

## EARLY DIAGNOSIS OF CHILDHOOD CANCER : ATTITUDES AND KNOWLEDGE OF HEALTH AGENTS IN SIKASSO HEALTH CENTERS

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### Summary

#### Introduction

The situation of childhood cancers is alarming in sub-Saharan countries where the cure rate does not exceed 15 to 20%, due to insufficient means of diagnosis, delay in treatment and especially the absence of protocols. appropriate chemotherapy. This is due to the inadequacy of the means of diagnosis, the delay in treatment and above all the absence of suitable chemotherapy protocols. The delay in diagnosis is based on a complex chain of factors and events complicated by the difficulties. Early diagnosis is a fundamental objective in oncology.

#### Patients and methods

This is a prospective, descriptive and cross-sectional study conducted for 6 months in 2021 on a sample of 120 community health workers. Data collection was carried out using a previously tested structured questionnaire.

#### Result

We interviewed 120 health workers and noted that 36.67% were general practitioners, 29.17% nurses, 5.83% paediatricians, 10.8% midwives and 17.5% other specialties. According to them, the first signs of cancer are adenopathy (90.8%), abdominal mass (89.2%), hepatosplenomegaly (75.8%) and 75.8% declare that there is a predisposition to childhood

cancer. Faced with an abdominal mass, 51.6% requested an abdominal ultrasound. 92.5% of agents thought that care depended on early diagnosis.

## CONCLUSION

Lack of knowledge of the early signs of cancer leads to a delay in diagnosis. It is necessary to develop strategies based on information, education and training of medical and paramedical personnel in order to reduce the long delay in consultation and therefore in diagnosis.

## Introduction

Cancer has become a major public health concern and one of the causes of child mortality worldwide, in both developed and developing countries [1].

Worldwide, childhood cancer is estimated to have an incidence of more than 175,000 per year and a mortality rate of approximately 96,000 people per year [2]. In developed countries, childhood cancer has a mortality rate of about 20% of cases. However, in countries with limited resources the mortality rate is around 80%, and even 90% in the poorest countries [2]. This work aims to study the knowledge and attitudes of medical and paramedical staff in the early diagnosis of childhood cancer in the health district of Sikasso.

## Materials and method

This is a prospective, descriptive cross-sectional study carried out over 6 months in 2019 on a sample of local health workers working in health structures in Sikasso. To be included, you must be health workers (doctor, midwife, state-certified nurse) working in a health structure and involved in health consultation and research activities.

Excluded are traditional healers and health workers working outside the district of Sikasso.

Data collection was carried out using a previously tested structured questionnaire appended.

➤ The questionnaire focused on:

- Sociodemographic information: age, sex, etc.;
- Knowledge of the ministerial circular and perspectives on childhood cancer screening;
- Knowledge and practices regarding the prevention of childhood cancers in general (risk factors, screening tests);
- Childhood cancer prevention knowledge and attitudes
- The practice of the clinical examination of childhood cancer and the analyzes likely to detect childhood cancer;

➤ Criteria for judging staff knowledge and attitudes.

Based on the responses obtained, it was decided to dichotomize the score at the threshold of 8, with scores  $\geq 8$  being considered good scores.

Table 1: Variables retained for the calculation of the knowledge, attitudes and practices (KAP) score among health workers.

	Correct answers (1 point per correct answer)
<p>Knowledge</p> <p>1. To your knowledge, is there a ministerial circular whose objective is the generalization of child cancer screening in basic health care establishments?</p> <p>2. In your opinion, are the factors below risk factors for childhood cancer? (Knowledge of at least 8 FDRs was considered correct answer)</p> <p>3. Childhood cancer is a public health problem in Mali</p>	<p>Yes</p> <p>. Age ;</p> <p>. Familial cancer ATCD;</p> <p>. Abdominal mass or swelling;</p> <p>. Prolonged and unexplained fever;</p> <p>. Paleness, loss of energy and rapid weight loss;</p> <p>. Prolonged and unexplained pain and headaches, often accompanied by vomiting;</p> <p>. Sudden bruising of balance or behavior;</p> <p>. Head swollen;</p> <p>. White reflections in the eye.</p> <p>Yes</p>

