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Burnout syndrome in nursing students: An observational study

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ABSTRACT

Background: Academic burnout appears attributable to work and academic overload and may negatively affect learning and care quality during clinical clerkship.
Objectives: To evaluate the presence of burnout syndrome in nursing students and to detect the main stressors that occur during clinical clerkship.
Design: Observational, descriptive and cross-sectional study carried out between January and July 2017.
Settings and participants: Second-, third- and fourth-year nursing students at Jaume I University (Universitat Jaume I) (Spain) (n = 126).
Methods: The KEZKAK questionnaire and the Maslach Burnout Inventory Student Survey were used when carrying out the data collection; sociodemographic and clinical clerkship variables were also collected. Descriptive and bivariate analyses of these instruments' variables were performed.
Results: No student manifested high levels of depersonalisation or low personal accomplishment. Moreover, depersonalisation was found to increase as the academic year progressed (p = 0.027). The most stressful factors were Helplessness and Uncertainty (m = 3.61, sd = 0.345) and Confusion of Medication (m = 2.50, sd = 0.754). The female subsample showed higher stress levels due to multiple factors, such as Lack of Competence (p = 0.001) and Having to Give Bad News (p = 0.01).
Conclusion: This study found that its sample did not meet the criteria indicating the presence of burnout syndrome. In addition, the main stressors affecting nursing students during clinical clerkship were identified.

1. Introduction

Burnout syndrome was defined by Maslach as a state of chronic stress characterised by high levels of emotional exhaustion and depersonalisation and low levels of professional efficacy (Hederich-Martínez and Caballero-Domínguez, 2016; Maslach et al., 2001). Elsewhere, it has been characterised as a psychosocial disorder stemming from chronic interpersonal stressors present in the workplace (Ferreira and Lucca, 2015).

Burnout syndrome predominantly affects those professions involved in continuous and direct contact with people, especially professions involving a holistic approach—features that describe the healthcare field (Ayaz-Alkaya et al., 2018), especially nursing (Barragán et al., 2015; Cremades Puerto et al., 2017). Additionally, during their academic curriculum, nursing students are exposed to the effects of stress resulting from academic and work pressures and overload—conditions even more strongly exacerbated among those nursing students who practice in health centres (Hederich-Martínez and Caballero-Domínguez, 2016; Moya Nicolás et al., 2013; Tomaschewski-Barlem et al., 2014).

2. Background

Academic burnout is defined as a circumstance in which students feel unable to give more of themselves, leading to an attitude of negative criticism, devaluation, loss of interest and questions about their own capacity to finish school (Hederich-Martínez and Caballero-Domínguez, 2016). Therefore, feelings of disappointment, irritability or restlessness are often present, leading to learning deficits and diminished quality of nursing care in the clinical setting (Pereira et al., 2010).

Burnout syndrome is a disorder that develops progressively, wherein the passivity of the subject increases in relation to coping with stress. In this sense, emotional exhaustion would be the first symptom, due to wear or fatigue, followed by depersonalisation, which is

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reflected as a negative response to the source of stress. Personal accomplishment is the final victim, whereupon feelings of incompetence and a lack of achievement or productivity at work arise (Maslach et al., 2001; Tomaschewski-Barlem et al., 2014). Pursuant to this conceptualisation, some studies determine the predominance of emotional exhaustion (Ríos-Risquez et al., 2018), as well as depersonalisation or cynicism (Marques da Silva et al., 2018), pointing out that it is an effect of idealising the academic training received followed by a later breach of expectations in the labour setting, among other factors. Several studies reveal that depersonalisation manifests to a greater extent in young students (between 20 and 24 years of age), those who are unemployed and individuals without previous experience in health care (Marques da Silva et al., 2018; Tomaschewski-Barlem et al., 2014).

Edwards et al. (2010) note that students' confidence and self-esteem decrease as the academic year progresses due to the presence of more stressors, as well as greater expectations about their professional tasks, leading to feelings of exhaustion, fear for the future and frustration; the effects are also associated with the adoption of ineffective coping strategies and a higher probability of dropping out of school. Additionally, several authors agree that one of the main sources of stress in nursing students is a lack of knowledge and professional skills (Sheu et al., 2002), especially during clinical clerkship (Carlotto and Gonçalves Câmara, 2006; Jiménez et al., 2010). This is important because clinical clerkships account for 50% of the educational nursing programmes in the European Union (The Council of the European Union, 2018).

