



## ORIGINALS

### Motivation and work engagement in a population of Nursing professional

Motivación y compromiso laboral en una población de profesionales de Enfermería

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#### ABSTRACT:

**Background:** The motivation and work engagement of healthcare professionals are an area of interest for healthcare management. Nurses, midwives, and nursing assistants (TCAE) represent an essential resource in the healthcare system.

**Objective:** to analyze the relationship between motivation and work engagement in nursing professionals at a tertiary hospital, describing the levels of each construct and its dimensions.

**Material and Method:** Descriptive-correlational transversal observational study conducted at a single center using a questionnaire. The participants were nursing staff. Work motivation was measured using *Hackman and Oldham's Job Diagnosis Survey* (JDS) scale, and work engagement was assessed with the shortened *Utrecht Work Engagement Scale* (UWES-9). Both scales were analysed based on their total scores and underlying dimensions.

**Outcomes:** 350 nursing professionals participated in the survey. The most represented category was nurses with 177 (50.6%), followed by nursing assistants with 146 (41.7%) and midwives with 27 (7.7%). The JDS and UWES-9 scale scores were  $77.16 \pm 8.786$  and  $4.49 \pm 1.130$ , respectively. On the JDS scale, midwives had significantly higher scores for task variety ( $p < 0.001$ ), while nursing assistants had higher scores for task identity ( $p < 0.001$ ) and feedback ( $p < 0.001$ ). In terms of work engagement, dedication and absorption scored highly with 4.81 and 4.29.

**Conclusions:** The level of motivation and work engagement are average. As points for action, better feedback on performance and the impact of tasks on midwives and nurses is needed.

**Keywords:** Motivation; Work engagement; Personnel management; Nursing; Midwifery; Allied Health Personnel.

## RESUMEN:

**Introducción:** La motivación y el compromiso laboral de los profesionales constituyen un aspecto de interés para la gestión sanitaria. Enfermeras, matronas y Técnicos en Cuidados Auxiliares de Enfermería (TCAE) representan un recurso indispensable del sistema sanitario.

**Objetivo:** analizar la relación entre la motivación y el compromiso laboral en los profesionales de enfermería de un hospital de tercer nivel, describiendo los niveles de cada constructo y sus dimensiones.

**Método:** Estudio observacional descriptivo-correlacional de tipo transversal unicéntrico mediante cuestionario. Los participantes eran personal de enfermería. La motivación laboral se analizó con la escala "Job Diagnosis Survey of Hackman y Oldham" (JDS) y el compromiso laboral con "Utrecht Work Engagement Scale" en formato abreviado (UWEs-9). Ambas escalas se analizaron mediante la puntuación total y las dimensiones subyacentes.

**Resultados:** Se reclutaron 350 profesionales de enfermería. La categoría más representada fueron las enfermeras con 177 (50,6%), seguido de TCAE 146 (41,7%) y matronas 27 (7,7%). La puntuación de la escala JDS y UWEs-9 fue de  $77,16 \pm 8,786$  y  $4,49 \pm 1,130$ , respectivamente. En la escala JDS, las matronas tuvieron diferencias significativas superiores en la variedad de la tarea ( $p < 0,001$ ), mientras las TCAE tuvieron mayores puntuaciones en la identidad de la tarea ( $p < 0,001$ ) y la retroalimentación ( $p < 0,001$ ). En el compromiso laboral, la dedicación y la absorción tuvieron altas puntuaciones con 4,81 y 4,29.

**Conclusiones:** El nivel de motivación y compromiso laboral tienen valores promedios. Como puntos de actuación, es necesaria una mejor retroalimentación del desempeño y del impacto de las tareas en matronas y enfermeras.

**Palabras Claves (Fuente: DeCS):** Motivación; Compromiso laboral; Administración de personal; Enfermería; Partería; Técnicos Medios en Salud.

## INTRODUCTION

In healthcare systems, nursing staff are one of the main assets within organizations. Currently, one of the main concerns in healthcare management is the retention of nursing staff<sup>1,2</sup>, which is addressed through a set of institutional strategies aimed at keeping professionals motivated and committed to the organization and the profession. The World Health Organization (WHO) has identified a Europe-wide problem in ensuring the supply of nurses by promoting a 6-point action plan<sup>3</sup>. This concern goes beyond all health services and requires an analysis of the current situation, not only in quantitative terms (number of professionals in different professions) but also in qualitative terms, linked to performance and the results of the care provided to the population.

One of the key factors driving this retention is working conditions<sup>4</sup>. In this regard, healthcare organizations that provide care for these conditions are able to innovatively strengthen commitment to the institution<sup>5,6</sup>. Thus, hospitals recognized for offering the best working environments for nurses are associated with better health outcomes and patient experience<sup>7</sup>, making them attractive places for professionals to work. Conversely, nurses' dissatisfaction with working conditions has a negative impact on retention in some institutions<sup>8,9</sup>.

