



ORIGINAL ARTICLE

The impact of employment on the learning environments of nursing students at a private university



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KEYWORDS

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Abstract

Introduction: The article examines the impact of combining work and study on the learning environment of university nursing students, providing insights into the types of employment, work characteristics, and the consequences of simultaneously studying and working throughout their nursing careers.

Methods: Using data from a self-report questionnaire, the article analyzes the types of employment in which students engage, along with the resulting benefits, negative effects, and impact on the learning environment.

Results: We found that 70% of students work, many driven by financial reasons. Among working students, 55% have a short part-time job, 25% have a long part-time job, and 20% engage in full-time employment. Additionally, around 40% of students work in jobs related to their career. Despite receiving low pay, a significant number of students work long hours, leading to sleep deprivation, with nearly 50% sleeping less than 6 h per night. Combining work and study has negative effects on the learning environment, leading to stress and exhaustion, mainly from studying at night. However, this combination also offers positive outcomes, such as fostering financial independence, supporting families, and providing valuable work experience, especially when the work aligns with their field of study.

Conclusion: The article suggests that the balance between academic performance and workload depends on whether the work is related to the career and if students achieve an optimal work–life–college balance. We recommend that universities increase awareness of students' current workloads and consider introducing flexibility in assessments and course requirements.

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PALABRAS CLAVE

Estudiante de enfermería; empleo a tiempo parcial; ambiente de aprendizaje; equilibrio entre el trabajo y la universidad

El impacto del empleo en los entornos de aprendizaje de los estudiantes de enfermería de una universidad privada**Resumen**

Introducción: El artículo examina el impacto de combinar trabajo y estudio en el entorno de aprendizaje de los estudiantes universitarios de enfermería, proporcionando información sobre los tipos de empleo, las características del trabajo y las consecuencias de estudiar y trabajar simultáneamente a lo largo de sus carreras de enfermería.

Métodos: Utilizando datos de un cuestionario de autoinforme, el artículo analiza los tipos de empleo en los que participan los estudiantes, junto con los beneficios resultantes, los efectos negativos y el impacto en el entorno de aprendizaje.

Resultados: Descubrimos que el 70% de los estudiantes trabajan, muchos impulsados por razones financieras. Entre los estudiantes que trabajan, el 55% tiene un trabajo a tiempo parcial corto, el 25% tiene un trabajo a tiempo parcial largo y el 20% se dedica a empleos a tiempo completo. Además, alrededor del 40% de los estudiantes trabajan en empleos relacionados con su carrera. A pesar de recibir bajos salarios, un número significativo de estudiantes trabajan largas horas, lo que conduce a la privación del sueño, con casi el 50% durmiendo menos de 6 horas por noche. Combinar trabajo y estudio tiene efectos negativos en el entorno de aprendizaje, causando estrés y agotamiento, principalmente por estudiar por la noche. Sin embargo, esta combinación también ofrece resultados positivos, como fomentar la independencia financiera, apoyar a las familias y proporcionar una valiosa experiencia laboral, especialmente cuando el trabajo se alinea con su campo de estudio.

Conclusión: El artículo sugiere que el equilibrio entre el rendimiento académico y la carga de trabajo depende de si el trabajo está relacionado con la carrera y de si los estudiantes logran un equilibrio óptimo entre trabajo, vida y estudios universitarios. Recomendamos que las universidades tomen conciencia de la carga de trabajo actual de los estudiantes y consideren introducir flexibilidad en las evaluaciones y requisitos del curso.