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<p>attitudes</p> <p>4. Childhood screening is important for early diagnosis of childhood cancer</p> <p>5. Clinical examination of children is important for early diagnosis of childhood cancer</p> <p>6. Imaging is important for early diagnosis of childhood cancer</p>	<p>Yes</p> <p>Yes</p> <p>Yes</p>
<p>Practice</p> <p>7. Do you practice clinical examination to children in your daily activity in the following cases (exam practice in at least 5 out of 10 cases was considered good)</p>	<p>. The search for a tumor focus in all children aged 0 to 14 presenting to the center</p> <p>. For all children with familial cancer ATCD</p> <p>. For all children with familial tumor ATCD</p> <p>. Abdominal or soft tissue mass</p> <p>. Lymphadenopathy</p> <p>. Hepatosplenomegaly</p> <p>. Leukocoria, strabismus</p> <p>. Respiratory distress</p> <p>. The referral is systematic to the doctor Onco_paediatrician</p> <p>. Do you use a reference sheet</p>

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	Lack of training
8. If you do not perform clinical examinations on children, why?	Insufficient technical platform
	Lack of exam rooms
9. Do you recommend screening 2 years later for your patients?	Systematically
10. In which cases do you ask your patients for an ultrasound?	In the presence of an abdominal mass

All data remained confidential. Data were entered using World 2013 and Excel 2013 software analyzed by Epi Info 2008 version 7.02 software.

## RESULTS

The study focused on 120 healthcare providers distributed as follows (see Table 2).

General practitioners were more represented at 36.67% followed by state nurses at 29.17%.

The age group of 30 to 39 years was the most represented, ie 45% with an average age of  $34 \pm 6$  years (see table 3). The majority of respondents were male (63%) with a sex ratio of 1.66. Respondents are more represented in the hospital (43%) followed by the Csréf (26%) and the CSCOM (26%) (see Table 4).

Almost all of the respondents, 117 (97.5%) completely agreed with early detection. Forty-four (36.66%) of general practitioners agreed that early detection has a place in their activities.

Health workers do not know of a ministerial circular in Mali on cancer screening in 71.67% (86 cases). Childhood cancer is not a public health problem for 108 (90%) of the agents surveyed. The majority of respondents (90.83%) have already seen or felt lymphadenopathy and (88.33%) an abdominal mass. The respondents say they have encountered pulmonary invasion and bone invasion in 90.83% and 50.83% respectively (see Table 5). The majority of respondents, 84 (70%) think that the age group from 5 to 14 years old was the most affected by cancer in children. The hospital respondents, 44 (38.94%), carry out awareness-raising activities on childhood cancer. The majority of staff find that the diagnostic tools are very insufficient, ie 80%. Respondents practice awareness activities during medical consultations in about 60.91% (Cf. Fig. 1). All the respondents refer to the onco-pediatrician doctor in the event of a positive clinical sign and 97.85% reassure the parents of the patients. 87.10% of respondents do not have information support. The health workers, 43.01%, often carried out the search for

a tumor focus and often the clinical examination in front of a family history of cancer, ie 38.71%. Respondents who had never used or received a specific reference sheet or a counter-reference represented respectively 82.80% and 65.59%. In their practice, doctors/midwives, i.e. 59.17%, asked for a tumor examination when faced with a case of antecedent family. 94.17% do not perform the biopsy puncture systematically. The respondents, 64.17% systematically provide psychological support, 65% systematically refer to the specialized service and 35.83% request screening at 2 years for a benign tumor (see Table 6). All respondents systematically use ultrasound while CT is desired by 85.71%.

