Journal of Affective Disorders 189 (2016) 351–356

Contents lists available at ScienceDirect

Journal of Affective Disorders

journal homepage: www.elsevier.com/locate/jad

Research report

Non-fatal suicidal behaviours in French Polynesia: Results of the WHO/START study and its implications for prevention

Stéphane Amadéo [a,b,c,d,*], Kairi Kõlves [e], Aurelia Malogne [b], Moerani Rereao [a], Patrick Favro [f], Ngoc Lam Nguyen [g], Louis Jehel [c,h], Diego De Leo [e]

[a] Centre Hospitalier de Polynésie Française (CHPF), Tahiti, French Polynesia
[b] Centre de Prévention du Suicide de Polynésie Française (CPSPF), Tahiti, French Polynesia
[c] Unité Inserm U1178, Paris, France
[d] Centre des Nouvelles Etudes sur le Pacifique (CNEP), Université de Nouvelle Calédonie, New Caledonia
[e] Australian Institute for Suicide Research and Prevention (AISRAP), National Centre of Excellence in Suicide Prevention, WHO Collaborating Centre for Research and Training in Suicide Prevention, Griffith University, Brisbane, Australia
[f] Université de Polynésie Française (UPF), Tahiti, French Polynesia
[g] Direction de la Santé Publique de Polynésie Française, Tahiti, French Polynesia
[h] Centre Hospitalier Universitaire, Martinique, France

ARTICLE INFO

Article history:
Received 26 March 2015
Received in revised form
7 July 2015
Accepted 21 September 2015
Available online 25 September 2015

Keywords:
Non-fatal suicidal behaviour
Suicide prevention
French Polynesia
Pacific Islands

ABSTRACT

Objectives: This is the first research article examining non-fatal suicidal behaviours (NFSB) in French Polynesia. The study was conducted in the frames of the WHO/START Study in 2008–2010. The main objective of the investigation was to obtain reliable data in order to develop evidence-based suicide prevention strategies.
Method: Interviews with people presenting with NFSB at the Emergency Department (ED) of the French Polynesia Hospital (CHPF) were conducted by emergency and psychiatry departments' staff examining socio-demographic and clinical information and motives triggering suicidal behaviour. Odds ratios and rate ratios with 95% confidence intervals were calculated.
Results: There were 556 presentations of NFSB by 515 persons at the ED of CHPF (ratio 1.08) with the average rate of 75 per 100,000 for those treated in the hospital. An estimate of cases occurring in remote islands might bring the rate for the whole French Polynesia around 94 per 100,000. NFSB was more prevalent in females; rates for both genders were highest in the age group 25–35 years and 15–24 years. The main suicide method was drug poisoning by psychotropic drugs. The most frequent psychiatric disorder was mood disorder (45.3%); however, 26% of subjects had no 'major' psychiatric disorders, with 14.5% without a psychiatric diagnosis or only reactive disorders (F43-11.7%). There was a high prevalence of previous NFSB (52.1%).
Limitations: Study includes only NFSB seeking medical help from the biggest hospital in the country.
Conclusion: Suicide prevention activities specific to the findings and the socio-cultural context of French Polynesia should be considered.

1. Introduction

Tahiti, Bora Bora and the so-called wider 'Pacific island Blue Continent' are often considered paradise in the imagination of Westerners. This Eden-like image was created in the tales and writings of early European explorers (e.g., Cook, Bougainville), who discovered these friendly-populated islands. This myth, later reinforced by travelling writers (e.g., Segalen, Stevenson), makes it difficult to study the apparently paradoxical presence of suicidal behaviours in this region, the latter often being denied or minimised by the 'outside' people, as well as by the indigenous people themselves, who sometimes think of it as a purely 'imported' phenomenon.

Given the lack of regular, systematic and reliable data in the Pacific region (including French Polynesia), in 2005 the World Health Organisation (WHO) held a regional meeting in Manila to coordinate activities counteracting the reportedly increased burden of suicide in the Western Pacific region. In response to recommendations made at this meeting, a project called "Suicidal Trends in the At-Risk Territories" (START) Study was launched. The WHO/START Study represents the first coordinated international

* Correspondence to: Centre Hospitalier de Polynésie Française (CHPF), Département de Psychiatrie, BP 1640, 98713 Papeete,Tahiti, French Polynesia. Fax: +689 40484725.
E-mail address: amadeo@mail.pf (S. Amadéo).

http://dx.doi.org/10.1016/j.jad.2015.09.042
0165-0327/

approach to suicide research and prevention in the region with a long-term aim to encourage the development of national suicide prevention strategies. The WHO/START Study comprises four components, described in details elsewhere (De Leo et al., 2009); some results have been presented (De Leo et al., 2013).

Following past recommendations from WHO collaborating studies, the WHO/START Study uses the term "non-fatal suicidal behaviours" (NFSB) which refers to "a non-habitual act with a non-fatal outcome that the individual, expecting to, or taking the risk to die or to inflict bodily harm, initiated and carried out with the purpose of bringing about wanted changes" (De Leo et al., 2006, p. 14). It is important to note that intent to die is often difficult to measure due to the ambivalence of a suicidal person; according to this definition, intent to die is not necessary considering there can be other types of intentions ('wanted changes').

The current article focuses on the results of the monitoring of non-fatal suicidal behaviour (NFSB) in French Polynesia, therefore the main aims of the paper are (1) to analyse the characteristics of NFSBs, such as gender, age, method of NFSB, marital and professional status, psychiatric disorder and potential triggers; and (2) to compare the socio-demographic characteristics of persons with NFSB to the general population.