These elements were particularly relevant during the recent COVID-19 pandemic, where healthcare professionals as a whole faced high workloads and uncertainty over a prolonged period<sup>5</sup>. This situation had a negative impact on the motivation and engagement of professionals, factors that influence not only at a personal level but also at an organizational level, as they promote lower work performance and higher absenteeism. Various authors have studied the psychological factors that influence the performance, motivation and engagement of professionals<sup>6,10,11</sup>.

Job motivation is defined as *'the degree to which the characteristics of the job arouse in the employee an internal state that drives them to perform their tasks with enthusiasm, responsibility and personal satisfaction'*<sup>12</sup> and consists of an intrinsic part and an extrinsic part. The first is greatly influenced by personal factors, and the second by the activity, institution, or service provided<sup>13</sup>. Motivated nurses develop their professional careers more extensively in relation to the unit where they work<sup>14</sup>, improving healthcare outcomes, the training of other professionals, and the working environment<sup>15</sup>. Motivation is essential for coping with the continuous stress of nurses' daily clinical practice<sup>14</sup>.

On the other hand, work engagement is defined as a positive, satisfying, and work-related state of mind<sup>16</sup>. Several authors describe work engagement as the opposite of *Burnout syndrome*. Work engagement is defined by three dimensions: vigour, dedication and absorption. Vigour is defined as persistence and resilience during work. Dedication involves being involved in work and experiencing a sense of enthusiasm, pride and inspiration from it. And finally, absorption is defined as the ability to be focused and immersed in one's work<sup>16</sup>. Schaufeli et al. developed an instrument with good psychometric properties to measure work engagement in all work activities<sup>17</sup>. This questionnaire was used to study this construct in different areas of nursing work in order to identify the factors that influence the development of both work commitment and its component dimensions<sup>18-20</sup>.

In accordance with the above, the objective of this research is to analyse the relationship between motivation and work engagement among nursing professionals in a tertiary hospital, describing the levels of each construct and its dimensions.

## **MATERIAL AND METHOD**

### **Design**

An observational, descriptive-correlational, cross-sectional, single-center study with convenience sampling using self-administered paper questionnaires. The Stroße checklist guidelines were applied to organize the structure of the manuscript and strengthen the methodological quality of the study.

### **Study Background**

The study was conducted at the Canary Islands University Maternity and Children's Hospital (HUMIC). Together with the Gran Canaria University Hospital (HUIGC) and its specialized care centers, this hospital forms the Insular Maternity and Children's University Hospital Complex (CHUIMI). HUMIC has 353 beds for the obstetric-gynecological and pediatric population of the island of Gran Canaria and adult medical-surgical areas to serve the hospital complex's reference area.

The area of interest of this study is nursing professionals (midwives, nurses, and nursing assistants) who belong to the Nursing Subdirection of the HUMIC and who carry out their professional work in the main building.

## Participants

The study population consists of 990 nursing professionals assigned to the Subdirección who work in the main building. The target population of this research includes nurses (n=484), midwives (n=75), and nursing assistants (TCAE) (n=431).

## Inclusion Criteria

The inclusion criteria were: being a nursing professional assigned to the HUMIC Nursing Subdirección in the main building, being active at the time of questionnaire collection (May 2024) and completing the informed consent form. Partially completed questionnaires were excluded.

## Instrument

The questionnaire consists of four sections. The first section consists of Hackman and Oldham's Job Diagnosis Survey (JDS), validated in Spanish. The JDS categorizes the level of motivation through 23 items that encompass five dimensions: professional autonomy, task identity, task significance, task variety and feedback. This scale is developed using a 5-point Likert scale (always, almost always, sometimes, rarely and never).

The second section analyses work engagement using the abbreviated 9-item questionnaire 'Utrecht Work Engagement Scale' (UWES-9). This questionnaire is evaluated using a double-frequency numerical scale consisting of a 7-point rating, ranging from zero (never or not at all) to 6 (always or every day). The UWES-9 has been validated in Spanish and encompasses the three dimensions of work engagement: vigour, dedication and absorption.

The third and fourth sections cover sociodemographic and occupational variables. The third section covers the demographic characteristics of the interviewee using qualitative and quantitative variables. The quantitative variable in this section was age in years. The qualitative variables were: gender (male, female, non-binary gender, prefer not to identify), marital status (single, married or civil partner, separated/divorced, widowed), characteristics of cohabitation in the usual residence (I live with my partner and children, I live with my partner and no children, I live alone, live alone with children, live with my parents and/or other relatives) and highest level of academic studies achieved. In the fourth section, the work variables listed below were defined qualitatively through items: professional category (midwife, nurse, nursing assistant), unit or service, type of patients treated (adults, pediatrics), type of contract (temporary, interim, permanent), work shift (fixed morning, daytime, rotating), work experience in healthcare, and work experience in the unit where they currently work. Professional experience in the current professional category was defined using a numerical variable in years of experience.

