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(RESEARCH ARTICLE)

# Transcultural approach to psychiatric and somatic comorbidities in the context of humanitarian medicine in Africa

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# Abstract

**Introduction**: Mental health is an essential component of human well-being. Nowadays there is a tendency to contrast the biological disorder with the mental disorder; which is hardly the case because the first would affect the body, the soma while the second would affect the psyche. Mental disorders described in different psychiatric taxonomies appear to be of multiple etiologies.

**Objective**: The objective of the study was to determine the prevalence of psychiatric disorders and their co-morbidities during general medical consultations at the Mokassa Developmental Health Center.

**Method**: A quantitative and diagnostic study, which took place in the context of a humanitarian mission to Mokassa in Congo-Brazzaville in May 2012. The target population consisted of children, adolescents, adults, and people from the third age. Sampling was carried out by taxonomic triage in two phases, one in Brazzaville for the management of cases and the second phase which concerned the search and evaluation of referred patients. The data was analyzed using content analysis during the interviews. The diagnostic process was carried out using the semi-structured interviews method according to DSM-5 and data collection (interview, diagnosis, anamnesis). The recruitment of participants took place according to the rules of the charter. Helsinki.

**Results**: 50 patients were included during the study period, ie 27 (54%) men and 23 (46%) women, the most representative age group was that of 35.45 years (34%); the reasons for frequent consultations were behavioral problems (20%) and headaches (24%). 30% of the patients suffered from depression, 4% suffered from psychosis and 2% from bipolar and schizophrenic disorder. The most represented comorbidity was the Nile with 44%.

**Conclusion**: Psychiatry has its place in humanitarian medicine and the mental health of the population of this island of Mossaka in the republic of Congo must be included in the strategic plan for the overall health of the Congolese authorities.

Keywords: Traumatic stressor; Mental health; Comorbidity; Culture; Psychiatry; Negative life events

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# 1. Introduction

Mental health is an essential component of human well-being. The General Association of Institutions of Retirement Cadres and Arrco (AGRIC, 2017) indicates with relevance that: "The notion of mental health designates emotional phenomena such as well-being, joy, satisfaction, personal resources of an individual like resilience, the ability to cope with life situations. "This positive approach to mental health implicitly considers mental illness as the result of a dysfunctional relationship with the world:" the psychological disorders or mental pathologies which are at the origin of mental handicap represent the negative pole of the definition of health. mental" (Op. Cit.). Mboua (2012), points out, following several authors, that it is not easy, with regard to the psychopathology of mental disorders, to define the expression "mental illness", so much ambiguity it is and enamelled with etiological prejudices, which marked the history of psychiatry. There is a general tendency to contrast the biological disorder with the mental disorder. The first would affect the body, the soma while the second would affect the psyche. Current knowledge about the etiopathogenesis of mental disorders invalidates such prejudices. Several factors are listed as determining mental health: biological, socio-cultural, environmental, psychological factors, etc.

The mental disorders described in different psychiatric taxonomies appear to be related to multiple etiologies, as Ionescu (1996, p.5) has underlined: "it is clear that a review of this debate that would take into account the All of the data currently available would point towards a pragmatic eclectic approach based on the biopsychosocial model of psychopathological disorders. A relevant definition of mental illness must necessarily consider these plural determinisms the role of negative life events, as well as the adaptive capacity of the subjects. Psychological disorders or mental illnesses are the main threats to mental health, or more precisely, the main markers of poor mental health. They refer to a panoply of dysfunctions that affect life, relationship, and the psyche. They induce suffering at the level of psychic experience; functional disabilities; relational and professional mismatches (Abraham, 1924; APA, 2015; Bloch, Chemama, Dépret et al., 1999; Zribi and Sarfaty, 2003; Le Roy-Hatala, 2007). As with other mental health problems, their prevalence varies over time and space: from one society to another; and, in the same society, from one period to another, depending on the evolution of mentalities, social, economic and political realities, which modulate the subject's relationship to himself and to the world (see APA, 2015; Bailly et al., 2; WHO, 2018; Zarifian, 1994). Authors such as Bronsard, Simeoni, Campredon, Auquier and Lanconu (2008); Meltzer et al. (2000); Verhulst et al. (1997) estimate that at least one in four people visiting health services has a mental or behavioral disorder, sometimes misdiagnosed or undiagnosed. Mental health is still in Africa and particularly in the Great Lakes and Congo Basin Region, a field that has been little explored and little integrated into the popular imagination. Its links with medicine in general and humanitarian medicine are vague and discussed across cultures. Several etiological conceptions of mental illness, which fall between scientific and cultural / social hypotheses are still widely shared. This is what Olivier de Sardan (1999a, 1999b) underlined, who points out that despite the introduction of modern medicine, mental illness in black Africa (in West Africa in particular) remains imbued with social representations and cultures which associate with psychopathological processes, a mystical dimension.

