



## ADMINISTRACIÓN – GESTIÓN – CALIDAD

### Opinion of graduates on the curriculum studied in the nursing degrees of the Faculty of Superior Studies of Zaragoza - Universidad Nacional Autónoma de México.

Opinión de los egresados del plan de estudios de la licenciatura en enfermería de la Facultad de Estudios Superiores Zaragoza – Universidad Nacional Autónoma de México..

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Palabras clave: opinión de egresados; plan de estudios; enfermería.

### ABSTRACT

**Introduction:** Institutions of higher education fit requirements in disciplinary fields and professional profiles. Graduate studies provide tools to improve the quality of educational programs, the location of graduates in the job market, working conditions and the demands they imply.

**Aim:** to analyze job placements and opinions on the training of graduates through the curriculum of nursing from Facultad de Estudios Superiores Zaragoza, Universidad Nacional Autónoma de México (FES Z, UNAM).

**Methodology:** quantitative, descriptive and transversal studies, calculated using the formula for finite populations. The instrument used was the form "follow-up of graduates from the nursing career, on the basis proposed by the National Association of Universities and Institutions of Higher Education, with a Cronbach's alpha of 0.878. The data analysis was performed using SPSS version 11.0.

**Results:** the employability of graduates is in general hospitals, followed by units of primary care and ultimately medical specialties. The opinion on the curriculum studied in theoretical and practical blocks, is of the level: very adequate. The opinion of knowledge and skills learned is that it is generally excellent. Modifications of the curriculum emerged in theoretical and practical modules, they said to keep the content first, extend them second, and a minimum suggested reducing it. The opinion of teacher training in theoretical module was very adequate, meanwhile for practical module was excellent.

**Conclusions:** graduates showed first and second levels of attention, corresponding to graduates profile, they point out that the curriculum give them fundamental tools for professional labor, exceptional knowledge and skills.

## RESUMEN

**Introducción:** Las Instituciones de Educación Superior (IES) requieren ajustarse en los ámbitos disciplinarios y en sus perfiles profesionales. Los estudios de egresados proveen herramientas necesarias para elevar la calidad de programas educativos, conocer su ubicación en el mercado y condiciones laborales y las demandas que les implica.

**Objetivo:** Analizar la ubicación laboral y la opinión sobre la formación recibida de los egresados del plan de estudios de la Licenciatura en Enfermería de la Facultad de Estudios Superiores Zaragoza de la Universidad Nacional Autónoma de México (FES-Z-UNAM).

**Metodología:** Estudio cuantitativo, descriptivo y transversal; muestreo probabilístico y aleatorio de 222 egresados; instrumento: "Seguimiento de egresados de la carrera de Enfermería de LA FESZ-UNAM", tomando como base el propuesto por la ANUIES (Asociación Nacional de Universidades e Instituciones de Educación Superior); con un Alpha de Cronbach de .878. Análisis con el SPSS versión 11.0.

**Resultados:** La Inserción Laboral de los Egresados es en hospitales generales, seguida de unidades de primer nivel de atención y finalmente en especialidades médicas. La Opinión Respecto al Plan de Estudios cursado, en los Bloques Teórico y Práctico, se ubica en el nivel de Muy Adecuado. La Opinión Sobre Conocimientos y Habilidades aprendidas, en general se encuentra en el rango de Excelente. La Opinión Sobre la Formación de los Docentes en los Módulos Teóricos, fue de Muy Adecuado, en tanto que para los Módulos Prácticos fue de excelente.

**Conclusiones:** Los egresados se ubican en el primero y segundo nivel de atención, lo que corresponde al perfil de egreso; señalaron que el plan de estudios les otorgó las herramientas fundamentales para el ejercicio profesional y los conocimientos y habilidades adquiridas fueron de excelencia.

