

# Knowledge Relating to the Management of Suicidal Behaviour Among Healthcare Professionals at the University of Bouake Teaching Hospital (Ivory Coast)

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**Abstract:** Management of suicidal conduct in hospitals is little known and practiced. People who show signs of suicidal behavior turn to psychiatrists alone or to unconventional care providers. The objective of this study is to assess the level of knowledge of the health personnel of the university hospital center of Bouake (CHU) in identifying and managing suicidal behaviors. This study is based on the use of data from a descriptive cross-sectional study of 125 health professionals working at the Bouake CHU. Among these health professionals, there is a predominance of men (60.80%) with an age range between 20 and 30 years (44.80%), most of whom were doctors (43.20%) with professional experience between 1 and 5 years (63.71%). The study found that stakeholders had a good level of knowledge about definitions of suicidal behavior and risk factors. However, 55.20% of respondents said that the management of suicidal conduct was the exclusive responsibility of psychiatrists. Hence the need to organize continuing training sessions on the management of suicidal conduct in order to improve the quality of care in our various health structures. The study concludes that awareness-raising and capacity-building among health professionals at the Bouake University Hospital should be carried out to improve the management of suicidal conduct by the Ivorian health system.

**Keywords:** Evaluation, Suicidal Behaviour, Healthcare Professionals, Ivory Coast

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## 1. Introduction

Suicidal behaviour is a major public health problem worldwide. According to the World Health Organisation (WHO), the number of suicides worldwide is estimated to be 804,000 in 2012, which represents an overall standardised rate of 11.4 per 100,000 population [1]. Suicide attempts are

much more frequent than suicides and represent the most important risk factor for suicide [2]. In Africa, socio-cultural constraints marked by denial or condemnation of suicidal behaviour reduce the use of health services, which makes it difficult to report cases. Nevertheless, several studies show

that more than half of the patients who have committed suicide had consulted a health professional, particularly a general practitioner, in the month preceding the act [3, 4]. Also, in most West African countries, the emergency and intensive care units of university hospitals were the first port of call for families and patients. At the University of Bouaké Teaching Hospital, a recent study on suicide attempts showed that 86.25% of suicidal patients were admitted by their parents without first visiting a peripheral health centre [5]. Non- mental health professionals are therefore the first-line actors in the reception, evaluation and management of suicidal behaviour. The knowledge of frontline health professionals of the recommendations for the identification and management of suicidal behaviour is an imperative for the integration of mental health care into general care. The aim of our work was to improve the management of suicidal behaviour at the University Hospital of Bouaké. The general objective was to assess the level of knowledge of health personnel at the Bouaké University Hospital in terms of identifying and managing suicidal behaviour.

## 2. Materials and Method

Our study took place at the University of Bouaké Teaching Hospital, in Ivory Coast.

It comprises 42 buildings, including 16 on-call villas, a boarding school, three (03) buildings transferred to annexes (Saint Camille, blood bank, NGO Vivre Débout) and 22 buildings for administrative and medico-technical use. Since the end of the military-political crisis in 2010, there has been a return of medical staff with the reopening of several specialised services. The University of Bouaké Teaching

Hospital provides care, training and research activities in several medical, surgical and biological specialities. In 2017, the total number of medical and paramedical staff was 300. Our study covered all health professionals working at the University of Bouaké Teaching Hospital. All medical and paramedical staff present at the university hospital at the time of the survey were included, regardless of sex or age. Not included in our study were staff who refused to participate in the study, non-resident students, student nurses and nursing assistants. Thus, out of a total of 300 health professionals, according to our selection criteria, we retained 150 and noted 25 refusals to participate in the study, i.e. a participation rate of 83.3%. We conducted a prospective cross-sectional study with a descriptive aim. This study was carried out over a period of 2 months from 05 January to 05 March 2017. Data were collected through individual face-to-face interviews. The data were collected using an anonymous standardized questionnaire designed for this purpose. Socio-demographic characteristics as well as the level of knowledge of health professionals about suicidal behaviour were the variables studied. Data entry and analysis was done using Epi info 7 software.

## 3. Results

### 3.1. Socio-Demographic Characteristics

The 20 to 30 age group represented 44.80% of the workforce. Doctors represented 45% of the respondents, followed by interns (22%). Nurses and midwives represented 21% and 12% respectively. 63.71% of the respondents had professional experience of between 1 and 5 years.

