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Clinical Case

NANDA-I Diagnosis risk of occupational injury (00265): Clinical Case

Juan Vega-Escaño[1], Carmen Fernández-Garrido[2], Sonia Repullo-Leiva[3], Rocío de Diego-Cordero[4]

1 Associate Professor, *Spanish Red Cross Nursing School. University of Seville, Spain*.

2 Occupational Health Nursing. Subdirectorate General for Attention to Personnel and Prevention of Occupational Risks. Granada City Council. Spain.

3 Occupational Health Nursing. Occupational Health Service. Reina Sofia University Hospital. Córdoba. Spain.

4 Assistant Professor, Department of Nursing. University of Seville. Spain.

ABSTRACT

The Occupational Nursing professional is a key piece in the approach to sleep disorders derived from labor aspects as well as in the prevention of their appearance or of the damages caused by it and the adoption of measures that promote occupational health in relation to these disorders. A clinical case of Occupational Nursing is presented where the worker manifests a symptomatology derived from the working conditions to which he is subjected. After the assessment, it is determined that the factors associated with the working conditions are the trigger of the referred insomnia symptoms and that these pose a risk of occupational injury in the worker.

Keywords: Occupational Healthcare Nursing; Insomnia; Working Conditions; Health Survillance.

Corresponding author

Juan Vega-Escaño

juanvegadue@gmail.com

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Introduction

The Ocupational Health Nursing is a nurse specialty that deals with the health status of individuals in their relationship with the world of work trying to reach the highest physical, mental and social level of the working population considering the individual not as an element isolated but taking into account the individual characteristics of the worker, the job position and the socio-labor environment in which it is developed (1).

The use of a standardized nursing language, typical of nursing and common to all nurses, provides benefits that redound in teaching, research, management and care practice (2). While RD 1093/2010 indicates that the minimum data set of clinical reports in the national health system, nursing diagnoses, results and nursing interventions must be expressed according to the NANDA, NOC and NIC taxonomies (3), the reality is that the use of standardized nursing language among nurses continues to be a challenge to achieve today, especially in certain specialties such as occupational nursing, which is a specialty in which progress towards new professionals not only in clinical practice, but in teaching and research, is a reality today (4).

Insomnia is the most common sleep disturbance. Its incidence in the population is high and notably deteriorates the quality of life of the people who suffer from it, with negative repercussions on their family, work and social activity (5).

Clinical Case

The 51-year-old Mr. MR attends the Health Surveillance Department of the Foreign Prevention Service hired by his company to carry out a health examination for the renewal of the certificate of psychophysical aptitude according to ORDER FOM / 2872/2010 (6) required to obtain the qualifying certificate for the exercise of the functions of railway personnel as *safety pilot in traffic.* Among the functions and tasks of this position are the surveillance of the infrastructure and protection of the maintenance work on the track (in relation to the safety of rail traffic) as well as the surveillance of the level crossings. During the instrumental examination carried out by the occupational nursing specialist nurse, in addition to the complementary tests, the taking of biological blood and urine samples for the detection of alcohol consumption or drug abuse are included. Added to this is accomplished detecting possible alterations of sleep through the *Pittsburg sleep quality index* questionnaire *(PSQI)* (7) and *Scale Epworth sleepiness* (ESE) (8). The score obtained in both tests was 18

and 14 points indicating "poor quality of sleep" and "abnormal sleepiness (possibly pathological)", respectively.

Overall Rating

Carrying out a correct assessment that includes the collection and standardized analysis of the information will allow detecting the problems on which to act, restoring the health of Mr. MR

Initial physical assessment

Medical diagnosis: Insomnia

Reason for consultation: Railway staff health examination.

a) Work history:

- Current job: Mechanic.
- Qualification: Traffic safety pilot.
- Risks of the position: standing, lung disease, driving of vehicles, cuts and wounds, professional dermatosis, manual handling of loads, forced postures, burns, electrical risk, noise, welding, turnicity, vibrations, projection of particles and confined spaces.

b) Instrumental Exploration:

- Anthropometry and Constants: Weight: 62 kg; Size: 170 cm; (BMI): 21.45 kgs / m^2; Abdominal circumference: 88 cm; Systolic BP: 130 mm / Hg; Diastolic BP: 80 mm / Hg. FC: 76 ppm.
- Complementary tests: electrocardiogram, forced spirometry, vision control (far, near and intermediate, campimetry, stereoscopic vision, chromatic vision, glare test) and liminal tone audiometry with previous otoscopy: parameters within normality.