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Introduction

An increasingly prominent feature of higher education in Chile has been the access to free education since 2016. This allows students from the 60% lower-income families to not pay tuition fees.¹ Indeed, in 2022, the coverage of this benefit reached 52% in traditional Chilean universities. Since the introduction of free education in 2016, a decrease in the number of college students in Chile who work during term-time is expected. In Chile, the evidence indicates that about 11% of those enrolled in higher education work at the same time.² The low tendency to combine studies and work could be largely due to higher education financing policies. However, the higher education system in Chile is diversified, consisting of 3 types of institutions: universities (public and private), professional institutes, and technical training centers.¹ Currently, only 30% of higher education institutions provide tuition-free education, or “gratuidad” in Spanish.¹ Therefore, this study will focus on the characteristics of full-time students who work and the consequences on their role as students in a private university not affiliated with free education. The proportion of students in higher education who work and study at the same time varies by country. It is common in Anglo-Saxon countries, with an

incidence of around 60%–80%,³ and less common in countries such as the Czech Republic, Belgium, and Italy, where fewer than 20% of students work.³

Nearly 50% of workers in Chile earn less than \$560 per month, and 80% of workers earn less than \$1100 per month. The monthly cost of a career in health sciences in Chile is around \$700, not including expenses for transportation, food, lodging, and other fees. This demonstrates that there is a significant gap between student income and expenses, “prompting many students to seek additional sources of income in order to cover their expenses.” As a result, students attending universities without free education are increasingly turning to part-time jobs during term-time to avoid taking out student loans or using their own earnings to pay for tuition. Employed students fall into 3 categories: short part-time (1–19 h per week), long part-time (20–30 h per week), and full-time (more than 30 h per week), as labeled by Hovdhaugen (2015). Unlike other studies that assume students who work full-time while also studying, are actually part-time students,⁵ we assume that some students can handle both full-time studies and more than 30 h of work per week, especially if they are working in jobs related to their career.⁶ Evidence suggests that the consequences of employment, whether they are positive or negative, depend

on the number of hours worked. On one hand, Dundes and Marx (2006) found that students who worked 10–19 h per week had superior academic performance compared to those who worked fewer than 10 h per week, over 20 h per week, or not at all. Furthermore, research has shown that working only slightly reduces the amount of time students spend studying.⁸ Therefore, a moderate degree of employment is unlikely to have a strong impact on studies, and in most cases, work interferes with students' leisure time, not their study time.⁸ On the other hand, negative effects of employment include missing lectures and failing to submit coursework on time. Work-related negatives include low pay, many students receive no sick pay or holiday pay; health and safety hazards, stress, tiredness, anxiety, depression, and poor academic achievement.⁹

Some studies suggest that working and studying have a detrimental impact on academic performance.¹⁰ In fact, a statistically significant negative relationship has been found between working more than 15–20 h per week and grades.⁷ In addition, employment status has an impact on dropout rates; students who work full-time alongside studying full-time are less likely to complete their degree than students working short part-time or not working at all. However, there seems to be a threshold for how much students can work, as working more than 20 h per week (long part-time work) increases the risk of dropout as much as full-time work⁴ or could have a negative consequence on academic performance.⁷ Positive effects of combining work and study include the acquisition of transferable skills, enhanced employability, increased confidence in the world of work, and improvement in organizational and time management skills.^{3,11} Therefore, the main question we want to answer is what the characteristics and consequences of combining work and study are for nursing students in a private university.

Methods

Design

The data reported in this article were drawn from a self-report questionnaire on the characteristics of nursing undergraduates who work and their perception about their role as students. The questionnaire design drew upon the survey work of Robotham (2012). The aim of the questionnaire was to generate data concerning the prevalence of work undertaken during term time, the nature of work among the undergraduate student population, and the impact of holding employment on students. Section 1 of the questionnaire contained demographic questions concerning the year of the degree they were studying at the time, age, gender, and who they live with. Section 2 asked about the characteristics of any term-time employment held. Section 3 concerned the effects of working on their role as a student. It had 3 items: what time do you study, hours of sleep, and how much time do you spend on campus studying and socializing, without considering class time, as well as what activities do you engage in during your free time. The last section of the survey focused on the impact of employment on academic performance (Supplementary material 1).

Sample

To enhance student participation and ensure a representative sample of the nursing student population, we communicated the study objectives to students at each course level. Furthermore, we designed an anonymous questionnaire with a response duration not exceeding 10 min and conducted the survey online. As a result, we achieved a response rate of 62%.