2. Methods

2.1. Data collection

Information on NFSB was systematically collected on all persons admitted to the Emergency Department of the French Polynesia Hospital (*Centre Hospitalier de Polynésie Française*, CHPF) after self-harming behaviour, over a period of 2008–2010. Events were defined as "non-fatal suicidal behaviour" on the basis of the outcomes of the WHO/Multicentre Study on Suicidal Behaviour as indicated above (De Leo et al., 2006). It is important to note that this definition includes all self-harming behaviours, whether suicidal intent was present or not during the act.

The local study team who collected the data consisted of a psychiatrist (CI of the study SA), three psychologists, an epidemiologist and students.

The questionnaire was translated into French and Tahitian, back translated into English and tested on 20 participants recruited in the Emergency Department of the CHPF. The protocol used in the WHO/START study for its monitoring phase (Component 1) is similar to that used in the WHO/Multisite Intervention Study on Suicidal Behaviours (SUPRE-MISS) (Fleischmann et al., 2005). The START questionnaire covers socio-demographic data, information of the current NFSB (method, potential triggers), and a series of variables related to clinical information (e.g. psychiatric diagnosis, alcohol and drug use). The psychiatric diagnosis was made by the psychiatrist who treated the patient following his and the psychologists' clinical judgement following the criteria of International Classification of Diseases ver 10 (ICD-10).

The ethics committee of French Polynesia approved the survey (CEPF, *Avis No. 29,* Jan 11, 2007) and the study was implemented between 1 January 2008 and 31 December 2010.

General population data was obtained from the 2012 census available at the *Institut de la Statistique de Polynésie Française* (http://www.ispf.pf).

2.2. Statistical analysis

Statistical analysis was performed using IBM SPSS Statistics 22. To make comparison, odds ratios (OR) with 95% confidence intervals (95% CI) were calculated. With small numbers (fewer than 5) Fisher's exact test was applied. In order to compare suicide rates in different groups Rate Ratios (RR) with 95% CIs were calculated. A probability level of 0.05 was considered as significant.

3. Results

Between 2008 and 2010, there were 556 presentations of NFSB (also referred to as 'episodes') by 515 persons at the Emergency Department (ED) of the CHPF (presentation/persons ratio: 1.08). During the study period, 27 subjects 'attempted' two times (5.2%), 4 subjects three times (0.8%) and 2 subjects four times (0.4%).

The START questionnaire was filled in at each presentation. Examination of the register of admissions at the ED for cases of NFSB identified that 20 episodes were not included in the analyses for each year due to momentary unavailability of staff. With an annual average of approximately 185 persons (205 episodes) presenting with NFSB at CHPF, the estimated mean rate of NFSB presenting at ED is 79.4 per 100,000 persons.

There were 382 female presentations by 350 persons (presentation/persons ratio 1.09) and 173 male presentations by 164 persons (presentation/persons ratio 1.05). Female to male persons ratio was 2.13. There was one NFSB episode by a transsexual person who is not included in the analysis by gender in this article. Fig. 1 presents NFSB rates per 100,000 by gender and age groups for population aged 10 years and over. Rates of NFSB by persons for both genders are highest in the age group 25–35 years followed closely by the age group 15–24 years; however, the prevalence of NFSB by age groups was highest for younger age group (15–24 years) followed closely by the age group 25–34 years (female – 34% vs 33.1%; male – 32.9% vs 32.3%). After the age of 35 years NFSB rates and prevalence drop.

Table 1 shows primary and secondary psychiatric diagnoses (ICD-10) of persons at the time of their first NFSB episode during the study period. It was not possible to diagnose 45 persons (8.7%) as a psychiatrist was not available. An absence of primary diagnosis was noted in 14.5% of subjects, a proportion similar for both genders (14.4% for males and 14.6% for females). Therefore, we used 'not having a diagnosis' as the reference category for calculating odds ratios to compare males and females. The most frequent diagnoses were mood disorders (45.3%), and while this was more common in females (48.1% vs 39.2%), it did not reach statistical significance when compared to those 'not having a diagnosis' (Table 1). The second most frequent diagnoses for both genders were personality disorders (15% for males and 13.3% for females). This was followed by anxiety and depressive reaction disorders (F43): 13.3% for females, 8.5% for males. The diagnosis of addictive disorders was significantly more frequent in males (9.8% vs 2.2%; OR=4.48, 95%CI=1.60=12.56). It is important to note that psychotic disorders were present in 4.3% of the persons with NFSB, being significantly more common in males compared to

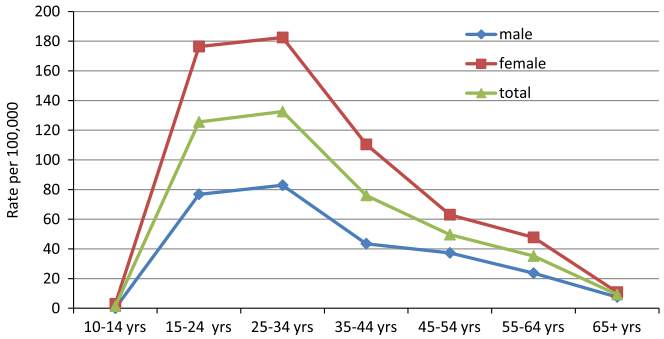

Fig. 1. Rates of NFSB for persons presenting to the ED of the CHPF in 2008–2010 (age at the time of their first attempt for those with more than one attempt).