Therefore, the main objective of this study was to assess the presence of burnout syndrome in undergraduate nursing students at Jaume I University (*Universitat Jaume I*) (Spain) and to identify the main stressors during clinical clerkship.

3. Methods

3.1. Design and sample

A descriptive and cross-sectional observational study was carried out among nursing students at Jaume I University (*Universitat Jaume I*) (Spain) between January and July 2017.

The study population consisted of 240 nursing students (60 students per course). Second-, third- and fourth-year students who had completed at least one period of clinical clerkship were included. First-year students were excluded because they had not yet qualified for clinical clerkship, according to the syllabus. Also excluded were those students whose questionnaires were at least 10% incomplete.

A population estimate was carried out using the GRANMO program, which determined that a sample of 122 participants was sufficient. Parameter values included a confidence interval of 95%, an accuracy of 0.7 percentage units, a predictable population percentage of 50% and a replacement percentage of 20%. Students were included through convenience non-probabilistic sampling.

3.2. Variables and instruments

Sociodemographic variables such as age, gender, number of children, composition of the household—family household ('living with parents'), horizontal household ('living with friends'), single household or own-family household)—and previous work experience ('yes'/'no' indicating current employment status) were collected, as were clinical clerkship-related variables, such as perceived satisfaction ('dissatisfied', 'slightly satisfied', 'satisfied', 'fairly satisfied', 'highly satisfied'), previous healthcare experience ('no', 'yes') and the year corresponding to the most recent period of clinical clerkship.

Degree of burnout was measured through the Maslach Burnout Inventory-Student Survey (MBI-SS), which has been adapted to health sciences students and validated in Spanish (Mansilla, 2016). This questionnaire consists of 22 items measured with a 5-point Likert scale ('1: Never'; '2: A few times a year'; '3: Several times during clinical clerkship'; '4: Some times a week'; '5: Daily'). The items are grouped into three dimensions: Emotional Exhaustion (9 items), Depersonalisation (5 items) and Personal Accomplishment (8 items). The MBI showed internal consistency in the studied sample of $\alpha = 6.49$ (Emotional Exhaustion $\alpha = 8.21$; Depersonalisation $\alpha = 5.57$; Personal Accomplishment $\alpha = 7.63$). To assess the Maslach questionnaire, the questionnaire dimensions were categorised as percentiles. Thus, the so-called "Lower" stratum comprised scores below 25%, the "Middle" stratum covered scores between 25 and 75%, and the "Higher" stratum comprised scores above 75%.

In turn, the KEZKAK questionnaire was used to determine the main stressors faced by students during their clinical clerkships (Zupiria Gorostidi et al., 2002). This questionnaire's original version was validated in Spain. The internal consistency for this study was $\alpha = 9.26$. It also follows a Likert-type response mode, and it groups 41 items into 9 dimensions: Lack of Competence (11 items, $\alpha = 8.58$), Contact with Suffering (10 items, $\alpha = 8.04$), Relationship with Tutors and Workmates (6 items, $\alpha = 7.22$), Helplessness and Uncertainty (11 items, $\alpha = 8.12$), Inability to Control the Relationship with Patients (8 items, $\alpha = 7.43$), Emotional Involvement (4 Items, $\alpha = 6.20$), Being Harmed by the Relationship with the Patient (5 items, $\alpha = 7.36$), Patients Seeking an Intimate Relationship (2 items, $\alpha = 6.02$) and Overwork (5 items, $\alpha = 6.87$).

3.3. Data collection

The fieldwork was conducted in February 2017, once the clinical clerkships corresponding to the first semester of the three included cohorts had completed. The data collection was carried out by means of a self-administered survey during established nursing classes and was preceded by an explanation of the objective of the study, as well as its voluntary and anonymous character, to the participants.

3.4. Analysis

The descriptive analysis of the data was carried out considering the means, standard deviations and confidence intervals of the means for the quantitative variables, whereas distributions of the frequencies and percentages were used for the qualitative variables. With respect to the bivariate analysis, the conditions of applicability of the parametric tests were corroborated with the Kolmogorov-Smirnov test; normality was corroborated with the Lilliefors correction; with Levene's test used to confirm the homoscedasticity of the sample. After corroborating these conditions, we studied the relationship between the dimensions of the Maslach questionnaire and the sociodemographic and clinical clerkship variables through Fisher's exact test. Regarding the analysis of the KEZKAK questionnaire, an initial univariate analysis of the dimensions was performed, followed by a bivariate analysis to relate the sociodemographic and clinical clerkship variables, using the Mann-Whitney *U* test for dichotomous variables and the Kruskal-Wallis test for variables with more than two categories. In addition, the relationship between the 10 main stressors identified and the characterisation variables of the subjects was analysed, through Fisher's exact test. The analysis was carried out with the statistical package SPSS (Statistical Package for Social Sciences) version 23. A level of statistical significance of $p < 0.05$ was established.