Questionnaires were distributed to all nursing students from the first year to the fifth year and were available online through the university's nursing program. A total of 220 students completed the survey. The sample had a gender bias, with 83% of the completed questionnaires being from female students and 17% from male students. The ages of the respondents ranged from 18 to over 36 years old. The age group with the highest percentage of respondents was 23 years old, with 13.2% of the total respondents belonging to this age group. The majority of students who participated in the survey were first-year students (37%), followed by second-year students (19.6%), third-year students (16.9%), fourth-year students (17.8%), and fifth-year students (7.8% of whom were currently doing a clinical internship).

Data analysis

The data collected from the questionnaire were analyzed via GraphPad Prism. Descriptive statistics in the form of frequencies, percentages, and means were used to make comparisons of the responses. All variables (number of students by cohort, percentage of students who work, sector of employment, years of service, number of hours worked, the remuneration for work, hours of sleep, and time spent at campus) were analyzed for normal distribution using the Shapiro–Wilk test, whereas the homoscedasticity was analyzed using the Levene test. All data were analyzed using one-way ANOVA followed by Bonferroni post-hoc test. All data were presented as mean ± standard deviation (SD), and statistical significance was defined as $p < .05$.

Results

Table 1 shows the number of students per year, revealing a gradual decline in the number of respondents from the first to the fifth year of their degree. On average, men represent 15.3% of the student population, whereas women represent 84.7%. The age ranges from 18 to 36 or older throughout the nursing program, with a median between 23 and 28 years, varying by year of the program. Furthermore, nursing students prefer to live with their parents (55%), regardless of the year of the program, while 17% live alone, 16% live with partners, and 12% live with relatives (Table 1).

Type of employment

During the survey period, 70% of students held some form of employment while attending university. Among full-time students who worked, over 50% had part-time jobs. Freelance part-time work was reported by 24% of students, while 22% worked full-time (Fig. 1A). Fig. 1B displays the types of employment held from the first to the fifth year of

Table 1 Demographics table.

Students	First year	Second year	Third year	Fourth year	Fifth year
Male	17	17	5	8	1
Female	66	36	32	31	16
Percentage	37.9%	19.6%	16.9%	17.8%	7.8%
Age (mean±SD)	23.1±4.7	24.1±5.1	23.7±3.7	25.6±4.1	27.5±3.2
Who do you live with? (%)					
Alone	19.3%	16.3%	18.9%	17.9%	11.8%
With couple	19.3%	16.5%	8.1%	15.4%	23.5%
With parents	50.6%	53.5%	67.6%	56.4%	47.1%
With relatives	10.8%	14.0%	5.4%	10.3%	17.6%

Each data point represents the average by year.

the program, which show minor fluctuations across all categories over the course of the program.

Characteristics of employment

Respondents were asked to indicate the types of employment they held while studying. It was found that healthcare services-related employment was the most frequently reported, with $39.9 \pm 13.5\%$ of respondents ($p < .05$), followed by $29.3 \pm 5.4\%$ who worked in the retail industry. Meanwhile, $13.9 \pm 10.2\%$ worked in the entertainment and fast-food-industries, $12.3 \pm 8\%$ in call centers or personal attention areas, and $4.5 \pm 3.1\%$ in the industrial sector (Fig. 2A). Work experience is an important issue, as transitioning from the academic space to the workplace can be difficult and overwhelming. In this study, 24% of respondents had less than 6 months of work experience, while 26% had worked between 6 months and 1 year. Another 23% had a work experience of 1–2 years, 5% had worked between 2 and 3 years, and 21% had more than 3 years of work experience (Fig. 2B). The main finding of this research is related to the potential impact of excessive working hours on students' experiences. In this sample, 70% of the students indicated that they had been engaged in some form of off-campus employment, ranging from under 11 h a week to more than

