Review Article

Nursing in pain management at urgency and emergency care units

Paulo Eduardo Pires de Oliveira[1], Lilian Varanda Pereira[2],
Nilde Resplandes Santos[3], Layz Alves Ferreira Souza[4]

[1] Nurse. Nurse at the Intensive Care Unit of the Anis Rassi Hospital. Goiânia, Goiás, Brazil. E-mail: eduardopepo@hotmail.com.

[2] Nurse, PhD in Basic Nursing. Assistant Professor at the Nursing School of the Federal University of Goiás. Goiânia, Goiás, Brazil. E-mail: lilianvaranda7@gmail.com.

[3] Nurse, Master in Nursing. Nurse at the Clinical Hospital of the Federal University of Goiás. Goiânia, Goiás, Brazil. E-mail: nildes_resplandes@hotmail.com.

[3] Nurse, Master in Nursing. Student at the Doctoral Program in Nursing of the Federal University of Goiás. Nurse at the Surgical Clinic of the Clinical Hospital, Federal University of Goiás. Goiânia, Goiás, Brazil. E-mail: layzenf@gmail.com.

Received: 08/21/2015.
Accepted: 12/04/2015.
Published: 06/30/2016.

Suggested citation:
Oliveira PEP, Pereira LV, Santos NR, Souza LAF. Nursing in pain management at urgency and emergency care units. Rev. Eletr. Enf. [Internet]. 2016 [cited __/__/__];18:e1171. Available from: http://dx.doi.org/10.5216/ree.v18.37309.

ABSTRACT

Nursing must manage pain in urgency and emergency care based on scientific evidences but there seems to be obstacles to this practice. The objective of this study was to identify and analyze pain management strategies and barriers for their use among the nursing professional categories at urgency and emergency care units. An integrative review was conducted with searches on LILACS, SciVerse Scopus, PUBMED, and in the Academic Google grey literature. Fifteen articles published between 2012 and 2015 were selected. Nursing professionals assessed pain characteristics through anamneses and use of instruments. Interventions were primarily limited to pharmacological ones, pointing to the need to associate them with non-pharmacological interventions. The monitoring of pain is still incipient. Professionals need to further the use of valid instruments for pain assessment, intervention, and monitoring to overcome the barriers faced by professionals, patients, and managers at urgency and emergency units to systematize its management.

Descriptors: Emergency Nursing; Pain; Pain Management.

INTRODUCTION

Pain is one of the main complaints by users seen at urgency and emergency units (UEUs)[1]. Although the appropriate relief from this experience is a human right[2-3], the production of knowledge on nurses' performance on pain assessment, relief, and monitoring at these units is still scarce[4-7]. A search at systematic reviews at the libraries of the Cochrane and Joanna Briggs Institute found one single review (without meta-analysis) on nursing interventions for adult patients with chronic pain[8]. However, that paper did not address

specific questions on pain management at the urgency and emergency context, which is characterized primarily by acute pain episodes. Barriers for the performance of this type of management were not addressed either.

This scarcity of studies hinders the dissemination of knowledge on the importance of pain assessment, available strategies for its control, and overcoming the barriers for the practice of evidence-based nursing. Moreover, the inappropriate relief of acute pain may increase catecholamines that cause tachycardia, in addition to raising blood pressure and myocardial oxygen consumption. Consequently, ventricular dysfunction and myocardium ischemia may occur. Acute pain also induces the production of hormones such as cortisol and glucagon, which increase the risks of developing immunological resistance to insulin, hyperglycemia, hypercoagulability, and dysfunctions[7,9]. These alterations may worsen the clinical picture of individuals in urgency or emergency situations.

When care is provided at an UEU, complaints, pain worsening/mitigating and concomitant factors must be assessed; likewise, personal and family background and indicators of discomfort created by the pain experience must be measured through instruments by which patients can express themselves. These instruments must also supply background for the choice of the best analgesic therapy[9-12].

After assessing the pain experience, nurses must be able of performing and prescribing nursing interventions that may provide pain relief, additionally to managing the prescribed analgesic medication and monitoring both relief and complications caused by this medication[9]. However, studies[4-6,10,13-15] show unfamiliarity and barriers concerning the appropriate nursing performance in pain management at UEUs.

