated. The findings identify motivation, institutional support and professional aspirations as facilitators while highlighting barriers like workload, time constraints and difficulties in guidance.

Keywords

Engagement, Motivation, Nursing Students, Research Process, Thesis

1. Introduction

“Nursing practice raises unanswered questions that lead to nursing research projects, which are then designed and conducted. The knowledge produced through these projects helps understand new health aspects or changes in the understanding of a phenomenon or experience, propose new care interventions, or revise existing practices” (Pepin, 2015). The signing of the Bologna Agreement in 1999 engaged European Union member states in creating a unified space for higher education and research (Phulpin & Danan, 2016). In 2009, integrating nursing education into universities through the Bachelor-Master-Doctorate (BMD) system and awarding a bachelor's degree to registered nurses formalized this aca-

demic transition.

As part of the nursing program set out by the Ministry of Solidarity and Health (MSS), students are introduced to research and, during their third year, are required to produce a thesis based on scientific methods (MSS, 2022). This study aims to identify the factors influencing third-year nursing students' engagement in the research process.

2. Literature Review

2.1. Nursing Research

The International Council of Nurses defines nursing research as “a systematic pursuit of new nursing knowledge for the benefit of patients, families, and communities. [...] The primary objective of nursing research is to improve health outcomes by advancing nursing knowledge and practice in the field” (Debout et al., 2010).

As indicated by the Observatory of Science and Technology (OST), since the beginning of the 21st century, the number of publications worldwide has more than doubled, reaching 1.8 million in 2015. Between 2000 and 2015, the United States, the United Kingdom, and Germany ranked as top scientific publishers, while France moved from fifth to seventh position (OST, 2018).

In the United States, studies by the American Nursing Association (ANA) state that nurses at all education levels participate in research (Dupin et al., 2012). In 2021, the American Association of Colleges of Nursing (AACN) published a series of “Essentials” defining research competencies for nursing students in colleges and universities (AACN, 2021). In Canada, research training starts in the first year (Lavoie et al., 2013).

In France, the National Commission of Paramedical Research Coordinators (CNCPR) specifies that nursing research was established in the mid-1970s (CNCPR, 2022). Since the 2000s, several initiatives have encouraged nursing research, such as training reforms (Rothan-Tondeur et al., 2018) and the establishment of the Nursing Sciences Research Chair at APHP Paris-Nord in 2009. Nursing research includes clinical research, studies on health professionals' education, and studies focused on future professionals (Debout et al., 2010).

2.2. Initial Training in Nursing Research in France

According to the decree of July 31, 2009, title II, art.17, obtaining the state nursing diploma follows the acquisition of 180 European credits (ECTS). The bachelor's degree is awarded to holders of the State Nursing Diploma according to article D. 636-69 of the Education Code (MSS, 2022). As part of the introduction to the research approach, nursing students are required to write a final dissertation, which contributes to obtaining ECTS relating to skills 7 “analyzing quality and improving professional practice” and 8 “researching and processing professional and scientific data”, and activity 9 “professional monitoring and research” (MSS, 2022). The research approach pursues a dual intention, evaluation and professionaliza-

tion. A concept linked to professionalization is professional development, it involves the identity process, professional knowledge, skills, engagement (Jorro, 2013).

2.3. Concept of Engagement

Engagement represents the energy and interest an individual puts into a project (Haberey-Knuessi, 2013). Unlike motivation, which is an intention to act, engagement is “anchored in action” (Heilporn et al., 2021). Motivation, therefore, is a “driving force behind action, and a condition for engagement” (Gerard & Rubio, 2020).

In educational contexts, engagement, emerging in the 1980s, “refers to the learner’s involvement in the learning process” (Poellhuber & Michelot, 2019). Engagement has behavioral, affective, and cognitive components that influence learning (Bourgeois, 2013; Poellhuber & Michelot, 2019). Behavioral engagement includes “effort and perseverance” and “extracurricular activities” (Hart et al., 2011; Mohamed Mohamed Bayoumy & Alsayed, 2021). It emphasizes the learner’s participation in his or her training activities through, among other things, compliance with instructions, civility, attendance and investment in extracurricular activities (Bourgeois, 2013; Heilporn et al., 2021). Affective engagement is made up of “taste for learning” and “taste for school” (Hart et al., 2011; Mohamed Mohamed Bayoumy & Alsayed, 2021). It is represented by emotions such as interest, pride, enthusiasm or fear, boredom, disappointment (Bourgeois, 2013). Affective engagement highlights the student’s perceived value of his or her learning environment, the emotional relationship that exists between the learner and the place of training, teachers and peers (Chouinard et al., 2022), contributing to the learner’s sense of belonging and confidence. Cognitive engagement involves the learner’s ability to concentrate and pay attention while carrying out an activity. It also induces the learner’s ability to observe him/herself while performing a task in order to readjust his/her practices and knowledge (Chouinard et al., 2022; Jorro, 2013). Engagement dynamics are influenced by individual factors as well as contextual factors (Bourgeois, 2013) that can be external such as family context and internal i.e. linked to individual characteristics such as motivation (Gerard & Rubio, 2020).