**Table 1.** Distribution according to knowledge of definitions of suicidal behaviour.

Questions	Correct answer n (%)	Wrong answer n (%)	Don't know n (%)	Total
Suicidal behaviour includes all ideas or actions that may lead to death.	116 (92)	03 (02,40)	06 (4,8)	125 (100)
A suicidal person is a person who has attempted suicide.	28 (22,40)	80 (64,00)	17 (13,6)	125 (100)
The suicidal person is the person who has suicidal thoughts.	33 (26,40)	47 (37,60)	45 (36,0)	125 (100)
Refusal of treatment or food can be considered as a suicidal equivalent.	108 (86,40)	11 (08,80)	06 (04,8)	125 (100)
Total	285 (57,00)	141 (28,20)	74 (14,8)	500 (100)

**Table 2.** Distribution according to knowledge of risk factors for suicidal behaviour.

Questions	Correct answer n (%)	Wrong answer n (%)	Don't know n (%)	Total
Suicidal behaviour is very rare in Africa	59 (47,20)	47 (37,60)	19 (15,20)	125 (100)
Suicidal behaviour is higher in young people than in older people.	94 (75,20)	9 (07,20)	22 (17,60)	125 (100)
suicide attempts are more common among women than men	100 (80)	13 (10,40)	12 (09,60)	125 (100)
Social isolation, loss of a loved one or job are risk factors for suicide	118 (94,40)	1 (00,80)	6 (04,80)	125 (100)
Suicidal recidivism is common in a patient with a history of suicide attempts	111 (88,80)	6 (04,80)	8 (06,40)	125 (100)
Suicidal behaviour is always linked to mental illness	93 (74,40)	24 (19,20)	8 (06,40)	125 (100)
Suicide risk is higher in depression	111 (88,80)	7 (05,60)	7 (05,60)	125 (100)
Suicide is to be feared in a person with a chronic pathology	72 (57,60)	34 (27,20)	19 (15,20)	125 (100)
Drug intoxication is the most common means of suicide for women	110 (88,00)	3 (02,40)	12 (09,60)	125 (100)
Phlebotomy and defenestration are the most common means of suicide in humans	35 (28)	26 (20,80)	64 (51,20)	125 (100)
A patient who expresses suicidal thoughts will not act on them.	74 (59,2)	31 (24,8)	20 (16,0)	125 (100)
Total	903 (72,24)	170 (13,60)	177 (14,16)	1250 (100)

**Table 3.** Distribution according to the level of knowledge about the management of suicidal behaviour.

Questions	Correct answer n (%)	Wrong answer n (%)	Don't know n (%)	Total
Asking a patient during the medical interview about the presence of suicidal ideation may reinforce the patient's desire to die.	72 (57,6)	20 (16,0)	33 (26,0)	125 (100)
The assessment of the risk of recidivism is a mandatory part of the general examination.	101 (80)	7 (05,60)	17 (13,0)	125 (100)
The management of suicidal behaviour is the exclusive competence of mental health professionals.	50 (40)	69 (55,2)	6 (04,80)	125 (100)
Primary prevention of suicide involves identifying populations at risk (of suicide)	93 (74,4)	12 (09,6)	20 (16)	125 (100)
Total	390 (62,40)	139 (22,2)	96 (15)	625 (100)

### 3.2. Suicidal Behaviour on the Health Workers

The results of our survey revealed that almost all the health workers surveyed (92.80%) had a good knowledge of the definition of suicidal behaviour. However, this population has relatively little knowledge of the definitions of suicidal and suicidal.

### 3.3. Apprehension of the Risk Factors for Suicidal Behaviour

The health workers surveyed knew that suicidal behaviour is not uncommon in Africa (49.20%) and is higher among young people than among the elderly (75.20%). The majority of health workers stated that suicide attempts are more frequent among women than among men. In our study, 94.40% knew that social isolation, the loss of a loved one or a job are risk factors for suicide and 88.8% of them stated that suicidal recidivism is frequent in a patient with a history of suicide attempts. When asked whether suicidal behaviour is always linked to mental illness, 74.40% of the health workers surveyed gave a correct answer. The risk of suicide is higher during depression, said 88.8% of our study population, and 57.60% of the subjects surveyed stated that suicide is to be feared in a person suffering from a chronic pathology, compared with 27.20% of the respondents who stated that there is no risk of suicide. For 88% of the health workers, drug intoxication is the most common means of committing suicide among women, compared with 9.6% who said they knew nothing about it. On the other hand, 51.20% of respondents had no idea about the most common means of suicide for men. More than half of the respondents stated that a patient expressing suicidal ideas could carry out the act, as opposed to 24.8% who were opposed to this opinion.

### 3.4. The Management of Suicidal Behaviour on Health Workers

The preconceived idea that asking a patient about suicide could lead to a suicide act was not present in 57.60% of the subjects surveyed. 16% of the respondents thought so, while 26.40% said they had no idea. Our results revealed that 55.20% of the subjects stated that the management of suicidal behaviour is the exclusive competence of mental health professionals.