Thus, considering that most of the clinical situations at UEUs involve the presence of pain, that this experience cannot be neglected in the assessment and intervention process, and that research on pain management by the nursing staff at these units is scarce, this study was conducted to enhance knowledge acquisition on the nursing performance on pain management at UEUs. The objective of this study was, therefore, to identify and analyze pain management strategies and barriers for their use among nursing professional categories at urgency and emergency care units.

METHOD

An integrative literature review was conducted between January and December 2015. The methodological framework, based on other authors' proposals[16-17], is presented in Figure 1.

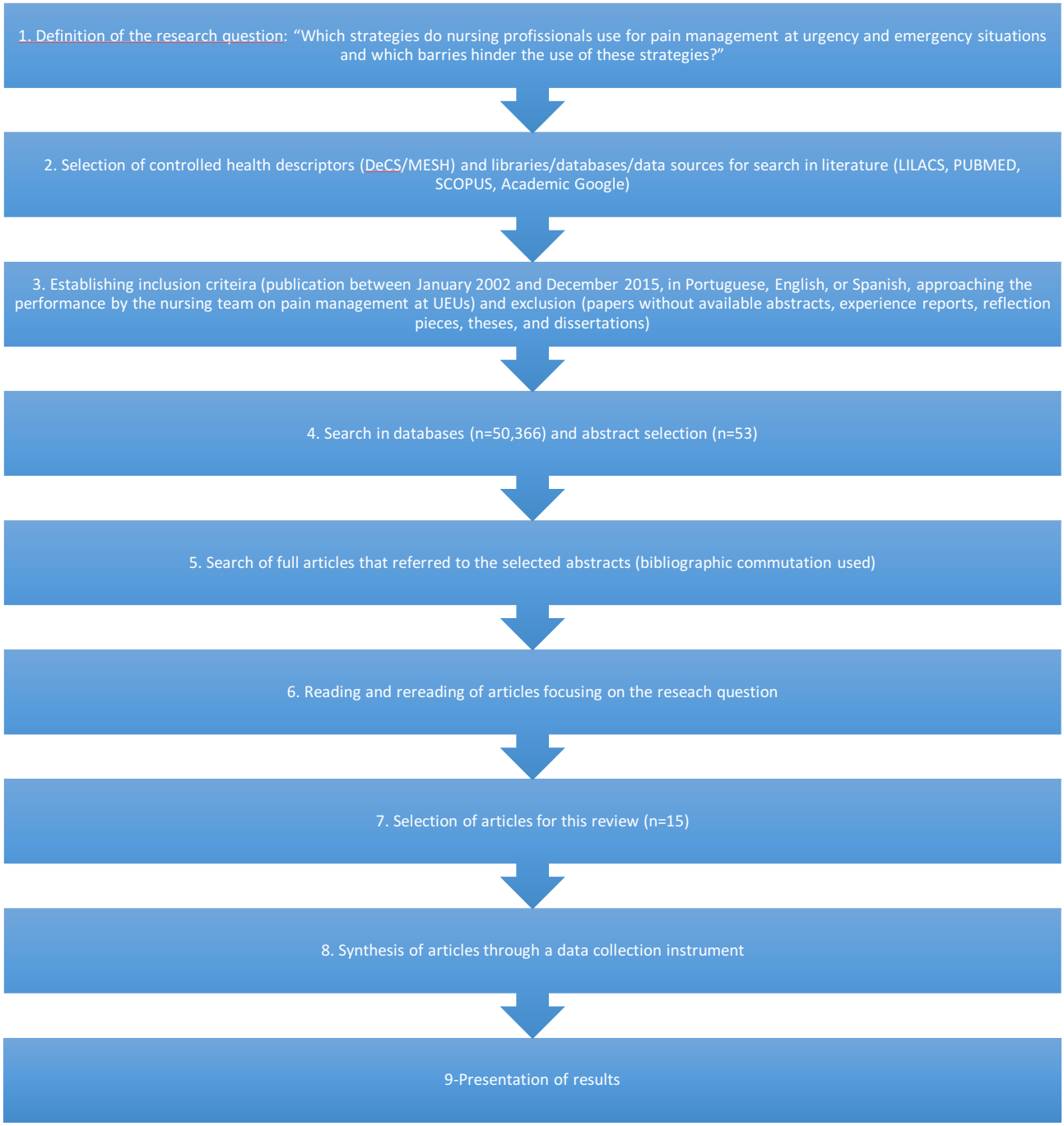

Figure 1: Methodological framework of the integrative review conducted. Goiânia, Goiás, Brazil, 2015.