44 h per week (Fig. 2C). Of the sample, 22% worked up to 11 h per week, with 33% working between 11 and 22 h per week, 25% working between 23 and 33 h per week, 7% working between 34 and 44 h per week, and 13% working more than 44 h per week (Fig. 2C). The average weekly hours across the sample were 20 h a week. Fig. 2D presents the relationship between salary and work. A significantly higher percentage (54%) of students earned a salary within the range of 120–240 dollars per month ($F(4,20)=39.82$, $p < .001$), while 20% of the sample receives a salary of 240–360 dollars a month. Another 12% earned between 360 and 480 dollars a month, while 11% earned between 480 and 600 dollars a month. Only 3% of the sample earned over 600 dollars a month (Fig. 2D).

Consequences of work on university environment

There is a continuing debate over whether combining full-time study and part-time employment is beneficial or detrimental to the students. As a result, respondents were also asked to indicate their study habits. The most common response was studying after 9:00 pm (50%), which was significantly higher compared to all other study times ($p < .05$). Thirty-three percent of the sample studied between 6:00 pm and 9:00 pm, 9% studied between 12:00 pm

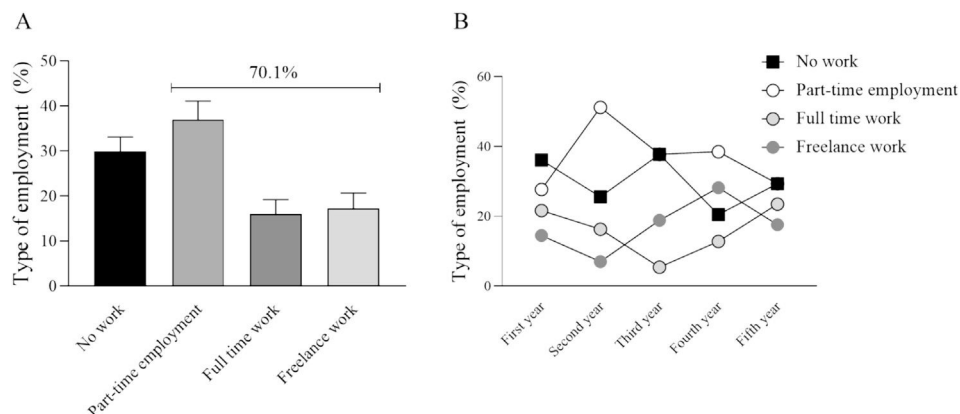


Fig. 1 Type of employment. (A) Type of employment that students were engaged in. It indicates that 70.1% of students had some form of paid work, while 30% did not work. (B) Types of employment that students held each year are shown, demonstrating that they worked throughout the course of their studies. Data represent means±SD. Asterisk (*) indicates significant differences.