3.5. Ethical considerations

This study was approved by the directorate of the nursing department of Jaume I University (*Universitat Jaume I*). Prior to data collection, the students received oral and written information from a member of the research team regarding the objectives and methodology of the study, as well as its voluntary and anonymous character. The questionnaires did not involve personal data that would compromise the

Table 1
Sociodemographic and clinical clerkship variables.

Variable/category	Overall		Second year		Third year		Fourth year	
	n	%	n	%	n	%′	n	%
Gender								
Male	25	19.8	7	14	13	36.1	5	12.5
Female	101	80.2	43	86	26	63.9	35	87.5
Offspring								
Yes	6	4.8	–	–	5	13.9	1	2.5
No	120	95.2	50	100.0	31	86.1	39	97.5
Household composition								
Family	95	75.4	38	76	24	66.7	33	82.5
Horizontal	12	9.5	6	12	4	11.1	2	5
Single	4	3.2	3	6	1	2.8	–	–
Own family	15	11.9	3	6	7	19.4	5	12.5
Work experience								
No	65	51.6	25	50	17	47.2	2. 3	57.5
Yes	61	48.4	25	50	19	52.8	17	42.5
Employed[a]	29	23.0	10	20	8	22.2	11	27.5
≥20 h/week[b]	10	7.9	4	8	4	11.1	2	5
Previous healthcare experience								
Yes	48	38.1	2. 3	46	15	41.7	10	25
No	78	61.9	27	54	21	58.3	30	75
CC satisfaction								
Slightly satisfied	6	4.8	2	4	2	5.6	2	5
Satisfied	21	16.7	4	8	9	25	8	20
Fairly satisfied	49	38.9	18	36	17	47.2	14	35
Highly satisfied	50	39.7	26	52	8	22.2	16	40

[a] Employed at the time of data collection.
[b] Employed, with a contract meeting or exceeding 20 h per week.

identity of the subjects. The project was designed according to the Organic Law 15/1999 of December 13 on the Protection of Personal Data (LOPD, by its initials in Spanish). In addition, the principles of the Declaration of Helsinki (beneficence, non-maleficence, autonomy and justice) were respected.

4. Results

Women comprised 80.2% (n = 101) of the student sample, with an average age of 22.83 (± 6.033) years; only 4.8% (n = 6) of the population had children. Regarding the composition of the household, the parents' family residence predominated (75.4%, n = 95); 48.4% (n = 61) of the population had previous work experience and, specifically, 38.1% (n = 48) had previous healthcare work experience. Appraisals of the clinical clerkship at the levels of 'fairly satisfied' or 'highly satisfied' were given by 78.6% (n = 99) of the sample (Table 1).

Table 2 provides a descriptive analysis of the MBI, highlighting the absence of students with high levels of depersonalisation or low levels of personal accomplishment.

The variables Gender, Offspring, Work Experience, Healthcare Experience and Composition of the Household showed no significant differences across any dimension for the Maslach questionnaire. As shown in Table 3, Emotional Exhaustion was marked by significant differences for the variables Course and Satisfaction during Clinical Clerkship, such that third-year students showed higher levels of exhaustion, followed by fourth-year students (p = 0.007), whereas high satisfaction values regarding clinical clerkship were associated with diminished levels of emotional exhaustion (p < 0.001). The Depersonalisation dimension showed significant differences with regard to Course (p = 0.027), with increases in Depersonalisation as the academic year progressed. Similarly, Personal Accomplishment was associated with significant differences in the variable Satisfaction during Clinical Clerkship (p = 0.003)—namely, higher levels of personal accomplishment were found as clinical clerkship satisfaction increased.