For the elicitation of the research question, the target population was identified along with the interest variables and expected results (PVO Strategy: adaptation of the PICO strategy recommended by Bireme for situations where a specific intervention is not searched)[18]. The interest population consisted of nurses, nursing specialists, and nursing aides at urgency and emergency services. The interest variable was pain management (pain assessment, intervention, and/or monitoring) and the barriers experienced by nursing professionals during this management. The expected results were strategies used by the nursing team for pain assessment (use of instruments, anamnesis, or physical examination), types of interventions used (pharmacological and/or non-pharmacological), follow-up of the clinical evolution of pain (pain monitoring), records or notes on difficulties found by the professionals for performing adequate pain management

(barriers for pain management). Thus, the research question was: "Which strategies do nursing professionals use for pain management at urgency and emergency situations and which barriers hinder the use of these strategies?"

A search was conducted on the databases Latin American and Caribbean Center on Health Sciences Information (LILACS), SciVerse Scopus, and on the US National Library of Medicine National Institutes of Health — PubMed portal. The Academic Google grey literature was also used because it enables an extension of the search[17]. For the PubMed and SciVerse Scopus search, controlled search was used through crossings with the Boolean operator *and*. The MESH descriptors used were Emergency Nurse, Pain, Measurement Pain, Management Pain, Emergency Treatment, Emergency Medical Service, Emergency Hospital Service, Based Evidence, Ambulances, Air Ambulance, and Emergencies.

As far as the additional databases and Academic Google are concerned, controlled descriptors were selected in agreement with the Health Sciences Descriptors (DeCS, as per its acronym in Portuguese — 2014 edition) and crossings made with Emergency Nursing, Pain, Pain Assessment, Pain Management, Pain Measurement, Emergency Treatment, Emergency Medicine, Evidence Based Emergency Medicine, Emergency Medical Services, Emergency Hospital Services, Air Ambulance, Ambulance, and First Aid.

The articles included were published between January 2002 and December 20, 2015, the period that followed Amendment GM/MS no. 2048/2002, which regulated Brazil's state urgency and emergency systems. Additional inclusion and exclusion criteria are presented in Figure 1.

The crossing of descriptors resulted in 34 studies on LILACS, 35,733 on Academic Google, 11,377 on PubMed, and 3,170 on SciVerse Scopus. Their abstracts were assessed through the application of Relevance Test I[16]. When selected, they underwent a new assessment (Relevance Test II), which consisted of the following questions: Does this study focus on the solution of the specific problem that is being investigated? In other words, does the study assess somehow the way nursing professionals manage pain in urgency or emergency situation and the barriers they experience in this context?

After this stage, abstracts were selected and the studies to which they belonged were read in full, with help from the Brazilian Ministry of Health's bibliographic commutation sector, and were analyzed through a Final Relevance Test[16]. For each article, a form was filled out with answers to the following questions: Is the research problem related to pain management by nursing professionals in urgency or emergency situations? Is the study objective related to the question studied by this review? Is the methodology well described so that it can be reproduced? Is the methodology adequate for reaching the objectives? Are the results compatible with the methodology used in the study? Is the application of results possible in practice and do the benefits surpass the potential risks and justify the costs? The articles that positively answered the questions were included in the review.

The selection of studies for this review included eight articles from PubMed, three from SciVerse Scopus, three from Academic Google, and one paper from LILACS, totaling 15 studies. An instrument created by the authors was used which included items on the article identification, name of the institution that

headquartered the study, type of publication (healthcare area the publication belongs to), methodological characteristics (type of study, characteristics of the studied sample, characteristics of the type of pain assessed, studied pain assessment instruments, research question), resulted obtained by the study, conclusions, and assessment of the methodological accuracy. The information was obtained by a thorough reading.

Later, the study methodological characteristics were analyzed and they were classified according to six evidence levels[19]: Level I – meta-analysis of multiple controlled studies; Level II – individual studies with an experimental design; Level III – studies with a quasi-experimental, cohort, or case-control design; Level IV – study with a non-experimental design, including qualitative research and case studies; Level V – case reports or data obtained systematically, of verifiable quality, or program assessment data; Level VI – opinion by reputed authorities based on clinical ability or opinion by boards of specialists.