## INTRODUCTION

According to the National Association of Universities and Institutions of Higher Learning (NAUIHL), a high-quality educational programme gains broad social acceptance because of the strong training of its graduates; its high graduation rate; its reputation for retaining professors who competently generate, apply, and transmit organised knowledge; and its up-to-date, relevant curriculum.<sup>(1)</sup>

According to the Ministry of Public Education (MPE) and NAUIHL, the development of alumni follow-up studies began in the late 1960s and has increased in institutions of higher learning (IHLs) within the last decade.

Epidemiological innovation and paradigm-shifting world events require IHLs to reconsider their disciplinary fields and professional profiles, especially the new professional formation requirements that prepare students for the professional environments they will face.

Educational research and, particularly, the monitoring of graduates as a method of quality evaluation provides insight into the occupational development of graduates, their incomes, professional mobility (promotions), and, more recently, their satisfaction with the programmes they attended.

These studies are of great importance for academic planning in IHLs because they powerfully represent reality and can induce institutions to reflect deeply on their purposes and values.<sup>(2)</sup>

These studies analyse the relation between the quality of an educational programme and its graduates' job placement and professional performance, including the satisfaction of their employers. Such studies can also suggest modifications to the development programmes of these institutions, which are attuned to new social necessities, allowing IHLs to recognise and incorporate new forms of professional practice into their curricula and thereby sustain a more equal social process.<sup>(3)</sup>

In April 1997, the Bachelor's Degree in Nursing at ZGS was approved by the Academic Council of the National Autonomous University of Mexico (NAUM). The degree programme began to be offered in August of the same year. Establishing an information feedback system for faculty and graduates facilitates curriculum evaluation and allows data regarding graduates' academic and professional histories to be obtained. This, in turn, facilitates the development of logistical support that enhances educational planning.<sup>(4)</sup>

Therefore, the objective of this study was to analyse graduates' job placement data and investigate their opinions regarding the training they received while attaining the Bachelor's Degree in Nursing at the ZGS-NAUM.

## **METHODOLOGY**

This study was quantitative, descriptive, and transversal and was conducted on a sample of 222 alumni (18% of the population) of the Bachelor's Degree in Nursing programme at ZGS-NAUM. The sample was selected from the graduating classes of 1998 through 2008. Information was collected via a questionnaire, titled "Monitoring of graduates from the ZGS-NAUM nursing programme", which was elaborated for this study. The instrument was based on a questionnaire proposed by NAUIHL. The validity of the instrument's content was expertly evaluated. Next, the instrument was tested on a pilot population with similar characteristics to the population who participated in the study. The questionnaire was subsequently adjusted before its use on the target population.

The data were collected by inviting alumni who had graduated at least two years previously to participate. After informed consent was obtained and all of the other ethical requirements had been satisfied, participants were invited to the ZGS. The instrument gathered data regarding the following elements: general information, job placement, opinion of the nursing curriculum, opinion of the knowledge and skills acquired, suggested modifications to the content of the curriculum, and opinion concerning quality of the faculty.

Participants rated their responses on a scale that was applied uniformly to all elements. The percentages reached are shown in Table 1. After collecting the data, the reliability coefficient (Cronbach's alpha) reached 0.878, establishing the internal consistency of each parameter. Using SPSS version 11.0A, a descriptive analysis was performed; frequency tables and percentages were drawn on for the data analysis.

**TABLE I**  
**GRADO DE SATISFACCIÓN POR EL PROGRAMA CURSADO**

| NIVEL         | RANGO         |
|---------------|---------------|
| EXCELENTE     | 90 – 100%     |
| MUY ADECUADO  | 70 – 89%      |
| POCO ADECUADO | 50 – 69 %     |
| NADA ADECUADO | Menos del 50% |

## RESULTS

### General Data

Of the 222 graduates surveyed, 88% were female and 12% male. The majority of graduates (68%) were between 26 and 30 years old, and 25% were between 20 and 25 years old. Most (62%) were single, 30% were married, and the remainder were either divorced or cohabiting. Furthermore, 34% did not have any economic dependents, 31% had two, and 22% had one.