2.4. Measuring Engagement

While several scales have been developed in English and French to measure levels of engagement, their purposes differ. The Student Engagement in Schools Questionnaire (SESQ) was developed by researchers in 19 countries (Heilporn et al., 2021; Mohamed Mohamed Bayoumy & Alsayed, 2021). It comprises four categories. The first relates to the three dimensions of engagement and is measured by the SESQ-ENG “Student Engagement in Schools Questionnaire-Engagement” scale (Hart et al., 2011). The second focuses on learning motivation and is measured by the Academic Motivation Scale (AMS) (Vallerand et al., 1992). The third category uses the Student Engagement Instrument (SEI) to measure facilitators of engage-

ment through social relationships (Appleton et al., 2006). The fourth measures academic performance using the CGPA, SGPA “Cumulative Grade Point Average, Semester End Grade Point Average” calculator (Mohamed Mohamed Bayoumy & Alsayed, 2021).

2.5. French Context

Students are introduced to the research process throughout their training, through various activities such as bibliographical research, situation analysis and thesis writing. This initiation emphasizes the abilities that the student must acquire, such as analysis, synthesis, mobilization of knowledge, appropriation of a method, mastery of writing and oral presentation; requiring an investment of time, effort, energy (Guillot, 2012), and commitment. But the problem is this: can 3rd-year nursing students engage to writing a thesis, and do they want to?

In 2021 in France, we counted 30,713 students enrolled in 3rd-year nursing, with ages ranging up to 50 years (Dress, 2021), underpinning a diversity of profiles, a heterogeneity of levels, a disparity of backgrounds, resulting in a varied audience. In today’s training context, the introduction to the research process takes place in a hybrid training system, with face-to-face and distance learning, synchronously or asynchronously, which implies organizational skills and the ability to manage communication tools.

As for writing, which is the basis for drafting and putting into words the thesis, it engages the learner by letting us see what he or she thinks (Cros, 2013). Writing can therefore be a factor of insecurity and imbalance for students, depending on their facility for writing and their history of this practice (Boutrais, 2022). In addition, to complete their thesis, students will have to plan and control their research, thus implementing metacognitive strategies (Heilporn et al., 2021).

All in all, writing a thesis represents a personal investment of effort and time for the learner, which is why it is important to determine the obstacles and levers that prevent nursing students at the end of their studies from engaging in the research process, of which writing their thesis is a part.

The aim of this study is to identify the factors that influence nursing students’ engagement to the research process, to compare the levels of engagement to this process and to understand what facilitates and barriers students’ engagement to the research process and the completion of the thesis.

3. Method

A mixed study based on the sequential explanatory model was carried out. This included a quantitative descriptive phase using questionnaires, followed by a qualitative phase using semi-structured interviews to explain and understand the results obtained in the quantitative phase (Fortin & Gagnon, 2022).

3.1. Population

The study population consisted of third-year nursing students enrolled in nursing schools (IFSI) in the Ile-de-France (IDF) region in France. This region surrounds

Paris and had a population of over 12 million in 2022, or 19% of the metropolitan French population (*The Prefecture and State Services in the IDF Region, 2022*). Inclusion criteria were specified that participants be in their third year during the 2022-2023 academic year (quantitative phase) and 2023-2024 (qualitative phase) in institutions that started the academic year in September.

3.2. Sample

For the quantitative phase, an a priori estimate of sample size was determined using the methodology for estimating a proportion (*Cochran, 1965*). A proportion (p) equal to 0.50 was considered, whose value represents the maximum variability of the binomial distribution, thus generating an estimate with the largest possible sample size, as well as a sampling error of 5% and a significance level of 5%. A target sample size of 386 students was set based on a population estimate of 5800 students (*Regional Council of IDF, 2023*). A voluntary, non-random sampling method was used. All 56 IFSIs in Ile-de-France were included. This sampling method was selected based on the characteristics of the target population (*Fortin & Gagnon, 2022*) to study the group of 3rd-year nursing students and understanding that descriptive quantitative studies aimed to developing knowledge can be conducted with small samples to “obtain the necessary information” (*Fortin & Gagnon, 2022*). The multi-site nature of the study improved the diversification of the contexts studied, contributing to the representativeness of the data collected.

For the qualitative phase, the sample size was based on the principle of data saturation (*Fortin & Gagnon, 2022*). Given that a minimum of 10 interviews is standard for descriptive qualitative research (*Whittemore et al., 2001*), a minimum of 12 interviews was planned to ensure saturation. The sampling method chosen was non-random network sampling (*Fortin & Gagnon, 2022*), and the participation of students was voluntary.