c) Physical examination: ranges of normality in pulmonary and cardiac auscultation (without presence of murmurs), vascular examination, central and peripheral neurological examination, mobility of the spine and extremities. Soft and depressible abdomen, painless muscle and joint palpation.

c) Anamnesis:

- Family history: leukemia (father), breast neoplasia (mother), cerebrovascular accident (maternal grandmother).
- Personal history: myopia, presbyopia, appendectomy, adenoidectomy.
- Allergies: not known.
- Pharmacological: gastric protector.

d) Tests of psychological ability of a cognitive, psychomotor and behavior-personality character (Personality Test 16 PF (9) and the Montreal Cognitive Assessment Test (MoCA) (10) within normality.

Nursing assessment according to the Virginia Henderson model:

1. Breathe normally.

   Heart rate: 76 bpm

   Blood pressure: 130/80 mmHg

   M. of independence: does not smoke. Breathe without difficulty; m. dependency: not observed; data to be considered. Ex-smoker 5 years ago.

2. Eat and drink properly.

   M. of independence: follow a balanced diet, following recommendations for gastroesophageal reflux. M. of dependency: not observed; Data to be considered: size: 170 cm; Weight: 62 Kg;

3. Eliminate by all bodily routes. M. of independence: normalized his intestinal habit; m. dependency: not observed; data to be considered: not observed.

4. Move and maintain proper postures.

M. of independence: regular activity (walks in the afternoons); m. dependency: not observed; Data to be considered: normal central and peripheral neurological examination, good mobility of the spine and extremities.

5. Sleep and rest. M. of Independence: The patient have attended to relaxation sessions in his district. M. of dependency: he refers to having problems falling asleep since, according to what he says, *"since I started working as a security pilot, between schedule changes and the responsibility of the job, sleeping is something that costs me a lot of work"* ; Facts to consider: The patient sleeps between 4-5 hours a day, and feels tired and drowsy during the day.

6. Choose the right clothes. Dressing and undressing. M. of independence: dress appropriately; m. of dependency: not observed; data to be considered: not observed

7. Maintain body temperature within normal limits by adjusting clothing and modifying the environment. M. of independence: not observed; m. dependency: not observed; data to be considered: he remains his temperature at 37º C.
8. Maintain body hygiene and skin integrity. M. of independence: adequate state of hydration of skin and mucous membranes; m. dependency: not observed; data to be considered: not observed.
9. Avoid environmental hazards and avoid injuring other people. M. of independence: has glasses. Follow appropriately the pharmacological treatment indicated for the control of gastroesophageal reflux. M. Dependency: poor sleep hygiene that can lead to harm oneself and others. Data to be considered: not observed.
10. Communicate with others expressing emotions, needs, fears or opinions. M. of dependency: sometimes he admits *feeling overwhelmed by the responsibility associated with the position.* data to consider alert and oriented.
11. Live according to your own values and beliefs. M. of independence: he refers to being very close to his partner with whom he has been in a relationship for 20 years and very excited about his grandson.; m. dependency: not observed; data to be considered: not observed.
12. Be engaged in something in such a way that your work has a sense of personal fulfillment. M. of independence: he shares with his relatives the joy of having achieved the position he now occupies. M. of dependency: not observed; Facts to Consider: Your financial situation has improved with this job.
13. Participate in recreational activities. M. of Independence: he goes fishing with his friends on weekends and collaborates in the neighborhood association in his neighborhood. M. of dependency: not observed; data to be considered: not observed.
14. Learn, discover or satisfy the curiosity that leads to normal development and to use available resources. M. of independence: he knows that he must change his sleeping habits and is interested in the nurse giving him explanations about his health problem; m. Dependency: inadequate sleep hygiene (lack of knowledge). data to be considered: not observed.

Planning and execution

Once the occupational health examination has been carried out and the problems identified, we elaborate a nursing care plan using the taxonomies, NANDA, NIC and NOC.

The following table (Table 1) shows the care planning and the follow-up and evaluation after its execution. These are prepared following the standardized nurse taxonomy (11-13).