## Sample size

The sample calculation for the population of 990 nursing professionals, for a confidence interval of 95% and a margin of error of 5%, requires the collection of 278 questionnaires.

## Data collection procedure

The data was collected during May 2024. The questionnaires were distributed in paper format to ensure the inclusion of the maximum number of workers and to avoid possible generational biases or biases related to the use of new technologies. The questionnaires were distributed and collected with the collaboration of the supervisors of each of the HUMIC units.

## Validity and replicability

The questionnaires selected for this study (JDS and UWES-9) have been previously used and validated in similar settings, and their psychometric properties have been analyzed. The internal consistency of both questionnaires has been described with  $\alpha$ -Cronbach 0.67-0.82<sup>4</sup>;  $\gamma$  0.84-0.94<sup>10</sup> for the JDS and UWES-9 scales, respectively.

## Statistical analysis

The results of the paper questionnaires were input by the research team into an Excel spreadsheet created for this purpose. The control procedures to ensure the quality and traceability of the information consisted of data verification by members of the research team, checking the consistency between what was expressed in the forms by the participants and the final document.

Quantitative data were described using mean and standard deviation. Qualitative data were presented using frequencies and percentages. The scales were analyzed using their overall scores and the dimensions included in each of them. For the different levels of the total UWES-9 scale and its dimensions, the ranges described in previous studies were applied<sup>16</sup>.

Data distribution was analyzed using the Kolmogorov-Smirnov test. For normally distributed data, parametric Student's t-tests and ANOVA were used. For abnormally distributed data, non-parametric Mann Whitney U and Kruskal-Wallis tests were used. The sociodemographic and categorical variables included in the study were analyzed to compare the JDS and UWES-9 scales, with their respective dimensions. The post-hoc test used in this study was the Bonferroni test. In cases where qualitative variables were compared, the Chi-square test was used. The relationship between the scales used was determined using Spearman's correlation. The statistical tests were analyzed bilaterally, and 95% confidence intervals were calculated. Data with a p-value <0.05 were considered significant. The statistical analysis was performed using the SPSS 27 statistical package.

## Ethical requirements

Participants were informed in advance of the study's objective through an informed consent form. The research was conducted in accordance with the ethical and legal principles of biomedical research 14/2007 and European regulation 2016/679. The study was previously analyzed and authorized by the Las Palmas Research Ethics Committee (CEIM-Las Palmas) with code: 2024-141-1.

## RESULTS

A total of 404 questionnaires were collected, of which 20 participants gave negative consent and 34 questionnaires were partially or totally incomplete in some sections of the questionnaire. Fifty-four questionnaires were eliminated according to the inclusion criteria. The study sample consisted of 350 valid questionnaires.

### Socio-demographic data of the sample

The sample finally analyzed consisted of 350 persons, predominantly female (n=294; 84.0%). The most represented professional category was nurses, followed by nursing assistants (TCAE) and midwives, with 177 (50.6%), 146 (41.7%) and 27 (7.7%), respectively. The mean age was 44.54±10.621 years. The most common contractual relationship was interim employment (144; 41.1%), followed by permanent statutory employment (141; 40.3%). Professional experience in the current category was 17.95±10.045 years. 76.3% (n=267) of the sample worked rotating shifts (Table 1).

**Table 1.** Sociodemographic and employment data of participants.

Variable	Items	n	%
Gender	Man	46	13.1
	Woman	294	84.0
	Non-binary gender	3	0.9
	I prefer not to identify myself	7	2.0
Marital status	Single	133	38.0
	Married – Domestic partner	163	46.6
	Separated- Divorced	43	12.3
	Widowed	11	3.1
Coexistence	I live with my partner and children	156	44.6
	I live with my partner and no children	80	22.9
	I live alone	50	14.3
	I live alone and have children	39	11.1
	I live with my parents and/or other relatives	25	7.1
Highest academic qualification attained	Intermediate Vocational Training	90	25.7
	Advanced Vocational Training	52	14.9
	Bachelor's degree	127	36.3
	University expert	33	9.4
	Postgraduate certificate	30	8.6
	Master's degree	16	4.6
Professional category	Doctoral degree	2	0.6
	Nurse	177	50.6
	Midwife	27	7.7
	TCAE	146	41.7
Service and/or unit	Emergencies	26	7.4
	Intensive Care Unit (ICU)	35	10.0
	Outpatient clinic/Functional test	38	10.9
	Hospital wards	171	48.9
	Operating room/ Recovery room	17	4.9
	Delivery room	33	9.4
	Neonatal unit	30	8.6