### Job Placement

Most of the graduates (48%) who hold positions at the first level of care and 36% of those who hold positions at the second level of care work at the National Institute for Social Security and Services for State Workers (NISSSSW). Of the graduates who work at the third level of care, 46% are employed by the National Institute of Social Security (NISS). In total, 24% of the alumni hold a first-level position, 57% a second, and 14.86% a third-level position (Table II).

**TABLE II**  
**UBICACIÓN EN EL MERCADO LABORAL POR INSTITUCIÓN**  
**Y NIVEL DE ATENCIÓN**

| INSTITUCIÓN                 | 1ER NIVEL |        | 2º NIVEL |        | 3ER NIVEL |        | NA |       |
|-----------------------------|-----------|--------|----------|--------|-----------|--------|----|-------|
| IMSS                        | 15        | 28%    | 37       | 29%    | 15        | 46%    | -  | -     |
| ISSSTE                      | 26        | 48%    | 45       | 36%    | 10        | 30%    | -  | -     |
| SSA                         | 13        | 24%    | 22       | 17%    | 08        | 24%    | -  | -     |
| PARTICULAR                  | -         | -      | 23       | 18%    | -         | -      | -  | -     |
| OTROS                       | -         | -      | -        | -      | -         | -      | 08 | 100%  |
| TOTAL                       | 54        | 100%   | 127      | 100%   | 33        | 100%   | 08 | 100%  |
| TOTAL POR NIVEL DE ATENCIÓN | 54        | 24.32% | 127      | 57.20% | 33        | 14.86% | 08 | 3.60% |

Table III shows that 57% of graduates are employed in general hospitals, 24% in first level of care centres, and 15% in medical specialties.

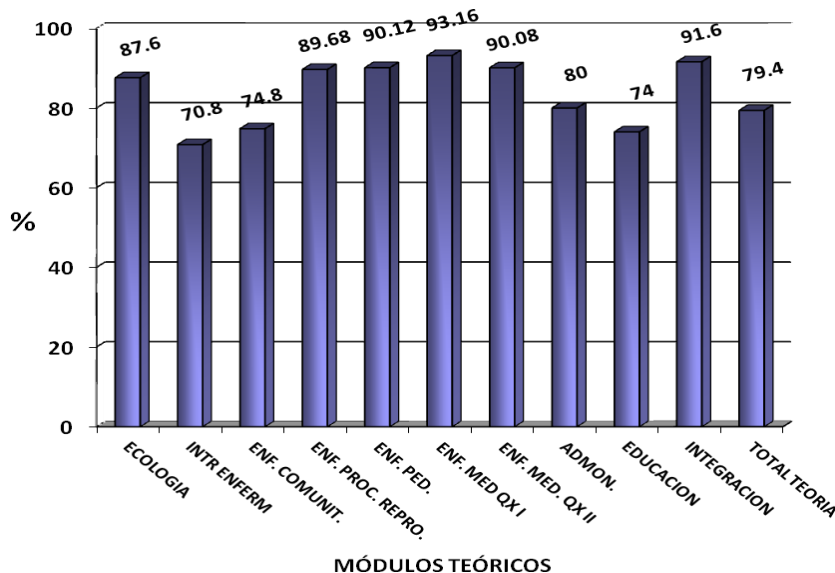
**TABLE III**  
**INSERCIÓN LABORAL DE EGRESADO POR TIPO DE UNIDAD**

| TIPO DE UNIDAD         | Fo.        | %          |
|------------------------|------------|------------|
| ESPECIALIDADES MÉDICAS | 33         | 15         |
| INSTITUCIÓN EDUCATIVA  | 06         | 3          |
| HOSPITALES GENERALES   | 127        | 57         |
| UNIDADES PRIMER NIVEL  | 54         | 24         |
| OTRAS                  | 02         | 1          |
| <b>TOTAL</b>           | <b>222</b> | <b>100</b> |