Table 2: Breakdown of staff surveyed in relation to their qualification

You are	Workforce	%
Pediatricians	7	5.83
Midwives	13	10.83
State nurses (IDE)	35	29.17
General practitioners	44	36.67
Other Specialists***	21	17.50
TOTAL	120	100

\*\*\*other specialists (radiologist, gynecologist, pharmacist, traumatologist, urologist, dermatologist, diabetologist, infectiologist, nephrologist, gastrology, ENT, odontostomatologist, ophthalmologist, cardiologist, emergency doctor, maxillofacial, orthopaedist)

Table 3: Breakdown of staff surveyed by age

Age (years)	Workforce	%
[20 – 29]	35	29.17
[30 – 39]	54	45
[40 – 49]	29	24.17
[50 – 59]	2	1.67
<b>TOTAL</b>	<b>120</b>	<b>100</b>

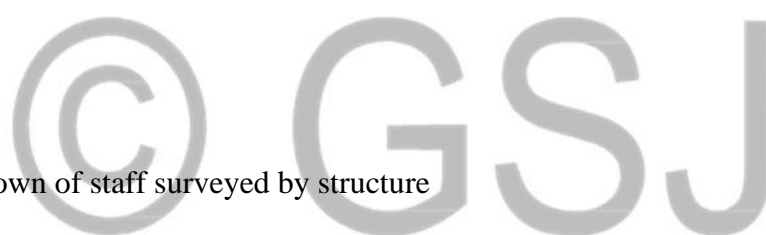


Table 4: Breakdown of staff surveyed by structure

exercise level	WORKFORCE	%
Doctor's office	4	3.33
Community Health Center (CSCOM)	31	25.83
Reference Health Center (Csref)	31	25.83
Regional Health Directorate (DRS)	3	2.50
Regional hospital	51	42.50
<b>TOTAL</b>	<b>120</b>	<b>100</b>

Figure 1: Distribution of health workers according to their mode of sensitization

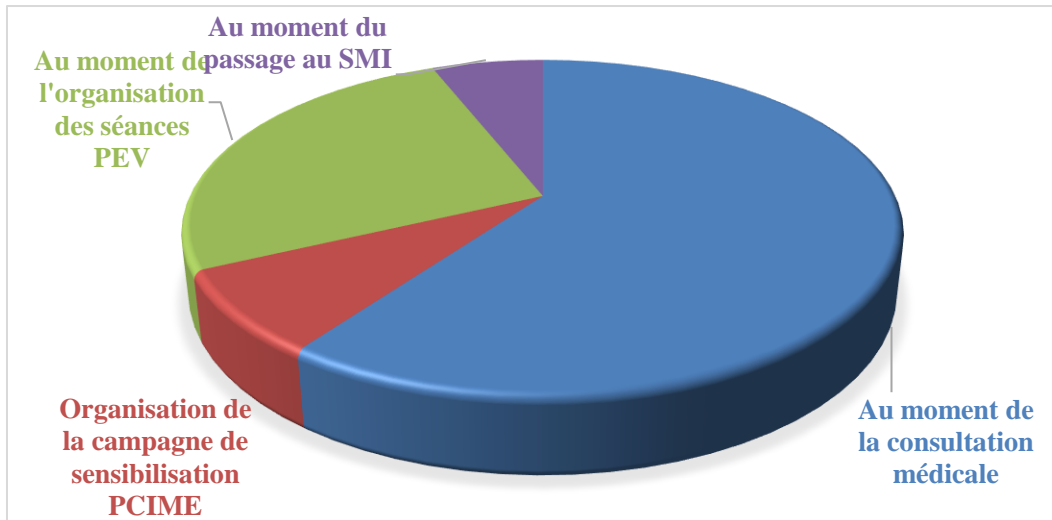


Table 5: Distribution of health workers according to signs of metastatic invasion in the examination

Signs of invasion metastatic encounter	Bone invasion		Pleuropulmonary invasion		Bone marrow invasion	
	Workforce e	%	Workforce e	%	Workforce e	%
Yes	61	50.83	109	90.83	21	17.50
No	59	49.17	11	9.17	99	82.50
Total	120	100	120	100	120	100

Table 6: Distribution of health workers according to early diagnosis practices by doctors and midwives



