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Pediatric Pain Assessment at Gabriel Toure Hospital: Knowledge, Attitudes and Practices

Évaluation de la douleur chez les enfants à l'Hôpital Gabriel Toure: connaissances, attitudes et pratiques

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ABSTRACT

Objective. To describe the knowledge, attitudes and practices of health agents regarding pain of sick children at Gabriel Toure Hospital. **Methods** This was a transversal prospective study from April 16 to May 15, 2018. All medical or paramedical personnel of the paediatric department and the paediatric surgical unit of Gabriel Toure Hospital who agreed to participate in the survey were included. **Results.** The participation rate was 92.5% (11/120). The average age of the participants was 34 years. The sex ratio was 1.1. General paediatric care givers were the most numerous (38.7%), followed by residents (33.4%). Thirty-nine percent of respondents said they systematically assessed pain. Only 27% used a validated scale. To assess pain, 56.8% asked the sick child, 58.6% the parents and only 27% used a validated scale. The scales most familiar to staff were the visual analog scale (73%) and the verbal rating scale (41%). These two scales were most commonly used to assess pain, 56.7% and 26.7% respectively. Seventy-three care givers (65.8%) agreed that pain should be assessed at the time of patient admission. The vast majority (96.4%) believed that a systematic evaluation of the pain at admission using a suitable scale would improve the care. **Conclusion** Systematic assessment of children's pain is not performed in the medical and surgical paediatric wards of Gabriel Touré Hospital. Staff awareness and training will optimize pain management.

RÉSUMÉ

Objectifs. Décrire les connaissances, attitudes et pratiques des personnels de santé sur l'évaluation de la douleur chez l'enfant au département de pédiatrie et au service de chirurgie pédiatrique du CHU Gabriel Toure. **Méthodes.** L'étude s'est déroulée du 16/04/2018 au 15/05/2018. Elle était transversale prospective auprès du personnel de la pédiatrie médicale et chirurgicale du CHU Gabriel Toure. Ont été inclus tous les personnels médical ou paramédical ayant accepté de répondre au questionnaire établi pour l'étude. **Résultats** Le taux de participation a été de 92,5 % (111/120). L'âge moyen des personnels était de 34 ans. Le sex ratio était de 1,1. La pédiatrie générale était la plus représentée (38,7%) ; Les médecins inscrits au diplôme d'études spécialisées (DES) étaient les plus nombreux (33,4%). La douleur était toujours évaluée par 38,8% des personnels et 27 % utilisaient une échelle validée. L'échelle visuelle analogique (EVA) était connue par 81 agents (73%) et utilisée par 61,3% d'entre eux. Pour 73 agents (65,8%), l'évaluation de la douleur devait être réalisée dès l'arrivée. La grande majorité (96,4%) ont estimé qu'une évaluation systématique de la douleur à l'admission de l'enfant par une échelle adaptée améliorerait la prise en charge. **Conclusion.** Bien qu'indispensable à la prise en charge de la douleur, l'évaluation n'est pas systématique dans les services de pédiatrie médicale et chirurgicale du CHU Gabriel Touré

INTRODUCTION

Pain is a stressful experience considered a public health problem and children are the most vulnerable and underserved population [1]. In sub-Saharan Africa, pain is a physical, emotional and social concept. We learn to endure pain during ritual and initiation events [2]. Africa is undergoing socio-cultural change. Pain assessment and management are beginning to be at the center of attention in our health facilities. Proper pain management reduces anxiety for children and parents and increases compliance and collaboration, which can reduce some of the burden on medical staff [3, 4]. In light of this evidence, pain management in sick children is an important factor in meeting their needs and maximizing

the chances of recovery [5]. Pain in children is underestimated because of the lack of pain assessment tools**.** Acute pain that is not properly treated has a negative effect on the body. Despite the exponential increase in scientific evidence on childhood pain in recent decades, there are many barriers to transferring knowledge to clinical practice [6]. Pain assessment should be part of the patient's physical examination; however, this assessment is not systematic in our health facilities in sub-Saharan Africa. The management of procedural pain has long been neglected, and parents prefer to seek pain-free care for their children. The different tools for pain assessment in pediatrics have greatly improved overall management. Today, there are several assessment tools depending on the age of the child and the acute or chronic nature of the pain [7, 8, 9]. In Mali there is few data on the assessment of pain in children. This study aimed to assess knowledge and practical attitudes about pain assessment in sick children.