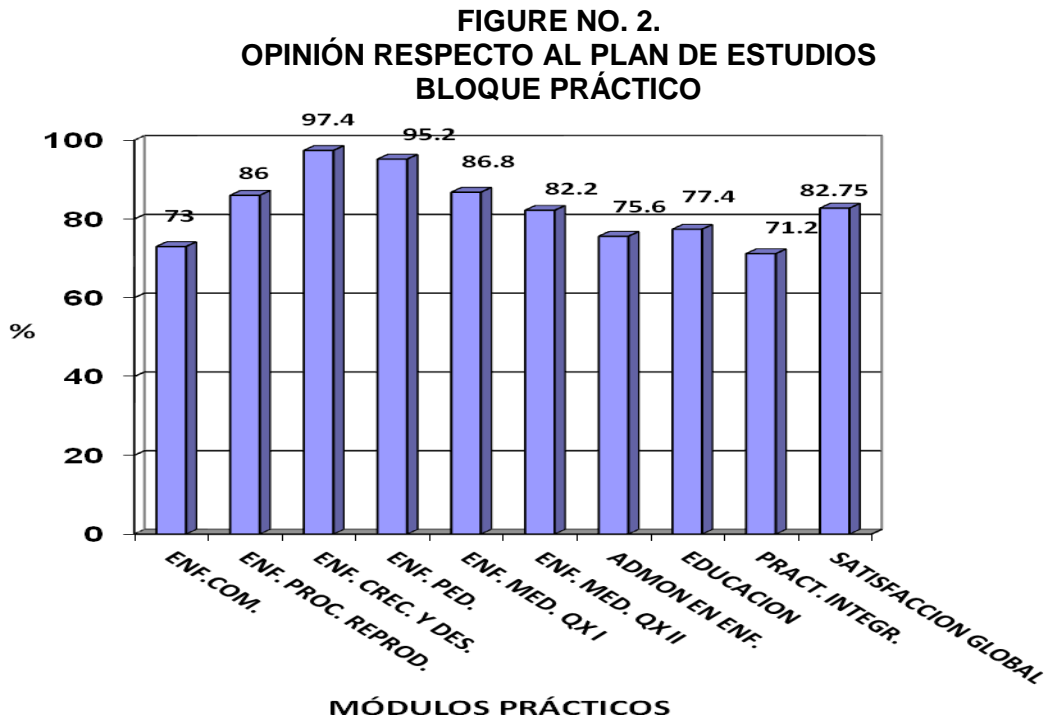
### Opinion of the Nursing Curriculum

Regarding the theoretical training, those who graduated from the Medical and Surgical Nursing I (93.16%), Integration (91.60%), and Paediatric Nursing (90.12%) units had the highest levels of satisfaction, rating their experience “excellent”; the overall satisfaction with the theoretical training was 79.40%, positioning it as “very adequate” (Figure 1).