Regarding the analysis of the KEZKAK questionnaire, the students identified Helplessness and Uncertainty as the most stressful dimension (m = 3.61, sd = 0.345), followed by Lack of Competence (m = 3.59, sd = 0.392) and Overwork (m = 3.54; sd = 0.391). As detailed in Table 4, the Gender variable showed significant differences across most dimensions of the questionnaire. In addition, the dimension 'Patient Seeking an Intimate Relationship' showed significant differences in the context of Previous Work Experience (p = 0.021) as well as Previous Healthcare Experience (p = 0.015). This reflected how having previous experience, in both areas, predicted lower levels of stress.

Pursuant to the analysis of the stressors, Table 5 shows the items with highest mean scores, both globally and in the various training years. Regarding the bivariate analysis, the stressors reflecting confusion of medication, making a mistake, receiving contradictory orders, doing a bad job and harming the patient, inability to respond to the patient and not finding the doctor when the situation requires it,

Table 2
Maslach Burnout Inventory, categorised dimensions.

Dimension	Lower stratum		Middle stratum		Higher stratum	
	n	%	n	%	n	%
Emotional exhaustion	57	46.341	4.5	36.585	21	17.073
Depersonalisation	96	78.049	27	21.951	–	–
Personal accomplishment	–	–	59	47.967	64	52.033

Table 3
Relationship between the dimensions of the Maslach Burnout Inventory questionnaire and the clinical clerkship-related variables.

Dimension/variable/category	Overall		Lower stratum		Middle stratum		Higher stratum		p[a]
	Mean	ds	n	%	n	%	n	%	
Emotional exhaustion									
Course									0.007
Second	17.73	4.69	29	58	17	3. 4	3	6	
Third	23.29	5.67	8	22.2	16	44.4	11	30.6	
Fourth	19.87	5.71	20	50	12	30	7	17.5	
Clinical clerkship satisfaction									< 0.001
Dissatisfied	–	–	–	–	–	–	–	–	
Slightly satisfied	26	4.60	–	–	3	50	3	50	
Satisfied	23.30	6.32	6	28.6	7	33.3	7	33.3	
Fairly satisfied	21.66	5.35	13	26.5	2. 3	46.9	11	22.4	
Highly satisfied	16.38	3.56	38	76	12	24	–	–	
Depersonalisation									
Year									0.027
Second	7.84	2.70	43	86	6	12	–	–	
Third	8.60	2.57	29	80.6	6	16.7	–	–	
Fourth	9.92	3.12	24	60	15	37.5	–	–	
Personal accomplishment									
Clinical clerkship satisfaction									0.003
Dissatisfied	–	–	–	–	–	–	–	–	
Slightly satisfied	30.50	6.06	–	–	3	50	3	50	
Satisfied	28.50	5	–	–	16	76.2	4	19	
Fairly satisfied	31.66	4	–	–	24	49	2. 3	46.9	
Highly satisfied	34.42	3.80	–	–	16	32	3. 4	68	

[a] Fisher's exact test.

Table 4
Relationships between the dimensions of the KEZKAK questionnaire and sociodemographic and clinical clerkship variables.

Dimension/variable/category	m	sd	P[a]
Helplessness and uncertainty			
Gender			
Male	3.487	0.403	0.045
Female	3.648	0.322	
Lack of competence			
Gender			
Male	3.385	0.384	0.001
Female	3.647	0.378	
Inability to control the relationship with the patient			
Gender			
Male	3.365	0.348	0.032
Female	3.525	0.347	
Contact with suffering			
Gender			
Male	3.216	0.478	0.026
Female	3.447	0.381	
Relationship with tutors and workmates			
Gender			
Male	3.093	0.425	0.015
Female	3.335	0.444	
Patient seeking an intimate relationship			
Gender			
Male	2.820	0.720	< 0.001
Female	3.401	0.555	
Work experience			
Yes	3.134	0.671	0.021
No	3.408	0.579	
Healthcare experience			
Yes	3.093	0.648	0.015
No	3.385	0.608	

[a] Mann-Whitney U test.

showed no statistically significant association with any sociodemographic or clinical clerkship variable.

However, there was a statistically significant finding that related high levels of clinical clerkship satisfaction with higher levels of stress upon the risk of needlestick injury (p = 0.027) and the inability to problem-solve in a specific situation (p = 0.006).