3.3. Data Collection

For the quantitative data, the SESQ “Student Engagement in Schools Questionnaire” was used (*Mohamed Mohamed Bayoumy & Alsayed, 2021*), focusing on 3 of these composites: dimensions of engagement (*Fredricks et al., 2004*), facilitators of engagement and motivation for learning (*Mohamed Mohamed Bayoumy & Alsayed, 2021*). The study instrument used for data collection was a questionnaire composed of items from the validated SESQ-ENG “Student Engagement in Schools Questionnaire-Engagement” (*Hart et al., 2011*), SEI “Student Engagement Instrument” (*Appleton et al., 2006*) and AMS “Academic Motivation Scale” (*Vallerand et al., 1992*). The items were adapted in terms of vocabulary to suit the training of nursing students, and items were added to highlight the research process and the completion of the thesis. The questionnaire consisted of 60 items and 5 parts. It included a 6-point Likert scale to express the degree of agreement or disagreement. In order to ensure the validity of the items, a test questionnaire was administered to 23rd-year nursing students. A modification to the collection tool was

made by a punctual variability in the wording of the scales aimed at reducing “automatisms” in responses (Podsakoff et al., 2003).

For the qualitative phase, semi-structured interviews aimed to capture participants’ views and experiences to further understand quantitative findings (Fortin & Gagnon, 2022). The themes explored by the interview guide were related to the level of engagement, the reasons for engaging in thesis writing, and individual and institutional resources. The interviews were conducted at the IFSIs or by zoom, depending on the students’ possibilities.

3.4. Data Analysis

For the quantitative analysis, a univariate statistical analysis was carried out to describe the data based on the overall score for each respondent. The aim of this analysis was to characterize the engagement of 3rd-year students and to draw a general portrait (Fortin & Gagnon, 2022). The analysis carried out was descriptive in nature, so headcounts, means and frequencies were used to describe the data. It was carried out using Excel (version 16.91) software. In analyzing the results, we applied the following rule: strongly agree represents a very high level of commitment; agree and somewhat agree represent a high level of commitment; somewhat disagree and somewhat disagree represent a low level of commitment; strongly disagree represents a very low level of commitment.

The qualitative analysis used a qualitative descriptive method (Fortin & Gagnon, 2022). Data collection took place between December 2023 and January 2024. A number was assigned to each participant to ensure anonymity. After collecting data by recording, the data were transcribed in full. The qualitative content analysis process was carried out using Atlas. Ti (version 24.1.1) software to select verbatims, determine units of meaning and categories (Fortin & Gagnon, 2022). Excel (version 16.91) software was then used to determine and organize themes and megathemes. The results were then analyzed by “theoretical triangulation” with regard to the literature, as well as by “data triangulation” of the students (Creswell et al., 2006). Triangulation of the analysis was carried out by a co-researcher to ensure objectivity (Fortin & Gagnon, 2022) and limit interpretation bias. Credibility was ensured by full transcription of the interviews and triangulation of the analysis. Rephrasing the students’ words to ensure understanding contributed to the authenticity criterion (Whittemore et al., 2001).

3.5. Ethical Consideration

Prior to data collection, the research protocols for both the quantitative and qualitative phases were submitted to the Ethics Committee of the Laboratory of Education and Health Promotion, UFR SMBH, Sorbonne Paris Nord University. Approval was received on February 25, 2023 (quantitative phase), and October 31, 2023 (qualitative phase).

For the quantitative phase, participants volunteered anonymously, and consent was assumed upon completion and submission of the questionnaires. Data secu-

rity was ensured using the Framiform® platform. For the qualitative phase, written consent was obtained before each interview, and anonymity for both institutions and participants was maintained throughout.

4. Results

4.1. Quantitative Results

Of the 56 IFSIs in the Ile-de-France region invited to take part in this study, 34 accepted. Students from 31 of these IFSIs took part, with the number of responses per establishment ranging from 2 to 56. In all, we obtained 446 responses.

4.1.1. Student Engagement Levels

Affective Dimension

Among the 446 students, 127 demonstrated very high engagement, while 240 showed high engagement. Specific examination of the data highlighted students' interest in learning, with 91% enjoying learning and 97% appreciating the acquisition of new knowledge (including “strongly agree,” “agree,” and “somewhat agree” responses). Interest in the research process was slightly less pronounced (**Figure 1**) corroborated by 63% of students who did not find thesis work boring.

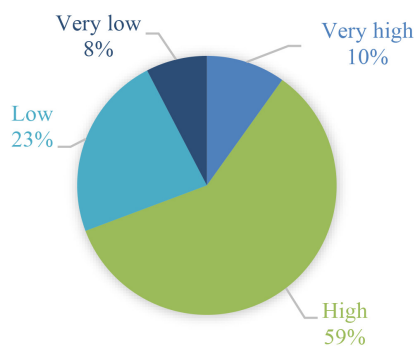


Figure 1. Interest in the research process.