To carry out the evaluation, we apply a rating scale from 1 to 5 where 1 is nothing proven and 5 is always proven. After the initial assessment, we established a follow-up by monthly telephone contact and a final assessment at three months.

The NOC outcome criteria evolved positively. Thus, we can see in the attached table how the indicator 19020, which recognizes personal risk factors, goes from having a score of 1 in the initial assessment to a score of 5 at three months, always recognizing the worker's risk factor. The same occurs with the indicator (190221), which recognizes the ability to change behavior, that goes from an initial score of 2 to a final score of 5.
The indicators (190204) and (190208) go from having an initial rating of 1 to a final rating of 4 after three months, reaching almost the maximum.

Regarding the proposed activities, once the risks have been identified, training actions will be carried out on the prevention of occupational hazards and health and safety at work, which have previously shown to be a key element for occupational safety and health (14) and that will help to detect situations that may pose a work risk.

Table 1. NANDA diagnosis with the corresponding NOC, NIC and activities realized

<table>
<tr><td colspan="5">Nurse Diagnosis: (00265): Risk of occupational injury R / C rotation of night and day shifts</td></tr>
<tr><td colspan="5">Definition: susceptible to a work-related accident or illness, which can compromise health</td></tr>
<tr><td colspan="4">NOC RESULT</td><td>NIC INTERVENTION</td></tr>
<tr><td colspan="4">1902 Risk control</td><td rowspan="6">[6610] Risk identification
- Identify biological, environmental and behavioral risks, as well as their interrelationships.
- Apply risk reduction activities.</td></tr>
<tr><td colspan="4">EVALUATION
Scale from NEVER proven (1) until ALWAYS proven (5)</td></tr>
<tr><td>Indicator</td><td>Initial value</td><td>Final Value</td><td>Evaluation/Follow-up</td></tr>
<tr><td>[190201] Recognize personal risk factors.</td><td>1</td><td>5</td><td>3 months/ 1 month</td></tr>
<tr><td>[190204] Develop effective risk control strategies.</td><td>1</td><td>4</td><td>3 months/ 1 month</td></tr>
<tr><td>[190208] Modify your lifestyle to reduce your risk.</td><td>1</td><td>4</td><td>3 months/ 1 month</td></tr>
<tr><td>[190221] Recognize the ability to change behavior.</td><td>2</td><td>5</td><td>3 months/ 1 month</td></tr>
</table>

Collaboration problem: insomnia	
NOC RESULT	NIC INTERVENTION
0004 Sleepness	[1850] Improve Sleep [6480] Environmental management

Discussion / Implications for clinical practice

The present case shows the consequences of a poor adaptation to a new (although desired) work situation (marked by changes in work shifts) that ends up affecting the worker's sleep / rest, insomnia appearing as a derived pathology.

Insomnia is the most frequent alteration of sleep. 30-40% of the adult population report symptoms of insomnia, with the consequent deterioration in the quality of life of those who suffer from it, with negative family, work and social repercussions. Despite its clinical relevance, it frequently goes unnoticed by healthcare professionals due to lack of time, information or resources, preventing correct diagnosis and treatment (5).

The diagnostic phase of this clinical case has been conditioned by the existence of the newly incorporated diagnostic label *Risk of occupational injury* (00265). This tag has been incorporated in the latest update of NANDA-1 (2018-2020) (11). It is found within l Domain 11, Class 4, Concept: occupational lesion. It currently has a level of evidence of 2.1. It has established 10 individual and 15 environmental risk factors, among which is the *"rotation of night and day work shifts",* which is directly related to the case raised.

Coupled with this, in this case, the risk of occupational injury is both for the worker and for third parties since insufficient sleep causes neurocognitive changes such as excessive daytime sleepiness, which carries a greater risk of accidents at work and traffic.

Conclusions

This clinical case shows the need for a broader vision on the part of Occupational Nursing professionals, with autonomy and their own professional responsibility that entails specialized training, as well as a greater approach as part of a multidisciplinary team in the performance of health examinations with a view to an early detection of pathologies that are highly influential in the psychophysical capacity of professionals and rarely diagnosed in health surveillance.

Together with this, the benefits of establishing the use of nursing language as a necessity among Occupational Nursing professionals are shown, thus allowing faster and more effective communication between them and giving rise to the use of common criteria and standardized protocols, which will result in a higher quality of care offered by the specialty.

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