Table 5
Stressors with the highest mean scores reported by the students.

	m	sd	CI 95%
Confusion of medication	2.50	0.754	2.37–2.64
Infection through needlestick injury	2.43	0.835	2.28–2.58
"Making a mistake"	2.41	0.823	2.27–2.56
Receiving contradictory orders	2,23	0,772	2.09–2.37
Doing a bad job and harming the patient	2.19	1035	2.00–2.38
Inability to solve a specific situation	2.15	0.703	2.02–2.28
Inability to respond to the patient	1.99	1045	1.56–1.86
Not finding the doctor when the situation requires it	1.97	0.826	1.82–2.12
Having to give bad news	1.91	0.957	1.74–2.08
The patient touching certain parts of my body.	1.91	1095	1.71–2.11

Likewise, the stressor 'Having to Give Bad News' manifested with statistically significant associations with several variables. Female students reported higher levels of stress for this stressor compared to male students (p = 0.010). In addition, students without children had higher levels of stress compared to those who did have children (p = 0.034). It was also observed that students without previous work experience reported higher levels of stress upon the possibility of having to give bad news (p = 0.035). Likewise, stress increased as the academic year progressed (p = 0.042). Finally, it was observed that higher levels of satisfaction were associated with higher levels of stress (p = 0.043).

Similarly, for the variable Gender, the stressor involving the patient touching certain parts of the student's body showed a statistically significant difference (p < 0.001), with stress value being higher among female students. There was also a significant association with offspring status (p = 0.032), with higher levels of stress being reported among students with no children. In addition, a statistical association between stress and academic year was observed (p = 0.001), with second-year students reporting higher levels of stress when confronting the possibility of the patient touching certain parts of the students' bodies.

5. Discussion

In line with the results of Tomaschewski-Barlem et al. (2014), no subject reported high levels of depersonalisation or low personal

achievement; thus, the members of the study sample did not evidence burnout syndrome. Some authors have suggested that one of the reasons why nursing students experience stress and anxiety during their academic training is due to the gap between theory and practice (Chernomas and Shapiro, 2013). This gap is a well-studied phenomenon that influences the work of future nursing professionals (González-Chordá and Maciá-Soler, 2015). The educational method used in the nursing programme at Jaume I University incorporates theory, simulated practice and clinical clerkship, allowing students to consolidate the acquisition of knowledge within this learning triangle, which also simultaneously integrates evidence-based practice. This feature is incorporated throughout the training process, instead of separating theoretical components of clinical practice into different subjects (Maciá-Soler et al., 2013), as happens in other nursing programmes that conceptualise 'practicums' as practical subjects different from theoretical content (Suárez-García et al., 2018).

Regarding the results related to the Emotional Exhaustion dimension, third-year students showed the highest scores, followed by the fourth-year students. It should be noted that the second-year students, who had higher rates of employment, were the least emotionally depleted. This finding is inconsistent with contributions from other authors (Carlotto et al., 2005; Ríos Risquez et al., 2012) who have shown that the need to reconcile work with the academic curriculum is a major predictive factor for the presence of emotional exhaustion. Furthermore, higher levels of clinical clerkship satisfaction reflected a decrease in emotional exhaustion, as well as an increase in personal accomplishment.

In the sample studied, the degree of depersonalisation increased as the academic year progressed. This fact can be explained by the gradual development of burnout syndrome. The Depersonalisation dimension is the second to manifest, after Emotional Exhaustion (Palacio et al., 2012). Similarly, the literature reflects that a lack of incentives, or social support, is related to the onset of the syndrome, just as positive feedback can be considered a protective factor against the development of the syndrome (Caballero et al., 2015; Carlotto et al., 2005).

Regarding the analysis of the KEZKAK questionnaire, Helplessness and Uncertainty, Lack of Competence and Overwork were identified as primary dimensions, in line with previous authors' findings (Chernomas and Shapiro, 2013; Suárez-García et al., 2018). First, fourth-year students more strongly identified Lack of Competence as a stressor. It is striking that the final-year students were those who perceived, to a greater extent, this lack of competence. However, as has already been noted, this fact may be attributable to a student's perspective shifting from that of a student to that of an imminent healthcare provider (Fernandes Pereira et al., 2014). A student may experience high levels of stress upon the possibility of failing to do a good job and the consequences that doing so entails, especially when considering the repercussions involved in a nurse's responsibilities falling exclusively on oneself (López-Cruz et al., 2016). It is worth noting the how these findings regarding lack of competence were inconsistent with the original evaluation of the KEZKAK questionnaire (Zupiria Gorostidi et al., 2002), which established that this lack of competence ceases to have an impact on stress levels as skill and experience are acquired and disregarded other factors, such as the proximity of the final-year students to entering the labour force.