Students showed a high level of appreciation for their structure, with 88% feeling proud of attending their IFSI. However, 33% of students were less motivated to attend classes in the morning.

Behavioral Dimension

A high level of effort and perseverance was found, with 121 students showing a very high level and 254 a high level. Students made efforts to work well in class (94% strongly agree, agree and somewhat agree), using course re-reading to solve comprehension problems for 93% of them. The amount of effort put into the coursework was significantly higher than that put into the thesis, with 87% of respondents stating that they put some effort into the thesis. The attention paid during lectures was 91%. In research courses, attention was less pronounced, with 82% of students claiming to be attentive. The results for concentration in class showed that 2/3 of students were concentrating.

In terms of extracurricular factor, 299 students reported low engagement, with

around a third of students declaring that they were involved in extracurricular activities.

Cognitive Dimension

For cognitive engagement in terms of self-reflection, 420 students showed a high to very high level of engagement. The results show that students relate the content they have learned to their experiences (96% strongly agree, agree and somewhat agree).

Cognitive engagement linked to readjustment of practices shows that 401 students readjust their practices (high to very high). The results show that 96% match prior knowledge with what is learned (strongly agree, agree and somewhat agree).

Overall, for the three dimensions of engagement, the declarative results obtained indicate that, on average, students demonstrate a high to very high level of engagement in learning.

4.1.2. Engagement Facilitators

Student-Instructor Relationships

Quantitative data revealed a significant relationship between student engagement levels and institutional support, with one of the most important facilitators of engagement being the trainer-student relationship ($n = 378/446$).

Students felt that instructors listened to them, showed concern, were available when needed, and were approachable. Between 83% and 86% of students said they completely agreed, agreed and somewhat agreed. As for the research process, 87% of them feel guided in this process.

Peer Support in Learning

This facilitator is perceived at a high level, with 99 students believing they are supported by their peers at a very high level and 251 at a high level. However, 71% of students think their peers care about them.

Family Support in Learning

Students reported feeling that their family and loved ones are there when they feel they need them, encounter difficulties and take an interest in the positive things that happen during training, with almost four-fifths (87% - 91%) of students saying they strongly agree, agree and somewhat agree.

Control and Relevance of Academic Work

Significantly, 91% of students consider that the content learned in class will be important for their future, and 98% think that learning is interesting for improving in a field (strongly agree, agree and tend to agree). However, when it comes to the content they need to know, 67% feel that they are taught at the IFSI.

Future Goals and Aspirations

On average, 153 students had very high objectives and aspirations, and 166 had high aspirations. Half of the students planned to continue their education post-graduation, and 95% viewed the training as essential for achieving their goals.

Overall, out of 446 students, 365 reported high to very high levels of engagement facilitators in their studies, indicating strong control over academic work and clear future goals, though only 50% intended to continue their studies.

4.1.3. Motivation

Amotivation

Among the sample, 354 students reported low to very low levels of amotivation. From a specific point of view, 95% had little feeling of wasting their time in training (almost never, infrequently, moderately often), and 26% questioned whether they should continue (completely agree, agree and somewhat agree). However, when it comes to writing their thesis, 32% felt that thesis was a waste of time.

Intrinsic Motivation

Intrinsic motivation was very high to high for 281 students, while 165 reported low to very low levels. Significantly, 93% of students took the course because they enjoyed learning new things. Pleasure in broadening their knowledge of subjects of interest to students is lower (85% completely agree, agree and tend to agree).

In research, half of the students found pleasure in attending IFSI for knowledge expansion related to research (Figure 2), and 29% were motivated by reading interesting authors (Figure 3). The pleasure of surpassing themselves through thesis work was reported by 44% of students, although 85% were motivated to broaden their knowledge in areas of interest.

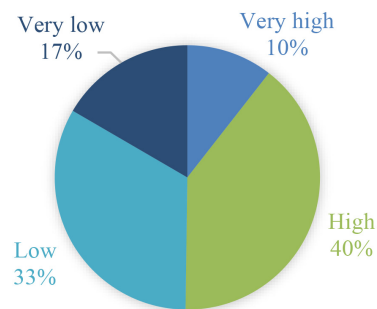


Figure 2. Pleasure for knowledge expansion through research.

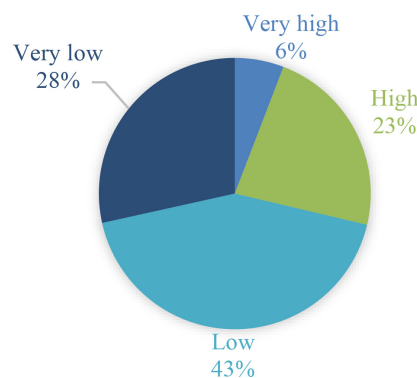


Figure 3. Pleasure reading authors.