**FIGURE NO. 1.**  
**OPINIÓN RESPECTO AL PLAN DE ESTUDIOS**  
**BLOQUE TEÓRICO**



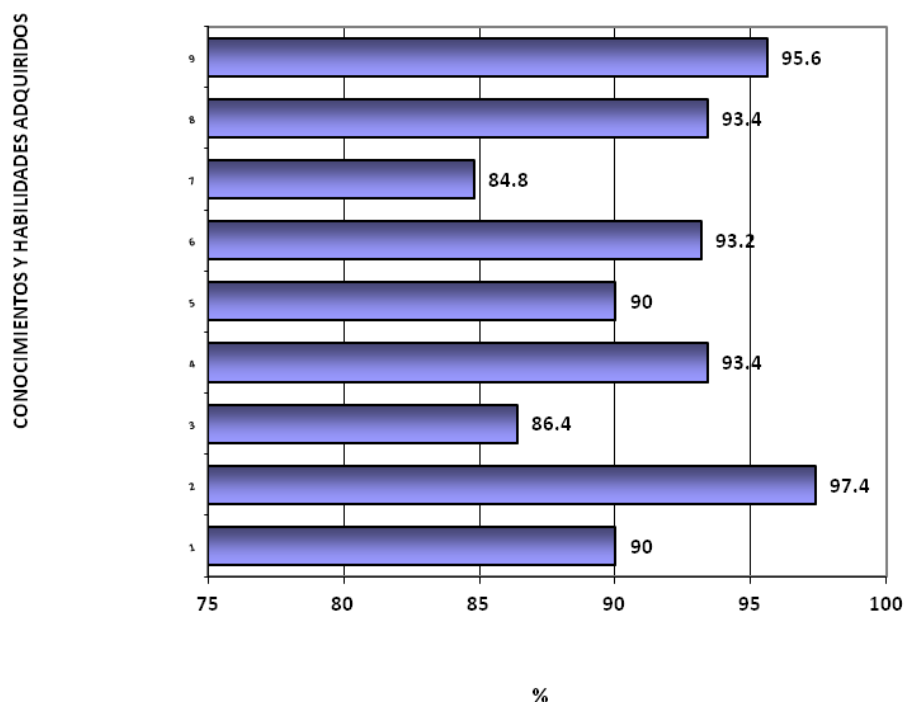
Regarding the practical training, the results showed that graduates believed the Growth and Development Nursing (97.4%) and Paediatric Nursing (95.2%) units to be “excellent”. The Medical and Surgical Nursing I (86.8%) and Reproductive Nursing (86%) units were considered “very adequate” by the graduates. The overall satisfaction rate was 82.75%, indicating that graduates perceived the practical training as “very adequate” (Figure 2).



### Opinion of Knowledge and Skills Acquired

The graduates indicated that the curriculum was broad and imparted current knowledge regarding the main theoretical focuses of the discipline (97.4%), provided theoretical knowledge of the discipline, and taught research skills (both with 93.4%); these variables obtained the highest percentages and were rated “excellent”. The average percentage was 95.2%, which also indicates an “excellent” rating (Figure 3).