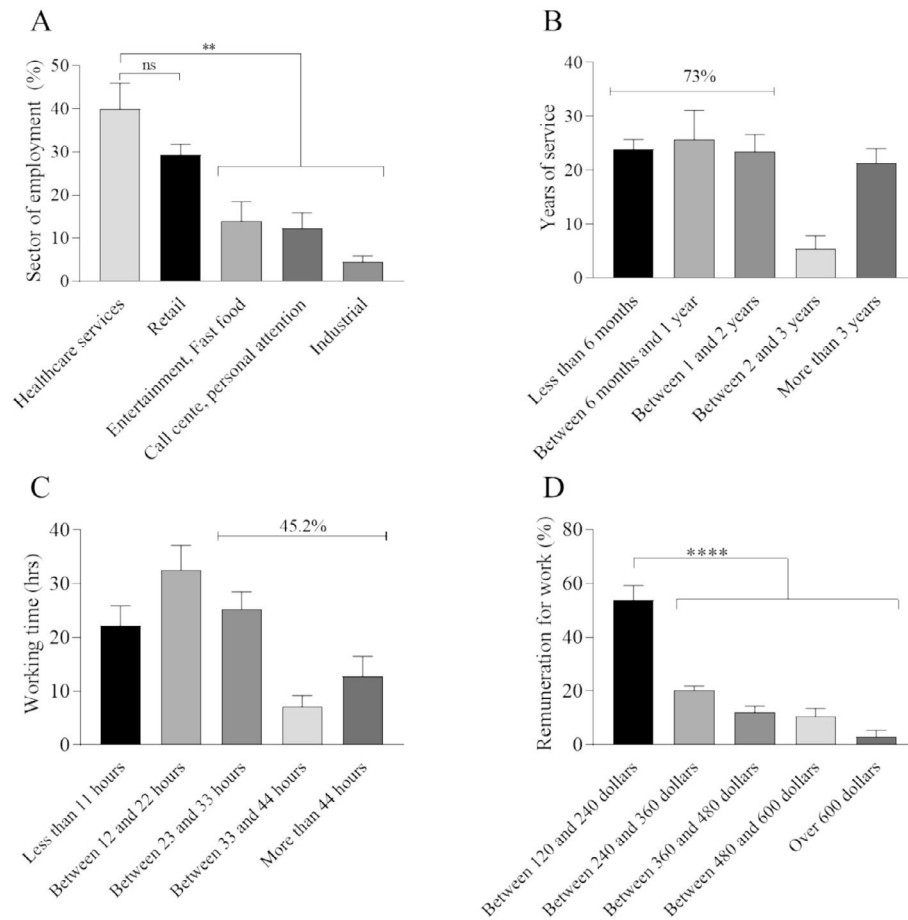


Fig. 2 Characteristics of work. Most students were employed in healthcare services ($39.9 \pm 13.5\%$), retail ($29.3 \pm 5.4\%$), and entertainment and fast food ($13.9 \pm 10.2\%$). (B) The years of service data show that 73% of students have been in their job for between 6 months and 2 years. (C) 80% of the students work between 11 and 33 h a week, while 20% of the students work between 33 and 44 h a week. (D) More than half of the students earn between 120 and 240 dollars. Data represent means \pm SEM. Asterisk (*) indicates significant differences.

and 6:00 pm, and 5% studied in the morning between 9:00 am and 12:00 pm (Fig. 3A). To determine how work affects sleep patterns, we asked participants to indicate the number of hours they slept per night. Overall, 85% of the participants slept for less than 7 h per night (Fig. 3A). Specifically, 46% of the students slept less than 6 h a night, 39% slept between 6 and 7 h a night, 6% slept between 7 and 8 h a night, 3% slept between 8 and 9 h, and less than 1% slept more than 9 h (Fig. 3A). Our students work long hours per week, sleep little, and study at night, so we asked what they do in their spare time. Twenty-two percent said they don't have free time, while 33% participate in activities with their family, 18% engage in sports or recreational activities, and 6% participate in social networks (Fig. 3C). Additionally, we asked how much time they spent studying and socializing on campus. Fifty percent of students spent less than 1 h on campus, while 22% stayed between 2 and 3 h, and 28% spent over 3 h on campus (Fig. 3D).

Table 2 presents the outcomes of combining work and study. Firstly, the study inquired about the students' reasons for seeking employment while studying. The results

indicated that 33% of the students sought employment to attain financial independence, while 30% did so as an alternative way to finance their studies. Interestingly, 23% of the students worked to support their family, reflecting the challenges posed by parental income and the costs of college and living expenses. Furthermore, 14% of the participants reported that their jobs aimed to improve their employability by providing them with work experience.¹¹ Secondly, the students were presented with a range of benefits of working and studying simultaneously. Forty-six percent of the students believed that the most significant advantage was earning money, while 28% believed that the greatest benefit was gaining work experience in a real environment and enhancing their interpersonal skills. Additionally, 18% of the respondents reported that the job boosted their motivation, while close to 10% believed that it improved their time management skills. On the other hand, the study also examined the negative academic effects of combining work and study. The students' primary concerns regarding the negative consequences were excessive fatigue (53%), stress (37%), insufficient time to prepare and study

