

# Epilepsy in Mali: State of art

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## INTRODUCTION

Epilepsy is a common neurological condition which in the majority of cases could be effectively controlled as seen in developed countries. In Africa or other low-income settings, with an average prevalence of 15 for 1000, people with epilepsy suffer in addition to their disease, from local beliefs and miserable socio-economic conditions.

Mali is no exception to this consideration given to patients suffering from epilepsy. Country of 22 million inhabitants and low income (less than US \$ 1.25 per capita and per day), previous studies find an average prevalence of 13.5‰. Cultural beliefs and adverse economic conditions impact both patients and caregivers. Even if patients sometimes see doctors, there is also and above all systematic recourse to traditional practitioners.

## OBJECTIVES

We propose to describe the publications made on the issue of epilepsy in Mali to then determine what we know about it: how is it managed and what remains to be done. It is a question of laying solid foundations which will then make it possible to carry out projects on good practice of epilepsy care in Mali.

## METHODOLOGY

**Sample** : With the keywords of « epilepsy » and « Mali », we obtained 21 responses. After an initial search which found 18 responses, a second search was launched using the same means in order to find the articles cited in reference in the first articles found. There were complete articles but also many abstracts presented in different congresses. Some articles actually dealt with the issue of epilepsy in Mali and others mentioned it in the title or the abstract when it was not the main subject even if the work was done in Mali. Other articles also treat epilepsy in Mali but not only because other countries also were included.

**Database** : We were able to retain 9 articles published between 2000 and 2021 which are listed in the table below with the authors, titles and years of publication.

**Data analysis** : information on the definition of epilepsy, prevalence, etiologies of epilepsy, the notion of contagiousness, antiepileptic drugs used, availability of EEG, availability of brain imaging , the availability of antiseizure medications (ASMs), the availability of management of psychiatric comorbidities such as anxiety and depression were extracted from the articles selected to describe what is done in the Malian context and what is not done.

## FINDINGS AND COMMENTS

- From what has already been done:
- The prevalence of epilepsy is estimated at 13.35%
  - Generalized tonic-clonic seizures are the most common;
  - Natal peril, infections of the central nervous system and cranio-encephalic trauma are important causes;
  - EEG and imaging are not sufficiently available;
  - Traditional healers are the first recourse
  - Phenobarbutal is the most used drug;
  - Commorbidities are rarely taken into account;
  - Cultural beliefs are still very influential;
  - There is no register.

Number	Year	Title	Authors
1	2000	The socio-cultural dimension of epilepsy ( kirikirmasien ) in rural Bambara (Mali).	S.Arborio et al
2	2000	Onchocerciasis and Epilepsy, Epidemiological survey in Mali.	Guy Farnarier et al
3	2002	Treatment with phenobarbital and monitoring of epileptic patients in rural Mali.	Karamogo Nimaga et al
4	2008	Knowledge about epilepsy and attitudes of parents of children in Mali: community study.	Youssoufa Maiga et al
5	2008	Pharmacological screening of Malian medicinal plants used against epilepsy and convulsions.	Michael Petersen et al
6	2012	Results of an Action-Research on Epilepsy in Rural Mali.	Elisa Bruno et al
7	2017	Current beliefs and attitudes regarding epilepsy in Mali.	Youssoufa Maiga et al
8	2020	Epilepsy Research in Mali: A Pilot Pharmacokinetics Study on First-Line Antiepileptic Drug Treatment.	Modibo Sangare et al.
9	2021	Using community health workers as an alternative approach for epidemiological research on epilepsy in six health districts in Mali.	Fatoumata, N. Konipo et al



STUDIES	Type of crisis	Percentage
A	Generalized	67%
	Focal debuts	16%
	focal lengths	5%
	Indeterminate	8%
B	Generalized	66%
	Focal debut	18.3%
	focal lengths	8.2%
	Indeterminate	7.1%

Health Districts	Suspected cases of epilepsy reported in 2019 by CHWs	General population in 2019	Prevalence of suspected cases of epilepsy Per 100,000 inhabitants	Confiance intervals
	<i>n</i>	<i>N</i>		IC = 95 per 100,000
Kadiolo	450	331,647	136	[120–140]
Kayes	1435	704,686	204	[190–210]
Kénieba	758	266,512	285	[260–300]
Kolokani	625	322,106	194	[170–200]
Sikasso	881	672,870	131	[120–130]
Tominian	259	285,093	91	[72–109]

CHWs = community health workers, n = sample, N = general population, hbts = inhabitants, CI = confidence interval.

Etiologies	Item	Total workforce	Percentage
<b>Not organic</b> <b>Supernatural</b>	Knowledge about epilepsy and attitudes of parents of children in Mali: community study.	423	49%
	Current beliefs and attitudes regarding epilepsy in Mali.	381	52%
	The socio-cultural dimension of epilepsy (kirikirmasien) in rural Bambara.	N / A	N / A
<b>Organic</b> <b>infectious</b>	Treatment with phenobarbital and monitoring of epileptic patients in rural Mali.	5243	30%
<b>Meningitis</b>	Onchocerciasis and Epilepsy, Epidemiological survey in Mali.	5243	6%
<b>Measles</b>	Onchocerciasis and Epilepsy, Epidemiological survey in Mali.	5243	41%
<b>family</b>	Treatment with phenobarbital and monitoring of epileptic patients in rural Mali.	5243	52%
	Onchocerciasis and Epilepsy, Epidemiological survey in Mali.	243	30%
<b>Inbreeding</b>	Treatment with phenobarbital and monitoring of epileptic patients in rural Mali.	5243	25%
	Onchocerciasis and Epilepsy, Epidemiological survey in Mali.	5243	35%
<b>Perinatal</b>	Treatment with phenobarbital and monitoring of epileptic patients in rural Mali.	5243	4%
	Onchocerciasis and Epilepsy, Epidemiological survey in Mali.	5243	36%
<b>Head trauma</b>	Onchocerciasis and Epilepsy, Epidemiological survey in Mali.	5243	7%

## CONCUSSION

Much remains to be done, however the implementation of IGAP will make it possible to fill the various gaps discovered by this work.

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