Extrinsic Motivation

Extrinsic motivation was generally high, with 176 students reporting very high levels and 174 reporting high levels. Results showed that 97% of students considered their diploma would allow them to work in a field they enjoy (strongly agree, agree

and somewhat agree), and 84% aimed to prove they could succeed. However, almost half of them undertake their studies with the aim of securing a high-profile job.

Overall, the specific findings related to the research approach indicate heterogeneity in commitment and motivation. Most students felt well-guided (96%), were attentive in research courses (82%), and made efforts to complete their thesis (87%), interest in the process was less sustained (69%), and the pleasure of developing knowledge and surpassing oneself through this process are less marked (around 50% at a high to very high level).

4.2. Qualitative Results

4.2.1. Interview Analysis

We conducted 12 interviews. The average duration of the interviews was 34.16 minutes (range: 25 to 45 minutes). In total, 1004 verbatims were emphasized and linked to 171 meaning units. The meaning units were assigned to 34 categories grouped into 3 megathemes. The megathemes identified were educational and institutional factors, individual and psychosocial factors, and professional factors (Figure 4).

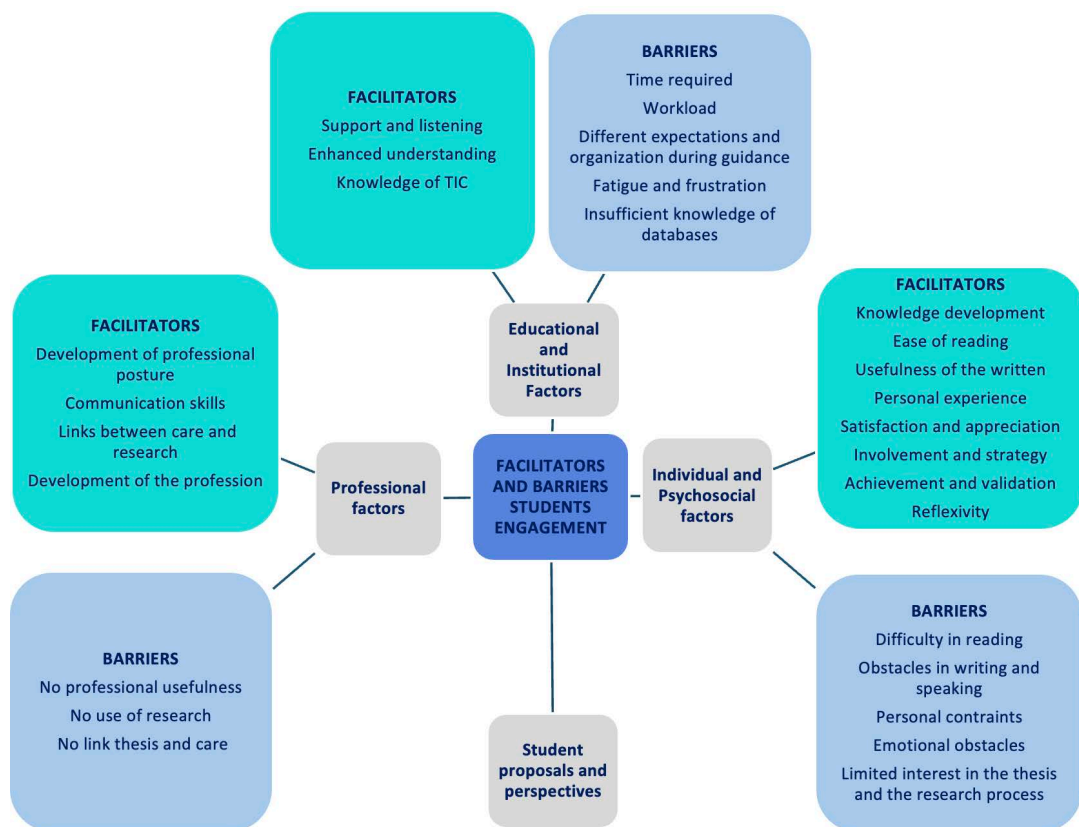


Figure 4. Facilitators and barriers students engagement.

4.2.2. Pedagogical and Institutional Factors

Training-Related Facilitators

One of the facilitators linked to training is understanding. To this end, research

concepts are developed over the 3 years of training, and the development of research is initiated through training (16 quotations). Students noted the need to understand the requirements of the thesis (13 quotations), *“So already, understanding the instructions helps a lot, because I know that at the beginning I had a bit of trouble, and once I understood them, I was able to get into it more easily”* (No. 8). In addition, it is specified that understanding is favored by the time dedicated to the thesis on the timetable. Another facilitator is that of accompaniment and listening, represented by 6 meaning units. Supervision helped to complete the thesis (32 quotations). In relation to this support and listening, 41 quotations emphasized the importance of the thesis director in motivating students to complete their thesis.