These representations organize what he called " popular nosologically entities " or "common sense diseases in Africa". They influence the therapeutic routes of patients. So, apart from the lack of a specialized response, patients with psychological / psychiatric disorders often associate their illness with the evil eye / bad luck. As a result, treatment is often more frequent with traditional healers, more than in psychiatry.

Studies of the prevalence of psychiatric / psychopathological disorders are poorly funded / encouraged in the WHO Africa Region. The World Health Organization underlines with regret the low involvement of public health policies in the field of mental health studies in the general population (WHO, 2001). She points out that the budgets allocated to mental health programs in most countries have not exceeded 1% of the health budget for several years. In Africa, and particularly south of the Sahara, there is little work being done on the issue, so that not only health indicators in this area are little known, but also little known. This is the case with the impact of socioeconomic precariousness, the impact of wars and other psychosocial stressors.

The Great Lakes region, and the Congo Basin, is since the accession of countries to independence, subject to armed, social, and tribal conflicts, which are at the origin of multiple and multifaceted humanitarian crises. The health problems that emerge in this context are numerous, affecting the body and the psyche. The violence born of conflicts, as well as the difficult transitions of lifestyles and traditional representations, modulate the relationship of subjects to the world and create a vulnerable environment, in terms of mental health (Banza & Hemedi, 2003, Duroch, 2004; Le Roy & N'Situ, 2010; Omba Kalonda, 2008; Otita Likongo, 2013). The populations of this region are thus exposed to various psychopathological disorders: post-traumatic stress, psycho-social distress, anxiety-depressive syndromes, suicidal raptus, aggressive and addictive behaviors, conduct disorders, etc. (Daxhelet, & Brunet, 2014; Dolan, 2010; Douville, 2013; Gerbes, Leroy, Leferrand, Michel, Jarno & Chapplain, 2015; Guimard, 2010). The Republic of Congo, like most of

the countries in the Congo Basin and the Great Lakes, has experienced many traumas linked to its geopolitical situation. The terrible disaster that occurred in Mpila (district of Brazzaville), on March 4, 2012, relative to the explosion of the ammunition reserve of the military camp, caused damage over a radius of 8 km, causing many deaths, leaving survivors multiple traumatized.

We can hypothesize here that beyond the material damage, it has deeply affected social communities. The populations in psychological distress found themselves after the disaster, without housing, congregated in cramped spaces, in promiscuity (Moayedoddin, Nangho Makaya, Canuto, 2014). This disaster constitutes for these communities, a negative event of life, with strong traumatic potential. The impact of negative life events has been analyzed by several authors (see Dohrenwend & Dohrenwend, 1982; Eaton et al., 1985; Ionescu 1993: 243; Robins, 1981). Negative life events constitute an exogenous causality that is increasingly valued in studies of mental health in the general population. The consideration of exogenous causality in the explanation of mental illness helps to enhance diagnostic efficiency.

Like other stressors, negative life events appear as markers of mental health: "since 1970, all mental health surveys have tried to measure the impact of so-called stressful events" (Perrault, 1981, p.1333). This study, which takes such factors into account, was based on a humanitarian mission to Congo, in relation to the Mpila disaster and other psychosocial stressors the country experienced. It was at the insistence of the head physician of the psychiatry service in Brazzaville that the researchers integrated the importance, as mental health specialists, of specialized help concerning the management of unrecognized psychopathological disorders and under -diagnosed in this region. In Congo, there are few mental health services, especially in the affected region. Psychiatric patients are therefore often treated either as part of a general medical response, or in the context of a specialized response, which addresses the issue of related biological suffering or biological co-morbidities of somato-psychic problems.

The main objective of the study is to determine the prevalence of psychiatric disorders and their comorbidity in general practitioner consultation for somatic disorders in the city of Mokassa, Congo Brazzaville. It is specifically about:

- Determine the clinical prevalence of psychiatric disorders in patients received in general consultation for somatic problems in Mokassa;
- Evaluate the importance of psychiatric amenities in patients seen in general practitioner consultation for somatic complaints in the city of Mokassa;
- Study the extent of false diagnoses based on somatic comorbidities in relation to medical diagnoses made in referred patients;
- Highlight the correlation between the reasons for patient consultations, the somatic diagnoses made by family physicians and the psychiatric diagnosis made by psychiatrists on referred patients.