Variable	Items	n	%
Contractual relationship	Temporary or substitute	65	18.6
	Interim	144	41.1
	Permanent	141	40.3
Work shift	Morning shift	48	13.7
	Diurnal shift	35	10.0
	Rotating shift	267	76.3
Work experience in healthcare	Less than 1 year	3	0.9
	1-5 years	41	11.7
	6-10 years	53	15.1
	11-15 years	40	11.4
	16-20 years	66	18.9
	21-25 years	61	17.4
Work experience in your current unit/service	Over 25 years	86	24.6
	Less than 1 year	75	21.4
	1-5 years	136	38.9
	6-10 years	53	15.1
	11-15 years	24	6.9
	16-20 years	32	9.1
	21-25 years	18	5.1
	Over 25 years	12	3.4

Note: Absolute frequencies and percentages (%). TCAE: Nursing assistants.

## Motivation level

Analyzing the level of motivation among participants, the following two items stand out with a very high degree of consensus: *'What I do affects patients' well-being in many important ways'* with a rating of always in 61.7% of cases (n=216), *'Patients are affected by the work that I do'* with a rating of always at 51.7% (n=181). (supplementary material 1).

The results of the scale were grouped according to total score and dimensions. The population studied has average motivation (Table 2). Motivation levels (low, medium, and high) were developed using the *Stanones* scale.

In relation to the total scale, 58.6% (n=206) expressed average motivation, 21.7% (n=76) high motivation, and 19.7% (n=69) low motivation. Within the dimensions, the highest percentages were the average level of both task significance and autonomy, both with 71.7% (n=251) of participants. (supplementary material 2).

**Table 2.** Descriptive data of the JDS scale.

Items	Mean	S. D.	Median	Kolmogorov -Smirnov test
JDS Scale	77.16	8.786	77	<b>0.006</b>
Dimensions				
Skill variety	17.90	3.218	18	<b>&lt;0.001</b>
Task identity	14.60	2.381	14	<b>&lt;0.001</b>
Task significant	11.28	2.196	12	<b>&lt;0.001</b>
Autonomy	12.95	2.509	13	<b>&lt;0.001</b>
Feedback	20.39	4.401	20	<b>&lt;0.001</b>

Note: Significant values in bold.

There were no differences in motivation levels in relation to gender, marital status, cohabitation, type of contract, or work shift. The highest level of education did determine differences between respondents in some dimensions. Participants with official postgraduate degrees showed greater motivation in task variety when compared to those with vocational training ( $p < 0.001$ ). However, the latter group showed greater motivation in the dimensions of task identity and feedback when compared to the group of university graduates and those with non-official postgraduate degrees ( $p < 0.015$  and  $p < 0.001$ , respectively).

About motivation levels according to professional category, significant differences can be observed when comparing the dimensions of the JDS scale, showing that midwives and nurses are the most motivated in terms of task variety. In the Bonferroni post-hoc test, the comparison between pairs shows that the differences are significant between midwives-TCAE  $p < 0.001$  and nurses-TCAE ( $p < 0.001$ ). TCAEs report the highest motivation in task identity and feedback. In the post-hoc comparison by pairs with the other two groups (midwives and nurses), significant differences are observed in both dimensions ( $p < 0.001$ ) (Table 3).

**Table 3.** Differences in motivation according to professional category.

Items	Nurses (n=177)	Midwives (n= 27)	TCAE (n=146)	H Kruskal Wallis	p
	Average Rank	Average Rank	Average Rank		
JDS scale	173.61	158.11	181.01	1.294	0.524
Skill variety	199.06	239.43	135.11	44.198	<b>&lt;0.001</b>
Task identity	154.05	130.87	209.76	30.472	<b>&lt;0.001</b>
Task significant	182.39	183.50	165.66	2.464	0.292
Autonomy	183.12	142.39	172.39	4.114	0.128
Feedback	160.52	126.67	202.69	20.830	<b>&lt;0.001</b>

Note: Kruskal-Wallis test. Significant values in bold. TCAE: Nursing assistants.

Staff working in special services (emergency, pediatric intensive care, operating theatre, delivery rooms, neonatal units) showed lower overall motivation than the other two areas compared (hospitalization and consultations), which was only significant in pairwise comparison with the hospitalization area in the Bonferroni test ( $p = 0.010$ ). In terms of autonomy and feedback, hospitalization nursing staff were more motivated than those working in special services, with both differences in the post-hoc analysis having the same statistical significance ( $p < 0.001$ ). Working in adult or pediatric units did not generate differences in the motivation of professionals.