Training-Related Barriers

On the other hand, there was an absence of support in this process, with a feeling of being alone in the completion of the thesis. Significantly, workload-induced fatigue was noted in 86 quotations. This workload was generated by both the training and the thesis. Investment in the thesis was not facilitated by the other activities required simultaneously. This workload generated fatigue and frustration, making it difficult to invest in the thesis, *“we’re tired too, we try to, to do, to do I h here, but it’s true there’s, there’s fatigue too which, which is there; even if we try to forget it, but it’s there”* (No. 1). Training was perceived as difficult, whether in terms of the 3rd-year of training or the sandwich course.

The time needed for research was a significant hindrance, cited in 70 quotations. It was seen as an element of difficulty, with the impression of not having enough time: *“What I find difficult is the time constraint”* (No. 7). This difficulty was linked to all the training activities that involve prioritization, with an impact on the completion of the thesis.

On 39 occasions, students noted the different expectations or organizations of trainers or structures as a hindrance. They perceived disorganized support and different expectations for the thesis, impacting on comprehension and the feeling of being lost. These differences in expectations gave rise to feelings of injustice, *“when I compare the demands of my thesis director with the demands of the thesis directors of my fellow students. Well, I realize that some asked for much more. Some asked for much less”* (No. 4).

One obstacle noted was the pressure that training puts on students, which can lead to demotivation. This could be induced by the grade of the thesis, in which the thesis director participates.

4.2.3. Individual and Psychological Factors

Student-Related Facilitators

The students highlighted that taking a deep interest in a subject with their thesis, carrying out research, contributes to the development of knowledge which allows the deepening of nursing care. Previous research knowledge was perceived as helpful, whereas lacking this knowledge was considered a hindrance. It should be noted that the possibility of choosing the subject of the thesis, the call situation

has a character influencing the interest and commitment in the approach.

Some students cited reading comprehension, ease of writing, and perceived value in writing and oral presentation as facilitators. Reading was described as engaging (17 mentions), with professional benefits such as expressing oneself to professionals using appropriate vocabulary. Familiarity with the structure and purpose of articles facilitated reading comprehension. However, students indicated uncertainty about the differences between scientific and professional articles: *“I’m not exactly sure about the difference between the two”* (Participant No. 5).

Writing a thesis was seen as a learning tool for drafting and structuring ideas with rigor.

Personal satisfaction and validation also motivated students, manifesting in pride from completing the thesis, feeling they belonged in nursing, and a desire to succeed and enjoy the research process.

Student-Related Barriers

A lack of interest in the thesis was noted 39 times, with some students viewing it as merely a requirement. Some questioned the relevance of research within their degree program, considering it uninteresting for a bachelor’s degree in nursing.

Individual constraints, such as housing and learning conditions, limited engagement.

Emotional obstacles, including feelings of inadequacy and discouragement, also negatively impacted thesis completion.

Difficulties in reading and writing were also noted, especially with scientific articles: *“Uh yes because in articles, sometimes there are a lot of pages and suddenly, when we read at the beginning we are concentrated and then very quickly we get lost in, in everything and finding what interests us is an exercise which is hyper uh complicated, finally it takes a lot of time”* (Participant No. 10). For writing and speaking, the difficulty of synthesizing ideas in writing and of respecting formatting instructions represent obstacles. These obstacles are linked to the effort that writing engenders, while speaking is not very appreciated.

4.2.4. Professional Factors

Professional Facilitators

The research process was seen as contributing to professional identity. A connection between research and the type of nurse students aspired to become was evident, with thesis work aiding in shaping their professional identity. Research also developed communication and teamwork skills through information-sharing and the pleasure of group research.

Professional Barriers

While some students valued research for professional development, others felt it lacked practical application post-graduation. Motivation was often focused on clinical internships rather than research, and thesis completion was not deemed essential for becoming a “good nurse”. Additionally, students expressed uncertainty regarding how they would use the thesis professionally. Some students sug-

gested the thesis should be more practice-oriented, as current research did not always seem relevant to direct patient care. A perceived gap between theory and practice was noted, impacting engagement with research training: *“In the end, we find ourselves in training and we...we are told, yes, that’s how it is but the IFSI is the school and now it’s here, in this training we have to do it like that because well, that’s reality.”* (Participant No. 5).

Overall, this study highlights a significant facilitator: students’ perception of the development of knowledge. The deepening of a subject through their thesis and the research conducted the acquisition of new knowledge. On the other hand, the main obstacles are fatigue and frustration due to the workload, as well as the lack of time. It is worth noting that these facilitators and obstacles are present in all three age groups studied (“up to 24”, “between 25 and 40”, and “over 40”). Furthermore, the importance of support and guidance from instructors is also found among students in all three age groups.