# 2. Material and methods

#### 2.1. Nature of the study

#### 2.1.1. The present study is quantitative and diagnostic

It is part of mental health studies in clinical populations. It was organized with the contribution of the Mokassa developed health center (CSD) and concerned patients received for somatic complaints evoking a mental health problem.

#### 2.2. Study site

The research took place in the context of a humanitarian mission to Mokassa, a small town in Congo Brazzaville located on the banks of the Congo River, 700 km from Brazzaville, the country's capital, in May 2012.

#### 2.3. Target population

The target population is made up of children, adolescents, adults, and elderly residents of Mokassa, known to the community and having their families in this island town, who came to consult for physical or mental health problems during our visit. humanitarian mission at the Mokassa developed health center (CSD).

# 2.4. Inclusion and exclusion criteria

#### 2.4.1. Inclusion criteria

- Male and female persons between 5 to 75 years old, having consulted at the CSD of Mokassa during the week from Monday to Friday during our humanitarian mission in Congo Brazzaville in Mokassa.
- People registered as patients at the Mokassa SCD reception and referred by the triage team to our mental health team mentioned above.
- Patients who have been evaluated by the psychiatrists of the mental health team and who have been diagnosed with psychiatric disorders without or with disorders of general clinical conditions.

#### 2.4.2. Exclusion criteria

- Men and women living in Mokassa therefore the age is less than 5 years and more than 75 years;
- People not registered as patients at the Mokassa SCD reception and not referred by the triage to our mental health team mentioned above.
- People with disorders but not residing in Mokassa and not known to this community but accompanied by a family member.

#### 2.5. Sampling process

Sampling was done by taxonomic sorting. Since there is no mental health service in Mokassa, the research team agreed with the medical team on benchmarks and procedures for patients with somatic complaints, whose biological causalities suggested an underlying mental health problems. Prior to the researchers' descent into the field, the medical team was to invite the population to participate in the free mental health campaign and the study which was being carried out concurrently. The consultation was conducted over 5 days, with an average of 5 patients received per day, for a total of 50 patients over 5 days. The patients, seen in consultation for various reasons, were referred to the psychiatric team after triage, based on interviews or analysis of the file. People referred by the triage team to our mental health team who have been diagnosed with psychiatric.

#### 2.6. Main phases of the study

The mission was carried out in two main phases. The first phase, which took place in Brazzaville, enabled the team to take care of a few patients from the Cuvette Department in which the city of Mossaka is located. The team was thus able to observe, during the interventions, a significant susceptibility to psychiatric disorders in the subjects examined. Interviews with the two psychologists made it possible to set up psychological support structures for victims, survivors of the disaster, as well as their families. This approach confirmed the idea of a high rate of psychiatric morbidity associated with the demand for care in the population. The second phase, that of research, concerned the evaluation, in referred patients, of the psychiatric comorbidity of somatic disorders and complaints.

#### 2.7. Diagnostic process

#### 2.7.1. Data collection tools / materials

#### Data collection was carried out from a composite material

Hospital registers, patient charts transferred to the triage team composed of a nurse and a family doctor. The diagnostic process was essentially based on the evaluation of patients referred by the triage team to the mental health team made up of two psychiatrists and two nurses from the same patient community, who also acted as mediator, translators and socio-community interpreters during the psychiatric assessment interviews.

#### Method of analysis and analysis

The data was analyzed using content analysis obtained during the interviews. It involved the development of a therapeutic contract consisting of:

- A definition of the main objective of the therapy, the concrete sub-objectives, and the determination of the techniques used;
- An implementation of the therapeutic treatment itself;
- Assessment of results, maintenance of learning, prevention of relapses;
- A count and diagnosis were carried out by the two psychiatrists from the mental health team who were laid off during our stay in Mokassa.

The diagnostic process was carried out using the semi-structured interviews method according to DSM-5 and data collection (interview, diagnosis, anamnesis). The semi-structured functional analysis interview plus the development of a functional hypothesis of the understanding of the disorders, the conceptualization is the hypothesis put forward about the psychological functioning of the patient by his environment on a socio-cultural level. The understanding of the suffering of the individual himself or not according to behavioral and cognitive mechanisms. A quantitative psychometric assessment of the disorders announced and objectified during the interview thus making it possible to measure the severity and intensity of symptoms and the invasive therapeutic urgency of the pharmacotherapeutic type or afterwards of the psychotherapeutic and psychoeducational type.