RESULTS

The findings showed that most of the studies on the subject still focus on patients' pain assessment; when they address interventions, these are mainly restricted to medicine administration according to medical prescriptions and the monitoring of this process is still incipient, pointing to the vulnerabilities in pain management at UEUs[4-6,10,13-15,20-25].

The barriers pointed out to an effective pain management refer to the professionals themselves (fear, unreliability, frustration, lack of empathy with patients etc.), with patients (difficulty understanding the scales used, clinical instability, reluctance in accepting opioids), or with the institution's organizational questions such as shortfalls in continuing education programs on the subject, conflicts between professionals and managers, high demand by patients, and service infrastructure and organization[4-6,10,13-15,22,24,26-27].

The synthesis of this review is presented in Table 1.

Chart 1: Distribution of articles selected (n=15) according to authors, year and country of publication, evidence level, and synthesis in terms of results found regarding management and barriers for pain relief at UEUs. Goiânia, Goiás, Brazil, 2015.

Authors/Country/Year/Evidence level	Pain management			Barriers to pain management
	Assessment	Intervention	Monitoring	
Callil and Pimenta[7] Brazil 2005 IV	Nurses state they assess pain by listening to patients' complaints (81%), agitation, facies of pain and/or comfort (18.2%).	Administering analgesic medication according to doctors' prescriptions.	Assessing analgesia by listening to reports of pain presence or absence after administration of medicine.	Unreliability or under administration of analgesic opioids when patients score on the Glasgow scale <9 and/or occurrence of traumatic brain injury.
Stalnikowicz et al.[23] Israel 2005 II	Nurses used the Visual Analogue Scale (VAS) at the UEU's triage.	Referring patients to medical service and administering analgesic medicines prescribed. Priority cases were selected based on the clinical picture and on higher pain intensity (VAS>7).	Pain was reassessed 30-60 minutes after the analgesic medication and at discharge. A reduction in the average of pain scores (VAS 5-7) was observed.	Not applied
Rampanjato et al.[5] Central Africa 2007 IV	Nurses used the Numeric Pain Rating Scale (NRS) at the UEU's triage.	Administering analgesic medicines according to the institution's protocol still during triage. Patients who scored >7 on the NRS received priority analgesia when compared with patients who assessed their pain as of lesser intensity ($p<0.05$).	Not applied	Nurses stated they felt incapable of assessing pain adequately (80%), and 67% admitted fear in administering morphine.
Le May et al.[27] Canada 2009 II	Not applied	Not applied	Not applied	Absence or shortfalls in educational interventions for managing pain can harm nursing care at UEUs. Nurses who received educational interventions on the subject improved the documentation of the pain experience and the use of non-pharmacological analgesic therapies.

Authors/Country/Year/Evidence level	Pain management			Barriers to pain management
	Assessment	Intervention	Monitoring	
Van der Wulp et al.[6] Holland 2011 IV	Nurses at UEUs' triage services did not assess pain behaviors and circumscribed their action to the questions established by the Manchester protocol and measurement of vital signals to infer on the pain experience.	Not applied	Not applied	In 86.1% of the cases, pain should have been assessed by a nurse but it was not. The existence of other hospital procedures for patients during triage (for example: blood collection), analgesic self-medication before care at the UEU (the nurse had the preconception that this might harm a reliable pain assessment), and using the Manchester protocol, which consists of anamneses and physical examination that did not focus on important aspects of pain assessment hindered the assessment.
Ribeiro et al.[20] Brazil 2011 IV	Nurses assessed pain by observing patients' pain behaviors (crying, facial expression, analgesic position, agitation, change in sleeping patterns, impatience, hipoativity, fidgeting) and objective data (vital signs, sweating, and pallor).	Administering analgesics according to doctors' prescriptions and applying non-pharmacological analgesic therapies such as dialogue, guiding, adjusting body position in bed, thermal comfort, taking off wet and dirty diapers, bath, use of local compresses, breathing exercises, massage, humanized attitudes, relaxation and distraction techniques.	Not applied	Not applied
Nascimento and Kreling[4] Brazil 2011 IV	Nursing specialists and aides assessed the presence of pain using the Verbal and Numeric Scale upon assessment of vital signs.	Not applied	Not applied	Nursing specialists and aides mentioned difficulties to assess pain because patients did not understand pain intensity scales and for lacking enough time to assess it themselves. Nurses' limits as supervisors and managers of the patients' pain were pointed out based on knowledge and proactive attitudes.
Shaban et al.[15] Australia 2012 IV	Not applied	Using the analgesic indication flowchart according to the institution's protocol at the time of triage.	Not applied	Nurses mentioned difficulties to implement the analgesic indication protocol at triage due to undervaluing patients' subjective information, lack of empathy, and pressures from the company.