**FIGURE NO. 3.  
OPINIÓN SOBRE CONOCIMIENTOS Y HABILIDADES ADQUIRIDOS DURANTE LA  
CARRERA**

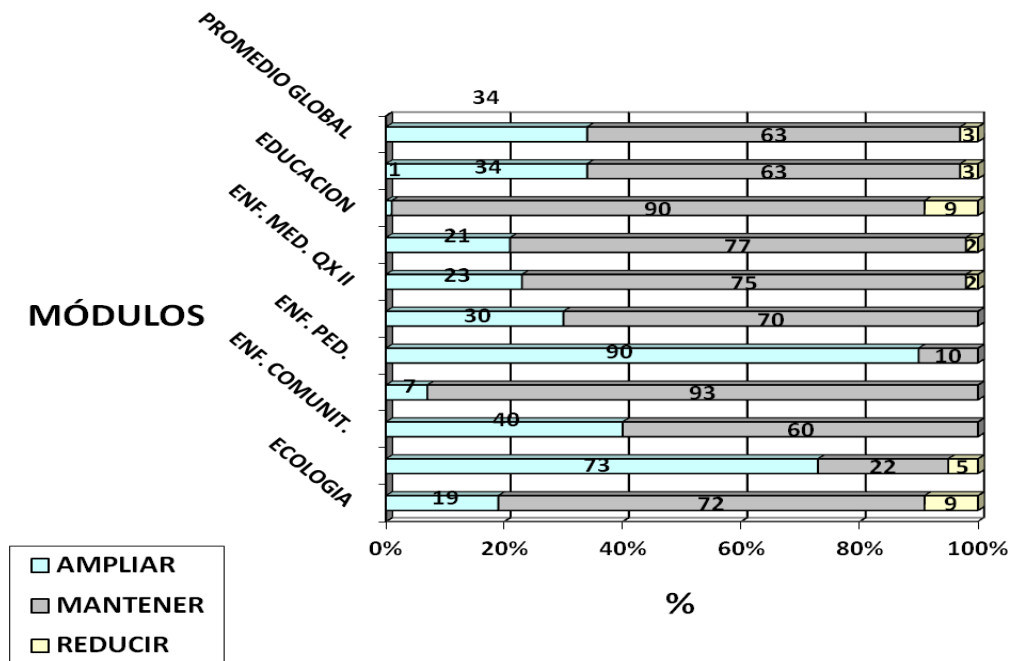


| No. | CONOCIMIENTOS Y HABILIDADES ADQUIRIDOS DURANTE LA CARRERA                                  |
|-----|--|
| 1   | Conocimientos generales de naturaleza científica y/o humanística                           |
| 2   | Conocimientos amplios y actualizados de los principales enfoques teóricos de la disciplina |
| 3   | Habilidades para la comunicación oral y escrita  |
| 4   | Habilidad para la búsqueda de información  |
| 5   | Capacidad analítica y lógica   |
| 6   | Capacidad para la aplicación de conocimientos  |
| 7   | Capacidad para identificar y solucionar problemas  |
| 8   | Conocimientos teóricos de la disciplina  |
| 9   | Promedio global  |

The suggested modifications to the theoretical training curriculum indicated that the Paediatric Nursing (90%) and Introduction to Professional Nursing (73%) units require more time and content. The Education (90%) and Human Ecology (72%) units, however, were thought to require no modifications (Figure 4). Generally, the

graduates suggested maintaining 63%, broadening 34%, and reducing only 3% of the theoretical content.

**FIGURE NO. 4.  
MODIFICACIONES QUE SUGIEREN A LOS CONTENIDOS DEL PLAN  
DE ESTUDIOS - MÓDULOS TEÓRICOS**

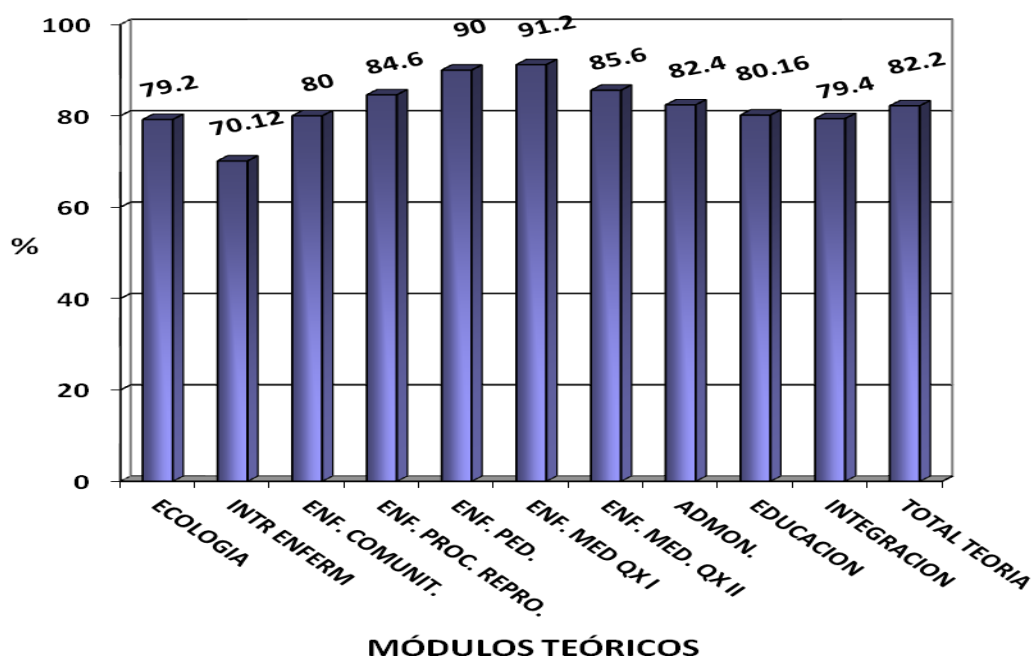


The recommended modifications to the practical training emphasised increasing the time spent in the Reproductive Nursing (70%) and Medical and Surgical Nursing I (55%) units. Students believed the time spent practicing in the Paediatric Nursing (96%) and Integration (92%) units required no modifications. In general, the graduates suggested maintaining 65% of the practical training content, broadening 30%, and only reducing 5%.