## 4. Discussion

### 4.1. Socio-Demographic Characteristics of the Study Population

The average age of our study population was 28 years with extremes ranging from 20 to 63 years. More than 81% of the health workers interviewed were under 40 years of age and had less than 5 years of professional experience. Our result was similar to that of Kouassi DP who found an average age of 26.68% of cases [6]. In our study, the number of male participants was 76, i.e. 60.80%, while the female participants totalled 42, i.e. 39.20%. This represents a sex ratio of 1.61. Nougou, in a study of health personnel in the town of Bouaké, found a predominance of women with 55.5% of cases [7]. Of the 125 patients who participated in our study, 45% were doctors, followed by interns with 22%. Nurses represented 21% while midwives had the lowest rate of 12%.

This young workforce and professional status could be an asset in proposing capacity building for improving suicide care in hospitals as interns and nurses are on the front line in our hospital services.

### 4.2. Definitions of Suicidal Behaviour

The results of our survey revealed that almost all the health workers surveyed (92.80%) had a good knowledge of the definition of suicidal behaviour. However, this population had relatively little knowledge of the definitions of suicidal and suicidal behaviour. This relatively low level of knowledge is due to the absence of specific courses or training on suicide. According to a study conducted in 2010, the majority of general practitioners have never received training in suicide risk assessment [8]. It would seem that the effects of training and information are only transitory as they wear off after one or two years, which justifies the implementation of continuous training [9].

### 4.3. Knowledge of Risk Factors for Suicidal Behaviour

A good knowledge of the risk factors for suicidal behaviour is a prerequisite for identifying suicidal behaviour, even if these different factors do not have an exact predictive value. They can thus promote or at least contribute to a suicidal act, without however being able to explain the occurrence of such an act on their own. Our results highlight a good knowledge of

these risk factors by the majority of the health workers surveyed with regard to the frequency of suicidal behaviour in Africa, age, sex, social factors, suicidal recidivism, mental illness, chronic illness and suicidal means. The health workers surveyed were aware that suicidal behaviour is not uncommon in Africa (49.20%). Indeed, according to a WHO report, the suicide rate in Africa was estimated to be close to the global average of 11.4 per 100,000 population in 2012 [1]. However, in Africa, the exact number of suicide attempts is not officially available because statistics are difficult to obtain, and country-level studies are difficult to conduct. Added to this is the denial or condemnation of any suicidal behaviour and the specific treatment of the suicide victim who should not benefit from a funeral rite. The results of our study showed that the majority of the health workers surveyed knew (75.20%) that suicidal behaviour is higher in young subjects than in older subjects. These results are in line with the data in the literature. Several studies carried out in Côte d'Ivoire found a predominance of young subjects who had attempted suicide. Konda [5] in his study of suicide attempts admitted to the University of Bouaké Teaching Hospital from 2010 to 2015 found 43.75% in the 16 to 25 age group. Tapah found a high number of suicide attempts in the 15 to 29 age group [10]. Adolescence is a period when conflicts are experienced more acutely. It is also a period during which adolescents, who are very sensitive to emotional variations, tend to make everything about themselves. He/she experiences relational and family conflicts very badly. Acting out or acting out with self-aggression of the body in its suicidal form is the preferred mode of expression of self-sufficiency, most often highlighting a failure of mental processing and cognitive management of conflicts. The majority of health workers stated that suicide attempts are more frequent among women than among men. This is in line with the literature where there is unanimous agreement on the predominance of females in suicide attempts, as shown by a multicentre study [11] of 3206 which found 67% to be female. Our study revealed that almost all the health workers surveyed (94.40%) knew that social isolation, the loss of a loved one or a job are suicidal risk factors. In France [12], these factors constitute so-called "secondary" risk factors and have little predictive value in the absence of primary factors. The health workers surveyed (88.8%) stated that suicidal recidivism is frequent in a patient with a history of suicide attempts. According to the consensus conference on the management of suicidal crises [12], the existence of a personal or family history of suicide attempts is a primary risk factor for suicide attempts. It has a strong predictive value and is therefore a major warning factor. For example, the risk of death by suicide is fifty times higher than in the general population [13]. One study showed that the existence of a previous suicide attempt increased the probability of making a new attempt fivefold compared with people who had never attempted suicide [14]. It is therefore essential to ask the patient about this personal and family history of suicide attempts. Suicidal behaviour is usually associated with different factors that accumulate and interact. When asked whether suicidal behaviour is always related to mental illness, 74.40% of the health workers