Authors/Country/Year/Evidence level	Pain management			Barriers to pain management
	Assessment	Intervention	Monitoring	
Fry, Hearn, McLaughlin[14] Australia 2012 IV	Nurses at the triage service assessed pain using NRS, verbal descriptors scale, and questions about the site of pain.	Application of the local protocol for analgesic prescription by nurses at triage.	Not applied	The fact that patients had used analgesic self-medication before care at the UEU was a barrier for administering other analgesics because of fear of adverse events. Only 47% of the nurses used the analgesic indication flowchart proposed by the institution's protocol.
Bergman[24] United States of America 2012 IV	Nurses at the urgency and emergency service of a large hospital referred to their frequent use of the Numeric Rating Scale.	Not applied	Not applied	Work overload pertaining to the sector demands (high number of patients waiting for care, insufficient number of beds for observation that produced prioritization of serious clinical cases to the detriment of patients whose only complaint was pain), conflicts at the work environment (care and management activities performed at the same time, which caused managing high demands in terms of nurses' performance; disagreement with doctors who do not assess and prescribe quickly to patients whose pain had already been assessed by nurses – lack of autonomy in terms of managing patients with pain) and frustration regarding nurses' role at UEUs. Because of the factors aforementioned, nurses fail to perform their functions.
Silva et al.[13] Brazil 2013 IV	Nurses used the Manchester protocol, which assesses pain in terms of site and intensity.	Not applied	Not applied	Nurses' restraint in terms of using the Manchester protocol limited the adequate assessment of the pain phenomenon at UEUs.
Gonçalves et al.[21] Brazil 2013 IV	Nurses and nursing specialists assessed pain at a pediatric UEU by observing changes in children's behavior (facial expression, crying, position, features), and verbal reports whenever possible.	Administering analgesics according to doctors' prescriptions and using non-pharmacological therapies such as non-nutritional suction, holding the children, and using warm and cold compresses.	Not applied	Not applied

Authors/Country/Year/Evidence level	Pain management			Barriers to pain management
	Assessment	Intervention	Monitoring	
Ucuzal and Dogan[22] Turkey 2015 IV	Most (80.7%) of the investigated nurses (n=57) did not use pain scales to evaluate it at triage. Almost half of them (48.4%) based their pain assessment on patients' behaviors.	Administering analgesics prescribed as "if necessary" whenever requested by patients.	Not applied	Fear of administering analgesic over dosages and deficit in knowledge on evaluation of pain.
Pretorius, Searle, Marshall[26] New Zealand 2015 IV	Not applied	Not applied	Not applied	Overload of nurses' responsibilities, delay between nurses' pain assessment and doctors' intervention, patients' reluctance in talking about their pain; patients who had used alcohol or other drugs before hospital care, nurses' inadequate knowledge on principles for pain management, inadequate monitoring of pain relief, and patients' reluctance in using opioids.
Dale and Bjørnsen[25] Norway 2015 IV	Nurses at the UEU's triage service used the NRS. In this study, 77% of the patients seen had their pain assessed. The ones who were not assessed for pain had not undergone assessment because they had more crucial clinical changes.	Administering analgesic medication according to doctors' prescriptions.	Not applied	Not applied

DISCUSSION

For analysis, the findings were grouped into three great axes that compiled evidences to facilitate discussion. Therefore, they comprehend: pain assessment by the nursing team, interventions used for pain relief, and pain monitoring. For each one of the topics, the identified barriers were addressed in the review.

Pain assessment by the nursing team

Difficulties in pain assessment were observed and suggest that nursing professionals do not assess pain as recommended[6,15], i.e., they do not assess place, intensity, starting moment, duration, frequency, sensitivity, factors that worsen and mitigate pain, impact, and pain evolution patterns[28].

Regarding instruments for pain evaluation, nursing professionals chose numeric, verbal descriptors, and visual analogue scales[4-5,14,20,23]. Nevertheless, professionals stated they made little use of them, resorting to isolated parameters[7,10,13,15,21,27], which impairs the process reliability[21].