4.2.5. Student Proposals and Perspectives

Students offered suggestions to improve the research experience. They recommended making the thesis a central component throughout training, involving students in ongoing studies, organizing workload management, and publishing thesis work to benefit future students.

5. Discussion

5.1. Methodological Discussion

In the quantitative phase, despite the questionnaire’s anonymity (Tournois et al., 2000), social desirability bias may explain the high response rates in favor of elevated engagement. The lack of a correlation coefficient calculation limited the ability to establish statistical relationships between variables (Ancelle et al., 2013). Furthermore, the use of non-random sampling method limits the generalization of results (Fortin & Gagnon, 2022). So, the results are partially transferable to French IFSIs due to the uniformity of the training program (MSS, 2022). However, variations in infrastructure and access to internships limit their national generalization. Internationally, differences in training systems, professional regulations and cultural or social contexts restrict this generalization.

For the qualitative phase, confirmation bias was mitigated by triangulating analysis with a co-researcher, but potential bias from social desirability may remain.

5.2. Results Discussion

This study focuses on engagement, motivation and facilitators of engagement in the research process, and provides information on the characteristics of the engagement of 3rd-year nursing students in this process as well as the obstacles and levers to this engagement. Students enjoy developing knowledge on topics that interest them and use research to evaluate their practices, appropriate the work

and reuse it. It therefore constitutes a lever for reflexivity allowing them to learn from experience and produce knowledge to be transferred (Perrenoud, 2001). However, research is not always perceived in this way, with obvious boredom during the dissertation work (37%) constituting an obstacle to engagement; because, to engage, it is necessary to perceive meaning in the project carried out, to want it and to consider it as a source of learning (Haberey-Knuessi, 2013). The reflexivity that this approach generates was also stated by the learners who noted that writing the dissertation allowed them to become aware of their abilities in spelling, syntax and working methods, through activities such as reading, rereading and correction, aimed at enriching their vocabulary. However, it was pointed out that only 29% of students enjoy reading authors. However, the end-of-year written work must be based on data from scientific or professional publications (MSS, 2022). However, students do not clearly distinguish the differences between scientific and professional articles, and other individual obstacles to reading articles have been reported, including their length, their difficulty in understanding and their time-consuming and tedious nature leading to a loss of concentration. These data should be adjusted to the extent that during a study it was highlighted that students increased their use of literature from 50.7% to 70.9% between the 1st and 3rd year of training (Timizar-Le Pen et al., 2020).

Students indicate as a lever for understanding this approach, support through support, listening from trainers and 87% of learners feel guided. Conversely, the lack of support or differences in expectations and methods depending on the dissertation directors have been raised as obstacles, leaving the student with the feeling of being alone in completing the dissertation or leading to a feeling of injustice when commitment requires a relationship of trust (Schlick, 2019). Students indicated that trust with the dissertation director and the support received promotes investment and contributes to the development of motivation thanks to the recognition they perceive (Chouinard et al., 2022).

Intrinsic motivation promotes engagement in an activity through the interest and pleasure it arouses (Rebah & Dabove, 2017). Specifically, to the research approach, it is contrasted with half of the students who feel pleasure in developing their knowledge in this area. Intrinsic motivation leads students to use learning strategies (Kanellopoulou & Giannakoulopoulos, 2020). However, the workload that includes internships, assessments and other simultaneous activities, generates fatigue and frustration and leads to prioritization strategies of which the dissertation is not part, learners having the feeling of not having enough time. The time required for research therefore represents a barrier to engagement in the completion of the dissertation, found in research on reflective writing which highlighted that the perception of an increased workload in a limited time was a barrier to this practice (Timizar-Le Pen et al., 2020). In addition, the feeling of wasting time when completing the dissertation was reported by a group of students. This amotivation may result, as indicated by students, from emotional obstacles in terms of inability to write or failure to move forward. A narrative review had highlighted

that the feeling of incompetence in reading an article and in implementing a project is linked to the difficulty of accessing scientific knowledge (Devos et al., 2019), and the search for resources is not self-evident for learners, as they explain by their lack of knowledge of scientific databases. This skills deficit in the use of scientific databases for research called “scientific literacy” has also been identified among some nurses (Devos et al., 2019), not promoting the support of students in the use of research results in the service of practice. The difficulty of using these tools can be increased, as Devos (2019) indicates, by the multiplication of the number of articles available (Demagny-Warmoes et al., 2024; Devos et al., 2019), making it difficult for nurses to update knowledge (Demagny-Warmoes et al., 2024), as well as for students. In addition, students do not always understand the link between research and care, supported by the fact that the importance of supporting practices through research is not always perceived by learners (Demagny-Warmoes et al., 2024).