By establishing two groups of high and low motivation based on the average values of the JDS scale, it was observed that professionals with official postgraduate qualifications showed high motivation on the total JDS scale and in task variety ( $\chi^2 = 8.665$ ;  $p = 0.032$ ) and ( $\chi^2 = 41.487$ ;  $p < 0.001$ ), respectively. Staff with vocational training showed high motivation in task identity and feedback ( $\chi^2 = 24.854$ ;  $p < 0.001$ ) and ( $\chi^2 = 29.915$ ;  $p < 0.001$ ).

No significant differences were found in motivation levels based on contract type, shift, work experience in healthcare, or current unit.

## Level of work engagement

The sample analyzed shows mostly average values for work engagement, with item 5 of the UWES-9 scale receiving the lowest score and item 7 receiving the highest score. Respondents are proud of their work as nursing staff. The values for vigour and the total scale show average values according to the standardized scale of the UWES-9 scale. Particularly interesting are the high values for dedication and, therefore, feeling enthusiastic and proud of their work, and inspired and challenged by their work. The staff surveyed show a high level of absorption and, consequently, are happily immersed in their job, so much so that time passes quickly in their professional work. (see Table 4)

**Table 4.** Descriptive values of the UWEs-9 scale.

Items	Mean	S.D.	Level
1. At my work, I feel bursting with energy	4.53	1.415	Average
2. At my job, I feel strong and vigorous	4.75	1.199	Average
3. I am enthusiastic about my job	4.63	1.460	Average
4. My job inspires me	4.53	1.594	Average
5. When I get up in the morning, I feel like going to work	3.84	1.771	Average
6. I feel happy when I am working intensely	4.50	1.448	High
7. I am proud of the work that I do	5.29	1.115	High
8. I am immersed in my work	4.56	1.367	High
9. I get carried away when I'm working	3.81	1.665	Average
Dimensions			
Vigour	4.37	1.229	Average
Dedication	4.81	1.227	High
Absorption	4.29	1.262	High
Total score UWE-9	4.49	1.130	Average

Note: Level described using information from the UWEs-9 scale<sup>21</sup>.

There were no differences between survey participants based on gender, marital status, or cohabitation status. However, significant differences were found between nursing assistants and nurses and midwives in terms of professional category (Table 5). Work engagement was always defined in the same way, with nursing assistants showing greater vigour, dedication, absorption, and work engagement than the other two categories. The Bonferroni post-hoc test determined significant differences in the pairwise comparison between the vigour dimension of TCAEs and the other two categories ( $p < 0.001$ ). Paired comparisons of absorption and dedication established significant differences only between the categories of TCAE and nurses ( $p < 0.001$ ). However, on the total scale there were significant differences between TCAE and midwives and nurses, with values of  $p = 0.019$  and  $p < 0.001$ , respectively.

**Table 5.** Differences in the scale of work engagement according to professional category.

Items	Nurses (n=177)	Midwives (n=27)	TCAE (n=146)	<i>H</i> Kruskal Wallis	<i>p</i>
	Average Rank	Average Rank	Average Rank		
1. At my work, I feel bursting with energy	167.86	131.56	192.89	11.273	<b>0.004</b>
2. At my job, I feel strong and vigorous	165.86	152.00	191.53	7.357	<b>0.025</b>
3. I am enthusiastic about my job	153.18	159.41	205.54	23.825	<b>&lt;0.001</b>
4. My job inspires me	166.60	184.15	184.70	2.979	0.225
5. When I get up in the morning, I feel like going to work	159.47	128.69	203.60	22.419	<b>&lt;0.001</b>
6. I feel happy when I am working intensely	155.59	166.57	201.28	17.668	<b>&lt;0.001</b>
7. I am proud of the work that I do	150.95	188.61	202.84	27.631	<b>&lt;0.001</b>
8. I am immersed in my work	154.43	163.07	202.20	19.651	<b>&lt;0.001</b>
9. I get carried away when I'm working	157.65	184.63	195.45	11.840	<b>0.003</b>
Dimensions					
Vigour	162.32	127.13	200.42	18.202	<b>&lt;0.001</b>
Dedication	154.92	171.54	201.18	17.127	<b>&lt;0.001</b>
Absorption	151.92	174.94	203.18	20.741	<b>&lt;0.001</b>
Total score UWE-9	154.40	154.83	203.90	20.388	<b>&lt;0.001</b>

Note: Kruskal-Wallis test. Significant values in bold. TCAE: Nursing assistants

Based on the respondents' job services, it was observed that staff working in special services (emergency room, operating theatre, resuscitation-recovery room, paediatric intensive care) had lower job commitment than those working in outpatient clinics or inpatient wards. These differences were confirmed after the Bonferroni test with the following values for the pairs Hospitalization-Special Services and Consultations-Special Services with  $p < 0.001$  and  $p = 0.012$ , respectively. In the dimensions of the scale, dedication showed differences only between the pair Hospitalization-Special Services ( $p = 0.016$ ). In the dimensions of vigour and absorption, there were differences between inpatient and special services staff with values of  $p = 0.002$  and  $p = 0.005$ ; and between outpatient and special services staff, vigour ( $p = 0.008$ ) and absorption ( $p = 0.041$ ).