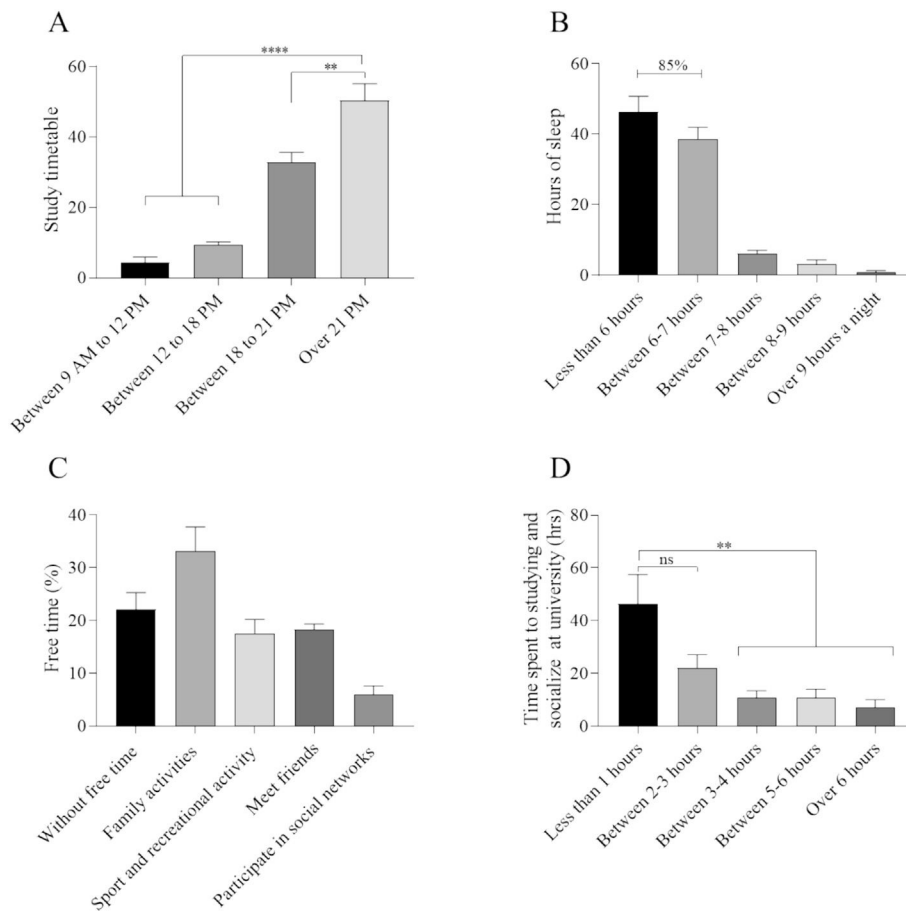


Fig. 3 Consequences of studying and working. (A) More than half of the student's study after 9:00 p.m., and 33% of students study between 6:00 p.m. and 9:00 p.m. (B) Almost half of the students (47%) sleep less than 6 h per night, while 39% sleep between 6 and 7 h per night. (C) Of the students who have free time, the majority participate in family activities (33.2%), sports and recreational activities (17.6%), meeting with friends (18.3%), and using social networks (6%). However, 22% of students reported having no free time. (D) The time spent studying and socializing at university shows that almost half of the students (46.4%) spent less than 1 h, while 22.2% of students spent between 2 and 3 h for studying or socializing with peers. Furthermore, 10.8% of students spent between 3 and 4 h, and 10.8% of students spent between 5 and 6 h for studying or socializing with peers. Only 7.1% of students spent more than 6 h. Data represent means \pm SEM. Asterisk (*) indicates significant differences.

for exams (33%), decreased concentration (28%), poor performance (21%), and low-class attendance (17%) (Table 2).