Students demonstrate effort in the research process despite less interest. To the extent that extrinsic motivation is linked to factors external to the individual that push them to carry out an activity or to get involved but not for the pleasure generated (Rebah & Dabove, 2017), they would produce the dissertation not for the pleasure but for the result it will generate, that is to say to obtain, as Rebah & Dabove (2017) calls it, “a reward”: the validation of ECTS, and thus avoid “a punishment”: the non-validation of ECTS (Rebah & Dabove, 2017). If learners demonstrate effort and perseverance in class, including in the production of their dissertation, their attention paid to research courses is less marked, and attention conditions learning (Dehaene, 2016). These observations can be explained by different factors stated by the learners, such as the nature of the course, reduced motivation, boredom, which Hontebeyrie (2021) called “intellectual absence” associated with a physical presence in class (Hontebeyrie, 2021). In addition, the number of hours of lectures devoted to the teaching unit “Introduction to the research approach” in semesters 4 and 6, as prescribed by the training framework (MSS, 2022), is high (2×20 h) (Limaiem, 2015), while these teaching methods are “questioned” by students (Hontebeyrie, 2021). Furthermore, the completion of the dissertation requested during the 3rd-year is questioned by students due to the required involvement, this data is supported by the decrease in investment observed in class over the three years of study, with an absence rate in the 3rd-year 5.7 times higher than that of the 1st-year (Hontebeyrie, 2021).

Learners indicate that the dissertation promotes the development of their professional identity and allows the development of their future profession. It is encouraged by exchanges with peers, reflection within the team, contributing to questioning, sharing, and the development of ideas. The importance of exchanges between peers and the pleasure associated with carrying out group research and collective guidance are mentioned in order to share common situations that facilitate or not, to encourage reflection. It has been highlighted that this need for group cohesion among students, reinforced by the feeling of experiencing an iden-

tical situation, particularly during intense periods, constitutes a factor of perseverance (Gauthier, 2014). These exchanges are, in addition, contributory to the sharing of a common “scientific language”, a factor of interprofessional exchanges (Demagny-Warmoes et al., 2024). Despite this professional development, they do not envisage any concrete use of the thesis after the training and do not perceive any professional utility in the thesis. During the interviews, he suggested that the research work carried out be published and the valorization of this work is considered by Jovic et al. (2014) as a possibility of “disseminating the teaching of nursing sciences” (Jovic et al., 2014).

6. Conclusion and Perspectives

Overall, if the development of knowledge is stated by the learners, it is nuanced by the rigor induced by writing, the lack of knowledge of databases, the difficulty in reading scientific articles. In addition, other obstacles to engagement in this process have appeared such as the time required, the pressure experienced in the 3rd-year, the lack of support felt. In a context where the attrition rate of nursing students in France has increased from 9% for the 2019 classes to 14% for those of 2020 (Regional Council of IDF, 2023), and in order to limit the decrease in the level of investment over time, it is essential to question the training curriculum. This curriculum aims to address issues related to workload and time constraints, which are perceived as barriers to student engagement in research. Thus, a planning system could be introduced from the first year, including a calendar with thesis deadlines and activities from contributing teaching units. This would respond to students’ suggestions for an organized workload and continuous approach to the thesis, while highlighting the links between the different teaching units and research, the latter being designated as a “transversal and specific skill” (Jovic et al., 2014). Establishing regular links from the first year would reinforce, consolidate knowledge (Dehaene, 2016) and support time management. Group work on writing, reading and information technologies would promote experience sharing and time management, while individual follow-ups would help students adjust their plans and develop their organizational skills. Finally, dedicating time in the timetable for research would strengthen students’ sense of support (Gauthier, 2014).

Faced with the dichotomy that learners hear during internships between theory and practice in work-study training, it seems necessary to rethink the support of graduate nurses in this research process. These nurses also encounter obstacles such as “lack of time, difficulty of access to scientific publications, social representations” (Rothan-Tondeur et al., 2018). The aim is to ensure that the meaning of this approach is also highlighted within care delivery services. Finally, it is worth noting that the “learning by doing” of research (Allin-Pfister, 2006) has not been mentioned, which contributes to discovery, learning, the right to make mistakes, the development of trust and therefore commitment. It would therefore be interesting to present this dimension to students. In this way, they could see the use-

fulness of the knowledge acquired through research, its “meaning” (Haberey-Knuessi, 2013), in the service of a researcher’s posture, of professionalization, of patient care. In the context of the overhaul of nursing training in France, this study considers areas of reflection aimed at enabling students to “learn to identify research and understand it in order to be able to integrate it into their general practice” (Gagnon, 2014). These future professionals will help develop in their assigned department, the culture of research (CNCPR, 2022; Gagnon, 2014), the use of scientific literature (CNCPR, 2022) with the aim of “improving the quality of care and the service provided to populations” (ARS Ile-de-France, 2014).

Finally, to generalize the results to the entire national and international context, it would be interesting to replicate the study, while considering environments and individual characteristics (Fortin & Gagnon, 2022).

Conflicts of Interest

No conflicts of interest were reported for this study.

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