### Correlation between motivation scale and work commitment

The existence of a relationship between both scales and their respective underlying dimensions was analyzed. As shown in Table 6, and following Cohen's postulates, there is a moderate positive correlation between both scales, extending to almost all dimensions with values above 0.300. The task significance dimension (JDS) is the only one that does not correlate with the UWES-9 scale.

**Table 6.** Spearman's correlation between the JDS and the UWES-9.

JDS		UWES-9			
		Vigour	Dedication	Absorption	UWES-9 Total
JDS Total	Spearman	0.331	0.430	0.338	0.402
	Sig. (bilateral)	<b>&lt;0.001</b>	<b>&lt;0.001</b>	<b>&lt;0.001</b>	<b>&lt;0.001</b>
Skill variety	Spearman	0.049	0.160	0.047	0.094
	Sig. (bilateral)	0.179	<b>&lt;0.001</b>	0.192	<b>0.040</b>
Autonomy	Spearman	0.228	0.343	0.251	0.304
	Sig. (bilateral)	<b>&lt;0.001</b>	<b>&lt;0.001</b>	<b>&lt;0.001</b>	<b>&lt;0.001</b>
Task identity	Spearman	0.295	0.347	0.275	0.335
	Sig. (bilateral)	<b>&lt;0.001</b>	<b>&lt;0.001</b>	<b>&lt;0.001</b>	<b>&lt;0.001</b>
Task significant	Spearman	-0.026	-0.015	-0.002	-0.023
	Sig. (bilateral)	0.314	0.391	0.484	0.337
Feedback	Spearman	0.363	0.370	0.373	0.404
	Sig. (bilateral)	<b>&lt;0.001</b>	<b>&lt;0.001</b>	<b>&lt;0.001</b>	<b>&lt;0.001</b>

Note: Spearman's correlation. Significant values in bold.

## DISCUSSION

The sample included is representative of the center where the research was conducted, with no significant differences between sociodemographic variables or professional categories. In our study, the sample's level of motivation is average, with some dimensions where the percentage of motivation was high, such as in the significance of the task and autonomy.

In contrast to the study conducted by Abu Yahya et al., which found differences in motivation based on gender and work experience among nurses<sup>22</sup>, our study found no differences based on these variables. However, we found significant differences in our sample in the dimensions of the JDS scale, according to professional category and highest level of education attained. In the study by Ilea et al, older staff with an average level of education were more likely to be demotivated<sup>23</sup>. In our study, age is not a predictor of demotivation, but there are differences in higher motivation between the two educational extremes (official postgraduate and vocational training) when compared to intermediate levels such as university graduates. These authors identified greater motivation throughout the three years of study during the pandemic among auxiliary staff and lower motivation among nurses<sup>23</sup>. These findings are consistent with those found in our study. These results highlight the need to implement a series of programs tailored to each professional category and the educational level of workers in order to boost motivation. Institutions must clearly communicate guidelines on professional performance and highlight the impact and value of their work for both users and the organization, without forgetting to provide continuous feedback.

Gaki et al. found differences in motivation depending on the healthcare sector, as nurses working in interdisciplinary units were more motivated than those working in internal medicine and surgery<sup>24</sup>. Therefore, the work environment seems to influence motivation, in line with our findings that staff in inpatient units are more motivated than those in specialized services. The characteristics of the work environment influence the level of motivation of participants, which implies that there are positions with specific

professional development needs. The roles and environment of nursing professionals in the specialized services included in this study have a negative influence on their level of motivation, and it is necessary to analyze the factors explaining this situation in further studies. One area for improvement in our sample is feedback from midwives and nurses, since, as Krogstad et al determined, positive evaluation by hierarchical superiors influences the job satisfaction of nurses and nursing assistants<sup>25</sup>. Promoting an adequate level of motivation encourages professionals to welcome new nurses and midwives more effectively<sup>26</sup>. In this context, our sample includes professionals with medium-high motivation scores (n=262; 80.5%), which is a positive point to note. The task identity (tangible results of the work tasks assigned to a job position) of both nurses and midwives is an area for improvement when compared to the scores of nursing assistants. Awareness of the importance of each professional in the healthcare system and the impact that their work has on the user as a complete and non-segmented process are fundamental aspects for improvement in this dimension. In our study, staff with official postgraduate degrees show an association with high professional motivation, in line with other studies<sup>27</sup>. This finding provides healthcare management with the possibility of identifying motivated workers who facilitate the adaptation of new healthcare changes.