The results for faculty quality indicated that 91.2% of students rated the Medical and Surgical Nursing I and Paediatric Nursing faculty at 90% and the Medical and Surgical Nursing II faculty at 85.6%. These faculty members, who received the highest scores, were therefore considered “excellent”. The lowest scores were for the faculty teaching the Integration (79.4%), Ecology (79.2%) and Introduction to Nursing (70.12%) units, who were rated “very adequate”. The average score of the teaching staff was 82.2%, or “very adequate” (Figure 5).

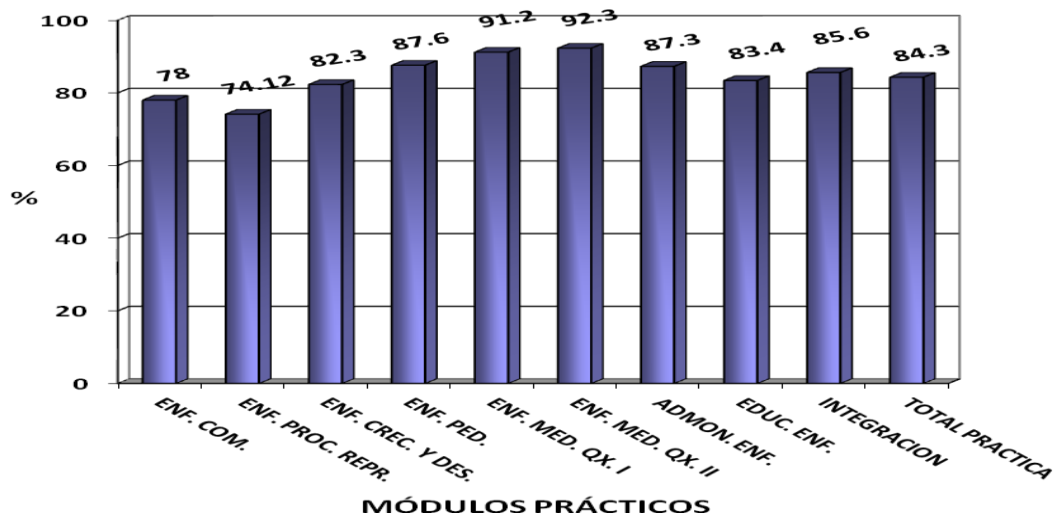


**FIGURE NO. 5  
OPINIÓN SOBRE LA FORMACIÓN DOCENTE  
MÓDULOS TEÓRICOS**



The highest satisfaction rates for the practical training staff were obtained by the faculty teaching Medical and Surgical Nursing II (92.3%), Medical and Surgical Nursing I (91.2%), and Paediatric Nursing (87.6%), all of whom received an “excellent” rating. The overall average for the practical training was 84.3%, or “excellent” (Figure 6).

**FIGURE NO. 6  
OPINIÓN SOBRE LA FORMACIÓN DOCENTE  
MÓDULOS PRÁCTICOS**



## DISCUSSION

The main objectives of this investigation were to obtain job placement data from the 222 interviewed graduates and to solicit their opinions of the nursing programme's structure, the content of the theoretical-methodological aspects of the curriculum, and the skills and abilities acquired during their education and their application to the daily performance of their professional and academic activities <sup>(5)</sup>.