surveyed gave a correct answer. Indeed, in high-income countries, almost 90% of people who commit suicide have a mental disorder [15]. In the remaining 10%, who have no clear diagnosis, the psychiatric symptoms resemble those of the suicide victims. In some Asian countries, however, mental disorders appear to be less prevalent among suicide victims (about 60%), as studies in China and India have shown [16, 17]. This risk factor should be considered with caution. Suicide risk is higher during depression, reported 88.8% of our study population. This statement corresponds to that found in most studies. Indeed, any depressed patient can die by suicide: "the attraction to death is almost constant in the depressive constellation" [18]. This means that the risk of suicide must be considered in every depressed patient. This risk is always present either at the beginning of the illness or during its course. In a review of 15 studies, the rate of suicide attempts in depressed patients ranged from 25 to 50% [19]. This shows that most people who attempt suicide have several symptoms of depression. However, despite this statement, the majority of health care personnel do not take the time to assess this risk. According to our study, 57.60% of the subjects surveyed stated that suicide is to be feared in a person suffering from a chronic pathology, as opposed to 27.20% of the respondents who stated that there is no suicide risk in a patient suffering from a chronic pathology. The role of chronic illnesses on suicide is little studied. J. Mac Lean et al [20] mentioned epilepsy in particular. This is a risk factor for suicide, the importance of which varies according to the severity of the illness. Other chronic diseases such as cancer [21] and multiple sclerosis [22] may be significantly associated with an increased risk of suicidal behaviour or death by suicide. The results of our study reveal that the majority of the subjects surveyed (88%) stated that drug intoxication is the most common means of suicide for women, compared with 9.6% who said they did not know. In addition, more than half of the subjects surveyed (51.20%) had no idea about the most common means of committing suicide among men. According to several studies, women are more likely to use drugs, while men are more likely to use other, sometimes more radical, methods. The above shows that most of the subjects surveyed (3/4) have a good knowledge of suicide risk factors. The results of our study showed that more than half of the staff surveyed stated that a patient expressing suicidal ideas could commit suicide, compared with 24.8% who disagreed with this opinion. This shows that a significant proportion of the study population is still unaware of the danger of having and even expressing suicidal thoughts. However, several studies, notably that of Shulberg et al [23], report that between 19 and 54% of suicidal people would have mentioned suicidal ideas before committing suicide. In France, according to the Baromètre santé jeune [24], 23% of boys and 35% of girls have thought about suicide in the last 12 months.

#### **4.4. Knowledge of the Management of Suicidal Behaviour**

The preconceived idea that asking a patient about suicide could lead to a suicide act was not present in 57.60% of the subjects surveyed. 16% of the respondents thought so, while 26.40% said they had no idea. This shows that a significant

proportion of the respondents did not question their patients correctly. However, it is recognised that asking a patient about suicidal thoughts during the medical interview does not reinforce his or her desire to die. Talking about suicide means above all opening the door to a dialogue, listening to the other person's suffering and accepting its existence. In the Italian study by Zanone Poma [25], just over 5% of doctors described this difficulty, and in a 2013 French study (including 1,431 general practitioners throughout mainland France), 9.5% of doctors considered that questioning a patient about suicidal ideas could trigger a suicide attempt. Our results revealed that more than half of the subjects surveyed (55.20%) affirmed that the management of suicidal behaviour is the exclusive competence of mental health professionals. However, medical staff's knowledge of how to deal with suicidal people is an important step in the management of patients. However, this knowledge is inaccurate among medical staff. There are few studies on the role of the attending physician. Those that have been carried out show that about half of all suicidal patients consult their GP one month after their suicide attempt [26]. This consultation is important for the follow-up of the suicidal person and the assessment of the risk of recidivism. These studies show that not only the general practitioner but also nurses and midwives have an important role to play. In France, the authorities recommendations on suicidal crises insist on the role of the monitoring the suicidal person [12]. Our results therefore showed that more than a quarter of the healthcare workers surveyed were unaware of primary suicide prevention. Yet these are the professionals who are the first point of contact for patients. An English study carried out between 1997 and 1999 showed that 30% of suicidal patients had consulted their general practitioner in the week following the suicide attempt and half had done so within a month. This study shows that there is a role for first contact healthcare staff in the primary prevention of suicide and therefore a need for continuing education on the various aspects of suicide and its management [6].

## 5. Conclusion

This study showed that the level of knowledge of health professionals about suicidal behaviour was satisfactory. These professionals had an average knowledge of the definition of suicidal behaviour and of the suicidal equivalents. However, the difference between suicidal and suicidal behaviour was not well known to them. The assessment of knowledge of the types of suicidal behaviour and the risk factors for suicidal behaviour was good among all the health professionals surveyed. On the other hand, 55.20% of the respondents stated that the management of suicidal behaviour was the exclusive responsibility of psychiatrists. However, the rate of participation in the study and the relative youth of the doctors and nurses surveyed would be an asset for improving the management of suicidal behaviour in hospitals.

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