Discussion

Time spends to work

Working part-time has long been considered a part of the undergraduate student experience. We found that 70% of full-time students were involved in some type of paid work, consistent with the findings of other studies.^{3,13,14} Student work hours vary greatly between individuals and universities. Several researchers have classified students through cluster analysis based on their range of work hours per week. To compare student work hours, we will use the classification described by Hovdhaugen (2015), who divided employed students into 3 groups: those who work up to 1–19 h a week,

labeled as "short part-time"; those who work 20–30 h a week, labeled as "long part-time"; and those who work more than 30 h a week, labeled as "full-time." According to Elling and Elling (2000), students engage in employment ranging from 5 to 60 h per week. When considering only working students, 31% work short part-time, 34% work long part-time, and 34% work full-time. In this study, the majority of students (55%) work short part-time, 25% work long part-time, and 20% work full-time. This finding is consistent with Dundes and Marx (2006), who found that 55% of students work short part-time, 45% work long part-time, and it cannot be determined if students work full-time. Similarly, Barron and Anastasiadou (2009) found that 60% of students work short part-time, 35% work long part-time, and only 5% work full-time. On the other hand, Chantrea et al.¹⁶ found that 70% of students work full-time jobs, 25% work part-time jobs, and 4% work freelance. According to Curtis and Williams,¹⁷ a significant proportion of students (93%) work exclusively in short part-time jobs.

Table 2 Outcomes of working and studying at the same time

	Percentage (%)
<i>Why study and work at the same time</i>	
To have financial independence	33.4
To finance studies	29.7
To support the family	23.4
To gain work experience	14.4
For pleasure, personal taste	10.5
<i>What are the benefits you get from working and studying at the same time?</i>	
Helped me to earned money	45.6
Enabled me to obtain work experience in a real environment	28.3
Improved my ability to deal with other people	23.2
Increased my motivation	18.3
Helped me to organize my time better	10.7
<i>What are the negative effects you get from working and studying at the same time?</i>	
Feld so tired, you cannot concentrate	52.7
Increased stress	36.9
I have less time to study	33.5
I suffer a lot of distraction and I cannot concentrate	27.6
Achieved a lower grade	21.1
Achieved lower class attendance	17.0
Done less reading	15.9
Delayed to delivery work, tasks, and evaluations	12.3
Did not turn in assignments and reports	4.7

Work and academic performance

To be a working college student, students must attempt to balance work, school, and life.¹⁸ Working require time and energy that could otherwise be spent on studying. In this case, student that working would have a negative impact on students' academic performance. However, the evidence indicates that employment affects undergraduates depending on the number of hours worked.^{7,19} Dundes and Marx (2006) found that the academic performance of students who worked 10–19 h per week was superior to that of all other students, including those working less than 10 h per week, more than 20 h per week, and those not working at all. Additionally, they established that students who work 10–19 h per week are more likely to spend more time studying than non-working students and students who work either less than 10 h or more than 20 h per week. Therefore, they suggested that the increase in performance is due to an optimal work–college balance that establishes structure and discipline not achieved by working too few or too many hours.⁷ In this study, approximately 32% of students work between 10 and 19 h, a balance that may positively influence academic performance by allowing them to manage work and college commitments effectively. Conversely, if the job demands more than 20 h per week,

students may face challenges in prioritizing study time or experience exhaustion, as observed in 45.2% of nursing students.

Work type and its location

Work up to 1–19 h a week might also facilitate students' academic study in other ways. For instance, students who work in jobs that are related to their academic interests might become more commitment to the field as they get more involved at work.⁶ In support of this idea, Chantrea and colleagues (2017) found that 44.6% of females and 54.5% of males have jobs related to their majors. In this study, 39% of participants had a job related to their career (health services), principally as a nursing technician. It is suggested that the balance between academic performance and workload depends to a large extent on whether the work is related to the career, although excess workload could affect other dimensions of college life, such as leaving less time than desired for studying,¹⁴ lack of energy, lack of social contact,²⁰ and more stress²¹ than those who did not work. However, other studies that, contrary to popular belief, the amount of time spent studying or at work had no direct influence on academic.²² On the other hand, the location of the job it could also affect the learning environment, such as integration to the institution. On-campus jobs such as research assistants, teaching assistants, and office assistants still provide students with opportunities to interact with faculty, staff, and peers. Therefore, it is possible that this job enhances student engagement and integration into the institution. By contrast, students who work off-campus have few opportunities to participate in school activities, and therefore might have a low level of integration to the institution. This study reveals that 70% of the students are engaged in off-campus employment.