In terms of work engagement, we find average values in the dimensions of vigour and total score, and high values in absorption and dedication. In the study by Alkorashy et al, which only analyzed nurses, the values were high in all dimensions<sup>28</sup>. In contrast, the study by Wang et al. found much lower levels of work engagement in a post-pandemic period than those found in our sample<sup>29</sup>. In Gómez-Salgado's research, which is closest to the context of our analysis, nurses did have lower levels of work engagement than other categories compared, and these were also lower than in our study<sup>30</sup>. Critically, we are dealing with participants with high-average work commitment, which must be analyzed prospectively, promoting plans that maintain or improve these outcomes.

Among our participants, work experience has not been a determining factor in greater work engagement. In terms of professional categories, nursing assistants show greater work engagement than the nurses and midwives analyzed. In line with other authors, belonging to hospitalization units in our sample shows a higher level of work engagement<sup>28</sup>. Healthcare institutions establishing programs aimed at improving work engagement is an investment in their professionals, since, as it has been published in other studies, this construct influences professionals leaving the profession and their mental health<sup>18,31</sup>.

Analyzing the scores for motivation and work engagement, a positive relationship can be observed between both scales and in all their dimensions except for the significance of the task. This finding indicates that activities aimed at promoting motivation among nursing professionals have an impact on work engagement and vice versa. The divergence in task significant should encourage us to raise awareness of the importance of each professional's activities for the organization and, in another sense, to analyze tasks with low added value. From a management perspective, explaining the importance of each activity in the assistance process gives workers a sense of purpose, as they understand how their work contributes both to patient well-being and to the functioning of the organization. This would encourage adherence to protocols, records in medical history and activities, improving both motivation and engagement. In this sense, both constructs can encourage us to retain professionals or foster a sense of belonging

among professionals<sup>31</sup> themselves with the institution where they carry out their professional work<sup>18-20,28</sup>.

Healthcare management must implement initiatives that promote motivation and work commitment, keep staff proactive and foster a strong sense of belonging, which is key to maximizing the contribution of each professional in all healthcare pathways and services. This should be developed through specific programs, the implementation and results of which can be analyzed in future research.

The limitations of this research are typical of observational and cross-sectional methodology. Therefore, we have analyzed motivation and work engagement over a specific period. In May 2024, a reasonable period had elapsed since the end of the pandemic to assess the current status of healthcare teams. This study was conducted in a tertiary hospital, so the findings cannot be extrapolated to other nursing settings. Another limitation is that only staff who were active at the time were included, so staff on temporary disability leave, who may have different levels of job engagement and motivation, were not included in this investigation.

## CONCLUSIONS

In conclusion, the findings of this study show that the analyzed population has a high level of motivation. Factors such as postgraduate training and professional category are explanatory values of the dimensions that constitute motivation. Midwives are the professionals who report the greatest variety of tasks, and nursing assistants are those who receive the most feedback. Therefore, in the latter case, greater feedback from management positions for nurses and midwives needs to be implemented in the environment analyzed.

In terms of work engagement, the participants in this research scored within the average range. It should be noted that staff in inpatient wards reported higher work engagement, suggesting that the working characteristics of specialist services influence this concept.

This research highlights the interrelationship between motivation and work engagement and the impact of both concepts on nursing staff retention. This research contributes to existing knowledge and suggests future lines of research focused on designing, implementing, and evaluating specific programs that enhance these aspects in different professional categories and hospital settings.