The majority of graduates were hired by private institutions (27.6%), displacing Social Security Institutions, for which the Ministry of Health has historically hired the most ZGS-NAUM graduates (20.1%). This information corroborates the report by Mügenburg R. and cols. <sup>(6)</sup>, which indicated the following frequency for hiring institutions: private sector, including self-employed practitioners: 47%; Health Ministry: 26%; NISS: 15%; and others: 12%.

Of the graduates surveyed, 57% work in general hospitals, 24% in first level of care units, and 15% work in medical specialties. These data reflect those found by Contreras G. and cols <sup>(7)</sup>, who reported that of the students who received a Bachelor's Degree in Nursing from the Metropolitan Autonomous University—Xochimilco (UAM-X), 36% work in second level, 18% in third, and 12% in first level positions.

According to 79% of the alumni, the theoretical training (theory and laboratory) they received was "very adequate". This result agrees with the results obtained by López M., Burgos F., and Campillo Castelo <sup>(5)</sup> which indicated that 92% of graduates from the University of Sonora Nursing School reported that theoretical training and laboratory practice were of crucial importance in preparing them to practice nursing. For the practical training (clinical and community practice), 83% of graduates reported a "very adequate" rating. This confirms the results of a study by Cruz N. and Barrios M. from the University of Veracruz Campus Poza Rica <sup>(8)</sup> which showed that 89% of graduates believed such training was highly useful for their professional performance.

Mügenburg R. and cols <sup>(8)</sup> indicate that 83% of respondents considered that the theoretical knowledge they acquired during their schooling was "highly" relevant to their current professional performance, and 17% believed that it was "not very" relevant. Regarding the practical education received, 64% of the graduates considered that the technical abilities they had acquired supported their performance "a lot", 34% reported a "neutral" influence, and 2% reported "little" influence. The current study found that 95.2% of the graduates believed that the theoretical knowledge and abilities acquired during their education were "excellent". In addition, 84.3% believed the practical knowledge gained was also "excellent".

Regarding the acquisition of knowledge and skills during their bachelor's degree, 97% of ZGS nursing graduates stated that the programme's provision of "extensive and actualised knowledge of the main theoretical focuses of the discipline" was "excellent". This result coincides with those of a study by López M., Burgos F., and Campillo Castelo <sup>(5)</sup> which indicated that 85% of graduates from the University of Sonora Nursing School believed that such content was "abundant". Another similarity between these two studies can be found for the "oral and written communication skills" parameter, which 86% of our graduates considered "very adequate", and 82% of University of Sonora graduates believed was "very abundant". Finally, 85% of our graduates believed their "ability to identify and solve problems" was "very adequate",

and 86% of the University of Sonora alumni considered their training in these skills to be “abundant”.

Regarding the quality of the faculty teaching the theoretical curriculum, the graduates opined that 82% of the staff possess an accurate knowledge of the content they teach (“very adequate”). The clinical practice professors obtained a score of 84%. This finding agrees with the study by Lopez M., Burgos F. and Campillo Castelo <sup>(5)</sup> in which 88% of the graduates stated that the teachers had extensive knowledge of the course content.

## CONCLUSIONS

While previous studies of other educational institutions have investigated graduates’ opinions of their school’s curriculum, this study and the one performed at the University of Sonora are the only studies that have considered the quality of the teaching staff, as measured by NAUIHL standards.

The placement of graduates in the first and second levels of care is considered highly positive because it corresponds to the graduation profile established in the curriculum.

Importantly, the graduates reported that the curriculum gave them the tools necessary for their professional practice and that the knowledge and skills they acquired were excellent. However, because there were neutral and unsatisfactory results, the university should consider improving these aspects of the degree programme.

It is important to highlight that the graduates had a higher satisfaction with the theoretical training relevant to the second or third levels of care and a lower satisfaction with the theoretical training relevant to the first level of care. It should also be noted that the graduates consider the quality of the teaching staff to be adequate for the development of the curriculum.

Monitoring graduates is a demonstrably valuable method for amplifying and deepening the field’s knowledge concerning the relationship between higher education and the job market, particularly if the information is compared across institutions.

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