PATIENTS AND METHODS

Population

Our study took place in the Department of General Pediatrics and the Department of Pediatric Surgery at the Gabriel Toure University Hospital, located in Bamako, republic of Mali. It was a cross-sectional prospective study on the knowledge and practices of pain assessment in children, from April 16 to May 15, 2018 (one month). The participation in the survey was voluntary and anonymous.

Medical and paramedical staff from the department of general paediatric and the department of paediatric surgery participated in the survey. During the study period, staff physically present in the various departments took part in the study

Study methods

Population recruitment method

There was no choice for the delivery of questionnaires according to the professional categories. The data were collected using a pre-established, individual questionnaire. The survey sheet should provide information on the general profile of paramedical and medical staff, the teams' knowledge of pain assessment and management, and recommendations for improving pain-related care. The questionnaire was distributed by a single interviewer to facilitate recovery and reduce loss. The free and informed consent of the participants was obtained in advance and the information collected was

Statistic methods

The data collected were entered and analyzed using SPSS version 20.0 software (SPSS Inc., Chicago, IL).

RESULTS

Descriptive study

Epidemiological characteristics

A total of 120 survey sheets were distributed; one hundred and eleven health workers responded to the survey, representing a 92.5% participation rate. The average age was 34 years (with a range of 22 years to 57 years). The sex ratio was 1.1. General pediatric staff was the most represented (38.7%), followed by neonatology (18.1%) and pediatric emergencies (16.2%). By professional category, the participation rate was as follows: physicians specialized in pediatrics (33.34%), medical students (24.32%) and nurses (24.32%). More than half of our sample (51.4%) had less than 10 years' professional experience (**Table I**.).

Table 1. Socio-demographic characteristics of the respondents

Characteristics	Number	Percentage
Age (in years)		
≤20	5	4,5
26-35	62	55,9
36-45	32	28,8
>45	12	10,8
Gender		
Male	59	53,2
Female	52	46,8
Membership service		
Pediatric surgery	15	13,5
Pediatric Emergencies	18	16,2
Pediatric oncology	15	13,5
General pediatrics	43	38,7
Neonatology	20	18,1
Professional category		
Midwife	4	03,5
Nurse	27	24,32
Medical student	27	24,32
General practitioner	8	07,1
Physician specialized in Pediatrics	37	33,4
Pediatric Surgeon	4	03,5
Pediatricians	4	03,5
Professional experience (in years)		
<10	57	51,4
10-20	11	9,9
21-31	4	3,6
None	39	35,1

Pain assessment

Only 2.7% of our sample had no prior experience with children in pain. Pain was always assessed in 38.8% of cases; often (34.2%), occasionally (24.3) and never (2.7%). To assess pain, 56.8% asked the sick child, 58.6% the parents and only 27% used a validated scale **(Table II).**

Table II. The tools used for pain assessment

The Evaluation tools	**Yes**		**No**	
	N	%	N	%
Interview of the child	63	56,8	48	43,2
Interview of the parents	65	58,6	46	41,7
Common sense	5	4,5	106	95,5
Observation skills	31	27,9	80	72,1
Professional experience	30	27	81	73
Validated scale for the assessment of pain in children	30	27	81	73

The scales most familiar to staff were the visual analog scale (73%) and the verbal rating scale (41%). These two scales were the most commonly used to assess pain, 56.7% and 26.7% respectively (Figure 1.).