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## MATERIAL SUPPLEMENT

**Table 7.** Frequencies and percentages of the JDS scale.

	Always		Almost always		Sometimes		Rarely		Never	
	n	%	n	%	n	%	n	%	n	%
1. I have almost complete responsibility for deciding how and when the work is to be done	21	6.0	73	20.9	141	40.3	76	21.7	39	11.1
2. I have a chance to do a number of different tasks, using a wide variety of different skills and talents	66	18.9	163	46.6	83	23.7	33	9.4	5	1.4
3. I do a complete task from start to finish. The results of my efforts are clearly visible and identifiable	112	32.0	122	34.9	80	22.9	31	8.9	5	1.4
4. What I do affects patients' well-being in many important ways	216	61.7	106	30.3	21	6.0	4	1.1	3	0.9
5. My manager provides me with constant feedback about how I am doing	90	25.7	90	25.7	87	24.9	55	15.7	28	8.0
6. The work itself provides me with information about how well I am doing	56	16.0	140	40.0	113	32.3	31	8.9	10	2.9
7. I make insignificant contributions to the final product or service	15	4.3	58	16.6	110	31.4	99	28.3	68	19.4
8. I get to use a number of complex skills on this job	59	16.9	140	40.0	105	30.0	30	8.6	16	4.6
9. I have very little freedom in deciding how the work is to be done	18	5.1	47	13.4	147	42.0	108	30.9	30	8.6
10. Just doing the work provides me the opportunities to figure out how well I am doing	82	23.4	153	43.7	97	27.7	10	2.9	8	2.3
11. The job is quite simple and repetitive	25	7.1	46	13.1	132	37.7	100	28.6	47	13.4
12. My supervisors or co-workers rarely give me feedback on how well I am doing the job	30	8.6	82	23.4	128	36.6	86	24.6	24	6.9
13. What I do is of little consequences to anyone else	21	6.0	28	8.0	53	15.1	115	32.9	133	38.0
14. My job involves doing a number of different tasks	149	42.6	127	36.3	54	15.4	14	4.0	6	1.7
15. Supervisors let us know how well they think we are doing	47	13.4	61	17.4	106	30.3	80	22.9	56	16.0
16. My job is arranged so that I do not have a chance to do an entire piece of work from beginning to end	64	18.3	125	35.7	102	29.1	41	11.7	18	5.1
17. My job does not allow me an opportunity to use discretion or participate in decision making	19	5.4	46	13.1	134	38.3	111	31.7	40	11.4
18. The demands of my job are highly routine and predictable	12	3.4	70	20.0	139	39.7	91	26.0	38	10.9
19. My job provides few clues about whether I'm performing adequately	60	17.1	138	39.4	119	34.0	25	7.1	8	2.3

	Always		Almost always		Sometimes		Rarely		Never	
	n	%	n	%	n	%	n	%	n	%
20. My job is not very important to the hospital's survival	31	8.9	22	6.3	58	16.6	73	20.9	16	4.7
21. My job gives me considerable freedom in doing the work	61	17.4	121	34.6	119	34.0	37	10.6	12	3.4
22. My job provides me with the chance to finish completely any work I start	82	23.4	144	41.1	104	29.7	17	4.9	3	0.9
23. Patients are affected by the work that I do	181	51.7	78	22.3	38	10.9	19	5.4	34	9.7

**Table 8.** Distribution of levels in the total score and in the respective dimensions of the JDS scale.

	Motivation level	N (N=350)	%
JDS scale	Low motivation	69	19.7
	Medium motivation	205	58.6
	High Motivation	76	21.7
Skill variety	Low motivation	49	14.0
	Medium motivation	237	67.7
	High Motivation	64	18.3
Task identity	Low motivation	58	16.6
	Medium motivation	215	61.4
	High Motivation	77	22.0
Task significant	Low motivation	58	16.6
	Medium motivation	251	71.7
	High Motivation	41	11.7
Autonomy	Low motivation	50	14.3
	Medium motivation	251	71.7
	High Motivation	49	14.0
Feedback	Low motivation	59	16.9
	Medium motivation	226	64.6
	High Motivation	65	18.6

**Table 9.** Kruskal Wallis test of the JDS scale score and its dimensions according to the highest level of education.

(N=350)	Vocational Training (n=142)	Bachelor's Degree (n=127)	Non-official postgraduate degree (n=63)	Official Postgraduate Programme (n=18)	H Kruskal Wallis	p
	Average Rank	Average Rank	Average Rank	Average Rank		
JDS scale	182.06	165.78	167.89	218.97	5.456	0.141
Skill variety	134.49	186.38	228.50	236.81	49.312	<0.001
Task identity	211.67	150.21	139.17	195.72	35.539	<0.001
Task significant	164.72	180.37	179.11	213.50	4.705	0.195
Autonomy	171.67	176.09	179.23	188.50	0.602	0.896
Feedback	204.65	161.11	136.57	183.36	23.922	<0.001

**Table 10.** Standardised levels of work engagement on the UWES-9 scale.

	Vigour	Dedication	Absorption	Total Score
Very Low	$\leq 2.00$	$\leq 1.33$	$\leq 1.17$	$\leq 1.77$
Low	2.01-3.25	1.34 – 2.90	1.18 – 2.33	1.78 – 2.88
Average	3.26-4.80	2.91-4.70	2.34 – 4.20	2.89 – 4.66
High	4.81-5.65	4.71 – 5.69	4.21 – 5.33	4.67 – 5.50
Very High	$\geq 5.66$	$\geq 5.70$	$\geq 5.34$	$\geq 5.51$