Answer	YES		NO	
	NOT	%	NOT	%
Do you practice				
Tumor examination in the presence of familial cancer ATCD	71	59.17%	49	40.83%
Systematic ultrasound in the presence of an abdominal mass	62	51.67%	58	48.33%
A systematic biopsy puncture in front of any tumor diagnosed on X-ray	7	5.83%	113	94.17%
Systematic psychological support	77	64.17%	43	35.83%
Systematic referral of all children with a malignant tumor to a specialist service	78	65%	42	35%
Screening 2 years later for all children who have developed a benign tumor	43	35.83%	77	64.17%

## Discussion

Early detection of childhood cancer is crucial for early treatment and reduced mortality. In Mali, childhood cancer is a priority in the fight against cancer. It is therefore essential to promote public awareness of the seriousness of this cancer and the interest of diagnosing it early. Health workers appear to be an important player in cancer prevention, whether primary or secondary (diagnosis).

This study on the knowledge and attitudes of health workers vis-à-vis the early diagnosis of childhood cancer is the first carried out in the region, according to our knowledge. This study showed that most health workers were not sufficiently informed about childhood cancer and its means of early diagnosis.

We noted a 63% male predominance with a sex ratio of 0.3. The average age of our sample was  $34 \pm 6$  years with extremes of 22 and 59 years. The majority 87% of our sample worked in urban areas. None of the health workers have had any training in the prevention of childhood cancers. All the health workers affirm that there is no ministerial circular whose objective is the generalization of screening for childhood cancer. The main factors considered



to be FDR of childhood cancer by the majority of respondents were the presence of familial cancer ATCD. Analysis of the knowledge and attitude score had shown a low level of knowledge, attitudes and practices among health workers working in the rural area. Other studies made elsewhere by N. Abda [3] on breast cancer which finds an average age of physicians was  $41.07 \pm 9.43$  years. 52.9% were male and 41.4% worked in the prefecture of Tangier. The follow-up of training on cancer prevention was reported by 29.7% of doctors, and they mainly focused on breast cancer (87.5%). The majority (85.7%) of doctors affirmed the existence of a ministerial circular whose objective is the generalization of breast cancer screening.

Care providers 43.01% often practice the search for a tumor site in all children, 38.71% of care providers practice clinical examination of children with a family history of cancer.

In the event of a positive clinical examination, the majority of respondents 82.80% referred their patients to another level of healthcare provision using a specific referral form, and among them 97.85% reassured the children's parents.

In general, the proportion of health workers carrying out the clinical examination of children was higher among health workers working in hospitals than those working in other structures, hence the importance of information and continuous training for health workers working in low health care networks in all Ministry of Health programs and the analysis of the CAP score had shown a low level of knowledge, attitudes and practices among female staff working in the health sector. rural area. In the study conducted by N.

Our study assessed knowledge of childhood cancer, 61.67% of respondents say that childhood cancer is the first cancer in our country, 70% know that the age group of women most affected is 0 to 14 years old, 93.3% mentioned that it is a public health problem. In the study conducted by ELKAOU [4] on the breast in Morocco, it is possible to answer this statement which finds 79.1% of respondents affirming that breast cancer is the first cancer, 78.6% know that women aged 45 at 70 are the most affected.

Communication and sensitization practice was carried out by 60.91% participants at the health center level at the time of the medical consultation and 25.5% during sessions of the Expanded Immunization Program (EPI). Sheets and leaflets are distributed at reception. At the level of the care pathways 94.17% of health center staff always participate in sensitizing the population. Alongside the improvement of the continuous training of health workers in the field of screening for childhood cancers, it would also be wise to strengthen awareness-raising actions by health workers with regard to this screening in order to get everyone's support for the care.

## CONCLUSION

The results of this study showed that the knowledge, attitudes and practices of health workers in early diagnosis of childhood cancer in health facilities were not satisfactory enough.

It is important to sensitize the Malian community, especially the parents of children, to the importance of risk factors in the early diagnosis of childhood cancer by organizing awareness campaigns, especially in regions where the incidence is the lowest. higher.

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**Conflict of interest: none.**