Studies[4-5,20] showed that professionals have difficulty using evaluation scales, both because of unfamiliarity with them and because of patients' difficulty to interpret these instruments. A study[4] that investigated the behavior of nursing aides and specialists during pain management evidenced difficulty among professionals to interpret pain measurement instruments.

In that sense, misinterpretation or underestimation of pain will result in an inappropriate intervention[29]. Using multidimensional instruments that are valid for the population and culture in question that comprehend the main aspects of pain can be helpful[30]. However, because of the requirement for brief assessment for early interventions, it is recommended that at least numeric or verbal descriptors scales be used at UEUs[1,7,30]. An adequate pain assessment enhances its treatment. Through this assessment, the need for new interventions can be defined, the effectiveness of the prescribed intervention can be assessed, and it is possible to suspend the intervention performed.

Keeping nurses off the assessment process and pain management was one of the problems found[4]. However, these professionals have the legal duty to exert leadership in view of the different phenomena experienced by their patients[31]. The absence of good pain management by team leaders may be the cause for the difficulties mentioned by nursing specialists and aides when using pain assessment scales.

As far as the difficulties for pain assessment are concerned, professionals mentioned barriers such as work overload and the pressure coming from the requirement to use protocols for pain management[4,20]. Nursing professionals are constantly submitted to a heavy workload and have to perform their routine activities without planning, which produces distress and fatigue because of long working hours[32]. Nonetheless, adequate pain management cannot be compromised by labor issues: it is necessary to develop knowledge, abilities, and attitudes to improve the practice of pain management even in face of professional challenges[33].

Intervention for pain relief by the nursing team

In Australia, Africa, and Jerusalem patients received analgesic care early at triage, according to nurses' prescriptions. Nurses resort to governmental and institutional protocols/algorithms that endorse the prescription of analgesics by these professionals until the medical conduct is defined[5-6,14,20,23].

In Brazil, the process of administering analgesic medications at UEUs is still restricted to the doctors' decision at the time of care[1]. However, the law that regulates the professional exercise of nursing in Brazil grants nurses the right to prescribe medicines approved by public health programs and by the institutions' routines[31]. Thus, to improve analgesic treatment of patients seen at triage and minimize the waiting time to receive that treatment, a redesign of the public health policies is needed on this subject, additionally to a change of heart and culture by the government and society, proper training for nursing professionals for this task, a redesign of nurses' training, and a review of curricula at teaching institutions.

Quickly mitigating patients' suffering is an ethical question[2], in addition to being an issue of humanization of care[12]. Nurses can resort to other strategies such as using Brazil's National Humanization Policy[34] and thus practice embracement and qualified listening of individuals who seek care at UEUs and look forward to finding relief to their pain. This conduct could help overcome the barrier found in this study concerning lack of empathy by professionals with their patients' pain.

Non-pharmacological therapies can be useful, especially the actions at pediatric UEUs. The nursing measures more often used in these situations were: non-nutritional suction, holding the children, application of heat and cold on the place[21]. At adult UEUs, some of the actions mentioned were: having a dialogue with patients, offering guidelines, positioning patients properly in their beds, offering thermal comfort, taking off wet or dirty diapers, bathing or helping in bath, using local compresses, stimulating breathing exercises, massaging, providing a comfortable environment, caring in a humanized way, relieving pressure in skin, giving emotional support with clarifications, teaching relaxation and distraction techniques, offering verbal comfort etc.[20]. These techniques, however, were little used at UEUs, perhaps because of the urgency in alleviating pain at those units.

Nurses' conduct to intervene with patients with pain complaints was significantly improved after their participation in continuing education or training programs[23,27]. Adequate pain management at UEEs can be reached through professional development at training courses, emergency or specific classes, and continuous and structured programs[35].

Pain monitoring

Regarding pain monitoring, objective aspects (pain assessment scales, vital signs, occurrence of agitation, pain and comfort facies) and subjective (reports of pain) were observed[10]. Another study[23] evidenced the use of objective data such as the use of pain evaluation scales, highlighting the importance of their use.

It is worth pointing out that the lack of pain monitoring after the administration of analgesic therapies

can pose a risk for the success of the pain relief treatment, exposing patients to unnecessary suffering.