Benefit of work

The main reason for students to take paid employment during the term-time was financial. The most surprising result was that nearly 20% of the respondents, considered supporting their families an important factor in their decision to work. This highlights the vulnerability of the family nucleus, and probably describes students who come from a non-academic family background (i.e., "first-in-family students"), which predicts students' decision to take time-consuming employment while studying. Combining work and study can results in positive and negative outcomes for students. Our findings show that students perceive obtaining experience in a real environment and receiving remuneration as positive aspects. This finding is consistent with Caldwell's²³ argument that working while studying can benefit students in terms of work experience, better time management, financial independence, and academic performance. Moreover, working in a specific place provides opportunities for students to expand their social network. Therefore, taking employment can have positive consequences for students' academic, social, and health outcomes, as well as serve students in the job market upon graduation.

Another possible benefit of to be a working college student is the development of time-management skills. Better time-management skill might lead to better academic performance because it increases students' efficiency. In addition, students also develop cognitive and non-cognitive skills at work, such as critical thinking, problem solving, and interpersonal skills.⁷ The improvement in cognitive skills might facilitate students' learning and make them more efficiency, while development in non-cognitive skills might help students build up a better relationship with faculty and peers and therefore increase the levels of engagement.

Detriment of work

Despite the benefits of employment, students who work also experience negative consequences that can affect their university experience. For instance, our study found an increase in exhaustion and stress among nursing students, which is consistent with previous research.^{5,15} Employed students may experience negative consequences on their social and academic integration at university. Employed students spend less time on campus,¹⁵ participate in fewer extracurricular activities organized by the university, report skipping lectures and classes more often, and are more likely to submit coursework late.¹² Furthermore, according to Kwadzo (2014), students who were employed experienced both emotional and physical stress. Combining work and study can impact students' learning by disrupting their study routine and reducing study time. Our study found that 85% of employed students sleep less than 7 h per night, which is comparable to the average sleep duration of medical undergraduate students.²⁴

The limitations of this research stem from its descriptive nature, which precludes an examination of the relationship between work type, workday, and academic performance, as well as other variables such as critical thinking. Nevertheless, ongoing research endeavors aim to explore these connections in more depth.

Recommendations and conclusions

Several researchers¹³ have suggested that universities should be more aware of modern student life and introduce more flexibility in their assessment methods and course requirements. This could be achieved by offering flexible scheduling of class times and study support services, given the rising number of non-traditional students in modern universities.²⁵ In conclusion, a significant number of nursing students engage in off-campus employment, often working long hours. Consequently, approximately 45% of students may experience negative effects on their academic performance due to burnout, while only 30% may benefit from achieving a balanced work-life-college equilibrium. This balance potentially leads to enhanced critical-thinking skills and academic performance. Nevertheless, correlational research is imperative to ascertain the impact of work type and schedule on academic performance and critical thinking.

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Author Contributions

MP and GU contributed to the conception and design of the study, and to the acquisition and analysis of the data. MP wrote the manuscript, and GU contributed to proofread the final version of the manuscript. All authors contributed to the article and approved the submitted version.

Ethics statement

The study involving human participants was reviewed and approved by the ethics committee of the Universidad Viña del Mar, Chile. Written informed consent for participation was required for this study in accordance with national legislation and institutional requirements.

Data availability statement

The datasets generated for this study are available upon request to the corresponding author.

Declaration of competing interest

The authors declare that they have no competing interests.

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Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.edumed.2024.100951>.

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