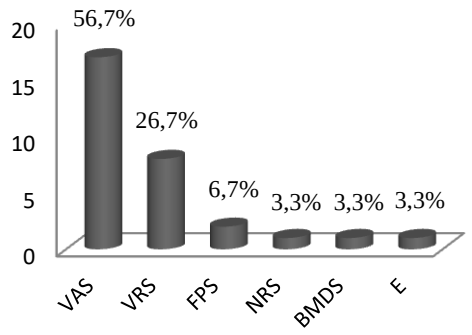

Figure 1. Distribution of scales used by staff.

VAS: visual analog scale; VRS: verbal rating scale; FPS: faces pain scale; NRS: Numerical rating scale; BMDS: body map drawing scale; E: Evendol scale

The other pain assessment scales less known by health care personnel were as follows: numerical rating scale (18.9%), faces pain scale (16.2%), Evendol behavioral pain scale (15.3%) and the body map drawing scale (6.3%). The majority of agents (65.8%) assessed pain upon arrival of the patient; 44.2% assessed if the child expressed pain. The majority of personnel (96.4%) believe that pain assessment improves patient management.

DISCUSSION

A total of 111 health workers participated in the survey, representing a rate of 92.5%. Miftah R et al in Ethiopia and Kabore et al in Burkina Faso recorded rates close to ours with 96.5% and 98% respectively [10, 11]. In Sudan, Alhassan et al. recorded a participation rate of 58% [12]. In our survey, 51.4% of health workers had less than 10 years' professional experience. Kabore et al. reported that 68.7% had less than 1 year of work experience. Alhassan et al. recorded 58% from 2 to 3 years of experience. According to the literature, the professional experience of health workers of less than 3 years is a quality factor for good pain management in emergencies, but only if they have been trained in algology [13]. Pain assessment should be systematic for any patient admitted to a consultation room. It makes it possible to quantify the degree of pain in order to give adequate treatment. In our series, pain was always assessed in 38.8% of cases; often (34.2%), from time to time (24.3%). Our result is similar to that of Kabore et al who reported 38% of staff who were still assessing pain. In Martinique 48% of prescribing doctors assessed pain [14]. In Morocco Bougtoub N. reports in his thesis that pain is always assessed in 17% of cases, often (42%), from time to time (36%) [15]. In another medical thesis defended in Marrakech, Abdelilah L. reported that 13.6% of staff always assesses pain; 35% often and 44.4% from time to time [16]. The lack of patient management protocol in our health facilities may explain the low rate of systematic pain assessment. For pain assessment 56.8% ask the sick child, 58.6% the parents and only 27% use a validated scale. In France, patient interviewing is used as an evaluation method in 58 to 80% of cases [17]. The absence of pain assessment scales in our structures and, above all, the lack of staff training, hinder the overall management of pain in children. The training of medical and paramedical staff on an evaluation and management protocol is an imperative necessity in our context. Sixty-five percent of staff report assessing pain upon arrival; however, 44.2% do so only if the child expresses pain. In Brazil, only 2% of health workers systematically assess pain [18]. our survey showed the high percentage of pain assessment at admission. this contrasts with the data in the literature on this aspect in developing countries. This raises the issue of the subjectivity of opinion surveys. The visual analog scale (73%) and verbal rating scale (41.4%) were the most known scales by the health personnel of both services. these two evaluation scales were the most used, i.e. 56.7% and 26.7% respectively.

Kaboré et al recorded 4% and 8% respectively for the use of pain assessment with visual analog scale and verbal rating scale. Our general paediatric and paediatric surgery departments do not have assessment tools, but very often some acquire them through pharmaceutical companies, which could explain the low use of these tools. We must adapt the pain assessment tools used in the West to our context where illiteracy is still preoccupying. Compared to the West, there is also a different cultural context compared to the approach to pain in the health environment. There is real groundwork to be done for a real change in behaviour in our health structures.

CONCLUSION

Although pain assessment tools are known by staff, their use remains very limited, hence the need for staff training in pain management.

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