CONCLUSION

Patients with high intensity pain still wait for their pain to be relieved at UEUs. This could be mitigated by the use of protocols and flowcharts based on governmental public health programs that allow nurses to perform analgesic treatments early on.

The barriers that hinder adequate pain management are real. Among them, it is worth highlighting the difficulty that the team and patients face to interpret assessment scales, nurses' distance from the pain management practice, and nursing professionals' work overload.

There is a need for sensitizing nursing professionals and for training them in pain management, empowering nurses in this process. It is also necessary to rethink the Brazilian legislation on urgency and emergency so that pain is included as a priority at UEUs.

These findings evidence a need to reorganize the nursing care offered to people in pain who go to UEUs and point out to pain management as a basic issue in terms of humanizing care and providing high quality care services.

REFERÊNCIAS

1. Calil AM. Dor e Analgesia em Vítimas de acidentes de transporte atendidas em um pronto socorro [tese]. São Paulo. Escola de Enfermagem. Universidade de São Paulo. 2003. 182 p.
2. Souza LAF, Pessoa AP da C, Barbosa MA, Pereira LV. O modelo bioético principialista aplicado no manejo da dor. Rev Gaúcha Enferm. 2013;34(1):187–95.
3. Sallum AMC, Garcia DM, Sanches M. Acute and chronic pain: a narrative review of the literature. Acta Paul Enferm. 2012;25(spe1):150–4.
4. Nascimento LA, Kreling MCGD. Avaliação da dor como quinto sinal vital: opinião de profissionais de enfermagem. Acta Paul Enferm. 2011;24(1):50–4.
5. Rampanjato RM, Florence M, Patrick NC, Finucane BT. Factors influencing pain management by nurses in emergency departments in Central Africa. Emerg Med J. 2007;24(7):475–6.
6. van der Wulp I, Sturms LM, Jong A, Schot-Balfoort M, Schrijvers AJP, van Stel HF. Pain assessments at triage with the Manchester triage system: a prospective observational study. Emerg Med J. 2011;28(7):585–9.
7. Calil AM, Pimenta CA de M. Importância da avaliação e padronização analgésica em serviços de emergência. Acta Paul Enferm. 2010;23(1):53–9.
8. Castilho-Bueno M, Moreno-Pina J, Martinez-Puente M, Artiles-Suaréz M, Company-Sacho M, García-Andrés M, et al. Effectiveness of nursing intervention for experiencing chronic pain : a systematic review adult patients Executive summary. JBI Libr Syst Rev. 2010;8(28):1112–68.
9. Dunwoody CJ, Krenzischek DA, Pasero C, Rathmell JP, Polomano RC. Assessment, physiological monitoring, and consequences of inadequately treated acute pain. J Perianesth Nurs. 2008;23(1 Suppl):S15–27.
10. Calil AM, Pimenta CA de M. Conceitos de enfermeiros e médicos de um serviço de emergência sobre dor e analgesia no trauma. Rev da Esc Enferm da USP; 2005;39(3):325–32.
11. Bottega FH, Fontana RT. A dor como quinto sinal vital: utilização da escala de avaliação por enfermeiros de um hospital geral. Texto Context - Enferm. 2010;19(2):283–90.
12. Calil AM. Avaliação da Dor e Analgesia no Atendimento Pré-hospitalar em Pacientes de Trauma. Rev. Gaúcha Enferm. 2008; 29(2):308-13.
13. Silva AP da, Diniz AS, Araújo FA, Souza CC de. Presencia de la queja de dolor en pacientes clasificados de acuerdo con el Protocolo de Manchester. Rev Enferm Cent-Oeste Min. 2013;3(1):507–17.