Second, the reported levels of stress associated with having to give bad news showed an upward trend as the academic trajectory progressed. This fact can be explained, again, by referring to the subjects taught throughout the curriculum, given that the focus of clinical clerkship periods is the achievement of competences and the development of care skills. This explains why students experience increased stress upon contact with suffering because the probability of facing this type of situation increases with more complex periods of clinical clerkship. After reviewing the literature, no other studies that focus on the relationship between the characteristics of clerkship students and their stress levels were identified. However, we did find studies focused on nursing professionals that reinforced this hypothesis, such as nurses working in oncology services having higher levels of stress (Gómez-Urquiza et al., 2016).

Other stressors associated with personal factors, such as family burden and workload, may increase student stress. However, in contrast with other authors (Admi et al., 2018; Chernomas and Shapiro, 2013; He et al., 2018), students with children, as well as those who report having work experience, face various situations during clinical clerkship, such as having to give bad news or dealing with patients trying to touch certain parts of the student's body, in better ways. Some authors suggest that this may be due to the fact that those students who have not had work experience could have more doubts and questions when applying the theoretical material to clinical practice (Tomaschewski-Barlem et al., 2014). These authors also highlight the possibility that work experience contributes to emotional strengthening and increased self-confidence, thus improving their ability to cope with situations that may arise during clinical clerkship.

The risk of infection through needlestick injury, which was identified as one of the most stressful factors, was significantly associated with the degree of satisfaction with the clinical clerkship ($p = 0.027$). This association points to the fact that, alongside increasing reported satisfaction, stress increases with the risk of infection through needlestick injury. Some studies show high rates of biological accidents among students and also reveal a considerable level of under-reporting, mainly due to a lack of knowledge of the reporting system and the low perception of risk (Alcántara Luque et al., 2013; Merino-de la Hoz et al., 2010; Orozco, 2013). The nursing programme at Jaume I University has a response protocol in case of biological accident due to needlestick injury for a student. In addition, the study curriculum in the third year includes a subject with theoretical-practical contents related to communicable diseases and, in particular, on the prevention of biological-risk accidents. However, data related to the incidence of these accidents, as well as their manner of exposure and risk behaviours, are unknown. This fact points out the need to deepen knowledge about the association between the theoretical instruction and the incidence of biological accidents among nursing students at Jaume I University.

In addition, it should be noted that the relationship between gender and high stress levels does not seem to be an isolated finding because similar results have been reported in other studies. Therefore, this phenomenon requires deeper research, insofar as no plausible explanation has been offered elsewhere in the relevant literature (Admi et al., 2018; Suárez-García et al., 2018).

Regarding the limitations of the study, the small sample size demands that the results be interpreted cautiously, notwithstanding their representativeness of the population being studied. Likewise, the study was carried out at a single institution, so the results cannot be generalised. In contrast, a longitudinal design would permit follow-up of the same group of students throughout the degree programme. Moreover, it is worth mentioning that the Maslach Burnout Inventory Student Survey (alongside other scales), despite being recommended by the literature and being widely disseminated, suffers from factorial structure limitations (Gil-Monte and Peiró, 1999).

Despite these limitations, the study results are of interest because they show that the nursing students at Jaume I University (Universitat Jaume I) do not manifest burnout syndrome, contrary to other studies that have reported incidences between 34.7% and 43.6% for this syndrome (Ayaz-Alkaya et al., 2018; Del Río Moro et al., 2003). In addition, it was possible to identify the main stressors during clinical clerkship, in order to develop specific interventions to improve the quality of learning. Particularly, it is clear that the theory-practice gap is one of the main stressors faced by nursing students, despite not being implicated in this study. It is possible that the structure of the study programme for this nursing degree, which incorporates a theoretical and practical approach, is a protective factor against this source of stress. To confirm this hypothesis, comparative studies with other nursing programme with different curriculum structures are necessary.

6. Conclusions

According to the study's results, no student reported high levels of depersonalisation or low levels of personal accomplishment. In this sense, the nursing students at Jaume I University do not meet the criteria necessary to establish the presence of burnout syndrome.

This study allowed the identification of helplessness and uncertainty, lack of competence, and overload regarding situations in the clinical setting as the predominant stressful dimensions. In particular, the main stressors included confusion of medication, risk of infection through needlestick injury and 'making a mistake'.

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Conflicts of interest

None.

Ethical approval

Not applicable.

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