# 2.8. Deontological and ethical principles

A few ethical principles have guided this study, framed by the incorporation of the Helsinki Charter. The patients received, who had previously been informed of the objectives of the research and gave their informed consent. During the phase of psychiatric diagnosis and interviews, patients were again informed about the objectives of the research. Their verbal agreement was required. The interviews were anonymous and codified. Patients were told that they did not have to answer questions they found embarrassing or culturally inappropriate. In addition, they were free to withdraw from the study at any time if they wished. Risk management mainly consisted of the qualification of professionals and the establishment of a safety framework for intervention and research.

# 3. Results

#### 3.1. Sample presentation

The age of the subjects is between 8 and 74 years, the most representative age group is that of] 35 - 45] with a frequency of 34%. Married and single subjects constitute the bulk of the sample, with respectively (42% and 46%). Divorced and widowed subjects represent 4% and 8% respectively. There are 27 male subjects representing (54% of the sample and 23 female subjects representing 46%. Concerning the level of education 68% of patients have completed primary studies, 26% have not been to the school and 6% have a high school education.

The characteristics of the sample are presented in Table 1.

**Table 1** Characteristics of the sample

Family situation		
	Workforce	Percentage
Single	23	46%
Divorced	2	4%
married	21	42%
Widow(er)	4	8%
Age group		
	Workforce	Percentage
]7 - 25]	14	28%
]25 - 35]	8	16%
]35 - 45]	17	34%
]45 - 55]	7	14%
]55 - 74]	4	8%
Gender		
	Workforce	Percentage
Woman	23	46%
Male	27	54%

Level of study			
	Workforce	Percentage	
None	13	26%	
Primary	34	68%	
Secondary	3	6%	

#### 3.2. Reasons for consultation

The participants were seen in consultation for a variety of reasons, the comorbidity of which with psychiatric disorders is documented. Headaches, Behavioral Disorders, and Insomnia are mentioned by more than half of the patients of the patients when they appear before the doctors. The psychic symptoms / psychological manifestations are very obvious. The somatic problems diagnosed or alleged are poorly specified. Sometimes the symptoms are diffuse and manifest in immediate connection with mental health.

The distribution of reasons for consultation is given in table 2

Table 2 Distribution of reasons for consultation

Reason for consultation			
	Workforce	Percentage	
Amputation	1	2%	
convulsion	1	2%	
Arm pain	1	2%	
Pain in the eye	1	2%	
Chest pain	1	2%	
Hypersomnia	1	2%	
insomnia	1	2%	
Tics	1	2%	
ALCOHOL ABUSE	2	4%	
Anger	2	4%	
ENURESIA	2	4%	
Asthenia	2	4%	
Low back pain	2	4%	
ABSENCES	3	6%	
Dizziness	3	6%	
Insomnia	4	8%	
Behavioral disorder	10	20%	
Headaches	12	24%	
Total	50	100%	

#### 3.3. Psychiatric diagnoses

Mental health disorders are recurrent (98%), with four psychiatric diagnoses (Depression, General anxiety disorder, Insomnia, other Anxiety disorders). Depression is the most recurrent psychopathological entity, with a prevalence of 30%. This diagnostic category is followed in rate of prevalence by anxiety problems (other anxiety disorders 12%;

generalized anxiety disorder 16%); Insomnia (12%); secondary enuresis and alcoholism (6% respectively); attention deficit hyperactivity disorder (ADHD), psychotic disorders and somatizations (4% respectively).

# Table 3 Psychiatric Diagnosis

Psychiatric diagnosis			
	Workforce	Percentage	
Nil	1	2%	
Schizophrenia	1	2%	
Bipolar Disorder	1	2%	
Psychosis	2	4%	
SOMATIZATION	2	4%	
ADHD	2	4%	
ALCOHOLISM	3	6%	
Secondary Enuresis	3	6%	
OTHER Anxiety disorders	6	12%	
INSOMNIA	6	12%	
TAG	8	16%	
Depression	15	30%	
Total	50	100%	

# 3.4. Somatic comorbidities

Comorbidity with a somatic problem is found in 56% of cases. Trypanosomiasis, Malaria, Epilepsy are the most common cases in terms of somatic comorbidity. The somatic problems diagnosed are given in the distribution below:

 Table 4
 Somatic comorbidities

Somatic comorbidities			
	Workforce	Percentage	
IMPUTED MEMBER	1	2%	
Malaria	1	2%	
Car accident	1	2%	
DISCAL HERNIA	1	2%	
НТА	1	2%	
Low back pain	1	2%	
VISION PROBLEM	3	6%	
Rheumatism	4	8%	
Epilepsy	5	10%	
MALARIA	5	10%	
TRYPANOSOMIASIS	5	10%	
Nil	22	44%	
Total	50	100%	

# 4. Discussion

We observe in the sample a high prevalence of psychiatric problems, strongly associated with somatic problems. Somato-psychiatric psychosis-epilepsy comorbidity is reported by Charfi Nada et al. (2014) as old and important. There is generally a significant comorbidity of psychiatric disorders. Here, as the authors suggest, it is more frequent in the case of anxiety and depressive disorders and little observed in psychotic disorders (Lejoyeux, Embouazza, 2013).

There is also a significant comorbidity in addictions, with an association between psychotic problems and alcoholism. Emphasizing the demonstrated link between alcoholism and psychosis, Potvin and Lalonde (2014) note that the lifelong prevalence of alcoholism of 9.4% is often 20.6% associated with schizophrenia. In their metha-analysis Koskinen et al (2010) a 27.1% comorbidity of schizophrenia with cannabis addiction was highlighted. Bordes, Schuster and Limosin (2011) indicate a significant comorbidity in hospitalization between depressive syndrome and factitious disorders.

The results obtained sufficiently underscore the need for a specialized response in the field of mental health for populations exposed to traumatic stressors. In an African context like that of the Congo where mental health is still a neglected issue, the trend of the results suggests urgent action. Mental disorders are not only a recurring clinical reality, but also a neglected, misunderstood, perceived Western clinical reality. However, we note that the demand for health care in the countries of sub-Saharan Africa is constantly increasing. In Cameroon, Edoa Mbatsogo (2015) indicates an increase in the demand for psychiatric care at Jamot hospital in Yaoundé of around 36% between 2005 and 2007. Depression is the most common clinical picture in this study.

These trends are in line with a retrospective study over a period of eight years (1998-2000) in Madagascar, which showed that depression is the leading cause of consultation (36.17%) in hospital. Contrary to the data collected, it is survival in this study by psychoses (25,26). Another study on the link between chronic hemodialysis and depression at the Sylvanus Olympio University Hospital in Lomé (Togo) demonstrated the fact that depression affected 68.2% of patients (Mawufemo Yawovi Tsevi et al, 2016). The etiological factors identified, as is the case in Mossaka, in the two above-mentioned studies, were mainly related to social insecurity. But here, in addition to social insecurity, traumatic events relating to conflicts and natural disasters must be included, to understand the important psychopathological symptomatology that is revealed.

# 5. Conclusion

The merit of this study initiated within the framework of this humanitarian mission was to show that psychiatry has its place in humanitarian medicine and the mental health of the population of the islands of Mossaka must be included in the strategic plan of global health. Congolese authorities who want to serve the inhabitants of this lost corner of the Congo as part of primary health care programs. The modest epidemiological data obtained here on psychiatric disorders can serve as a lever to carry out more in-depth and comparative epidemiological studies between the Department of psychiatric of the Brazzaville University Hospital and the developed health center (DHC) of Mokassa.

# Limitations

- Very small sample size;
- The notion of mental illness is poorly understood in the community, because the cultural dimension of tolerance, minimization or stigmatization are all obstacles for the early and even late detection of psychiatric disorders;
- The absence of the preparation of the ground by the psychoeducation of families, cultural associations and of the island of Mokassa and in schools could increase the absence of the early or late detection of psychiatric disorders in the community and the confirmation of their diagnoses at CDS.

# Compliance with ethical standards

# Acknowledgments

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# Disclosure of conflict of interest

The authors declare that they have no competing interests.

# Availability of data and materials

The datasets generated and/or analyzed during the current study are available from the corresponding author.

## Statement of ethical approval

Ethical clearance was obtained from the ethics and research committee of the Congo-Brazzaville.

## Statement of informed consent

All the participants read and signed an informed consent sheet. Research authorizations were obtained from the institutions involved.

# Authors' contribution

IB and RT reframed the study, IB and PCM revised the manuscript; IB, RT, HL collected the data; RT and IB analyzed the data; IB, PCM and AM revised the article considering aspects of cross-cultural psychiatry in Africa. All authors have read and approved the final manuscript.

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