14. Fry M, Hearn J, McLaughlin T. Pre-hospital pain management patterns and triage nurse documentation. Int Emerg Nurs. 2012;20(2):83–7.
15. Shaban RZ, Holzhauser K, Gillespie K, Huckson S, Bennetts S. Characteristics of effective interventions supporting quality pain management in Australian emergency departments: an exploratory study. Australas Emerg Nurs J. 2012;15(1):23–30.
16. Pereira AL, Bachion MM. Atualidades em revisão sistemática de literatura, critérios de força e grau de recomendação de evidência. Rev Gaúcha Enferm. 2006. 27(4):491-8.
17. Baldini Soares C, Akiko Komura Hoga L, Peduzzi M, Sangaleti C, Yonekura T, Rachel Audebert Delage Silva D. Integrative review: concepts and methods used in nursing descriptors Integrative review: concepts and methods used in nursing Critical review. Rev Esc Enferm USP. 2014;48(2):329–39.
18. Biruel P, Pinto R. Bibliotecário: Um profissional a serviço da pesquisa. In: Anais do XXIV Congresso Brasileiro de Biblioteconomia, Documentação e Ciência da Informação. Maceió, Alagoas, Brasil; 2011.
19. Stetler CB, Brunell M, Giuliano KK, Morsi D, Prince L, Newell-Stokes V. Evidence-based practice and the role of nursing leadership. J Nurs Adm. 1998 ;28(7-8):45–53.
20. Ribeiro NCA, Barreto SCC, Hora EC, Sousa RMC de. O enfermeiro no cuidado à vítima de trauma com dor: o quinto sinal vital. Rev da Esc Enferm da USP. 2011;45(1):146–52.
21. Gonçalves B, Holz AW, Lange C, Maagh SB, Pires CG, Brazil CM. O cuidado da criança com dor internada em uma unidade de emergência e urgência pediátrica. Rev Dor. 2013;14(3):179–83.
22. Ucuzal M, Doğan R. Emergency nurses' knowledge, attitude and clinical decision making skills about pain. Int Emerg Nurs. 2015;23(2):75–80.
23. Stalnikowicz R, Mahamid R, Kaspi S, Brezis M. Undertreatment of acute pain in the emergency department: a challenge. Int J Qual Health Care. 2005;17(2):173–6.
24. Bergman CL. Emergency Nurses' Perceived Barriers to Demonstrating Caring When Managing Adult Patients' Pain. J Emerg Nurs. Emergency Nurses Association; 2012;38(3):218–25.
25. Dale J, Bjørnsen LP. Assessment of pain in a Norwegian Emergency Department. Scand J Trauma Resusc Emerg Med. Scandinavian Journal of Trauma, Resuscitation and Emergency Medicine; 2015;23(1):86.
26. Pretorius A, Searle J, Marshall B. Barriers and Enablers to Emergency Department Nurses' Management of Patients' Pain. Pain Manag Nurs. American Society for Pain Management Nursing; 2015;16(3):1–8.
27. Le May S, Johnston CC, Choinière M, Fortin C, Kudirka D, Murray L, et al. Pain Management Practices in a Pediatric Emergency Room (PAMPER) Study: interventions with nurses. Pediatr Emerg Care. 2009;25(8):498–503.
28. Pimenta CA de M, Koizumi MS, Teixeira MJ. Dor, depressão e conceitos culturais. Arq Neuropsiquiatr. 1997;55(3A):370–80.
29. Sousa FAEF, Pereira LV, Cardoso R, Hortense P. Multidimensional pain evaluation scale. Rev Lat Am Enfermagem. 2010;18(1):03–10.
30. Sousa FAEF, Pereira LV, Hortense P. Avaliação e mensuração da percepção de dor. In: Alves Neto O, Costa CM de C, Siqueira JTT, Teixeira MJ, editors. Dor: Princípios e Práticas. Fisrt. Porto Alegre: Artmed; 2009. p. 370–81.
31. Brasil. Lei n. 7498, de 25 de junho de 1986. Dispõe sobre a regulamentação do Exercício da Enfermagem e dá outras providências. Brasília-DF.: Diário Oficial da República Federativa do Brasil; 1986.
32. Silva DB, Balbino CM. Fatores que contribuem para a sobrecarga de trabalho e seus efeitos no desempenho profissional do enfermeiro: revisão literária [Internet]. Revista Pró-UniverSUS. 2015 [cited 2016 Jan 3]. p. 11. Available from: http://editorauss.uss.br/index.php/RPU/article/view/384.
33. Peres AM, Ciampone MHT. Gerência e competências gerais do enfermeiro. Texto Context - Enferm. 2006;15(3):492–9.
34. Brasil, Ministério da Saúde. Política Nacional de Humanização. Brasília-DF 1ª edição. [internet]. 2013 [acesso em: 20 mar 2015]. Disponível em: http://bvsms.saude.gov.br/bvs/publicacoes/politica_nacional_humanizacao_pnh_folheto.pdf.
35. Silva GM da, Seiffert OMLB. Educação continuada em enfermagem: uma proposta metodológica. Rev Bras Enferm. 2009;62(3):362–6.