



Universiteit
Leiden
The Netherlands

Alcohol, drugs and sexual abuse in Cameroon's rainforest

Gallois, S.; Andel, T.R. van; Pranskaityté, G.

Citation

Gallois, S., Andel, T. R. van, & Pranskaityté, G. (2021). Alcohol, drugs and sexual abuse in Cameroon's rainforest. *Social Science & Medicine*, 277.

doi:10.1016/j.socscimed.2021.113929

Version: Publisher's Version

License: [Creative Commons CC BY-NC-ND 4.0 license](https://creativecommons.org/licenses/by-nc-nd/4.0/)

Downloaded from: <https://hdl.handle.net/1887/3763949>

Note: To cite this publication please use the final published version (if applicable).



Alcohol, drugs and sexual abuse in Cameroon's rainforest

Sandrine Gallois^{a,*}, Tinde Ruth van Andel^{b,c,d}, Gintare Pranskaitytė^b

^a Faculty of Archaeology, Leiden University, Leiden, the Netherlands

^b Leiden University, Leiden, the Netherlands

^c Naturalis Biodiversity Center, Leiden, the Netherlands

^d Biosystematics Group, Wageningen University, Wageningen, the Netherlands

ARTICLE INFO

Keywords:

Tramadol

Baka

Hunter-gatherers

Marginalization

Reproductive health

Domestic violence

ABSTRACT

Due to global socio-economical and ecological changes, indigenous societies are exposed to an increased risk of alcohol and substance abuse. Most research on this topic has been done on indigenous communities in Canada, Australia, the US, parts of Europe and New Zealand, leaving indigenous communities in other parts of the world largely unrepresented. This study focuses on alcohol and drug consumption among the Baka: a former hunter-gatherer society in southeastern Cameroon that has been facing drastic socio-ecological changes in the last five decades. During long-term fieldwork we collected ethnographic and empirical data by means of group and individual interviews among four Baka communities. By using a multivariable approach, we describe psychoactive substance use behaviors, its socio-cultural and political context, and consequences. Our findings show that 48% of men, 24% of women and 11% of children between five and 16 years old reported alcohol intake in the past 24 h. The use of Tramadol was also reported, including by children as young as five years old. Psychoactive substances were used for recreational purposes, as painkillers, and energy boosters. Substance abuse was related to health issues, especially problems with fertility, and to several household and social conflicts. Other factors related to substance abuse were Baka's marginalization and sexual exploitation of Baka women and girls. By discussing these matters, we hope to stimulate more research on similar problems in small-scale societies and to invite governments, human rights activists, and other important parties to take action.

1. Introduction

Worldwide, indigenous people and local communities that rely on natural resources for their subsistence face several socio-ecological challenges that directly and indirectly threaten their livelihood, well-being and cultural integrity (Diaz et al., 2019). Compared to other groups from the same country, indigenous people often show higher infant and maternal morbidity and mortality, infectious disease loads, malnutrition, as well as overall lower life expectancy (Valeggia and Snodgrass, 2015). Some of their health issues also relate to harmful psychoactive substances use, such as binge drinking or drug misuse –i.e., not following medical guidelines for drug consumption or using them illegally (Sussman and Ames, 2001). For instance, indigenous people in Australia, the US, New Zealand and Canada show higher rates of binge drinking, and related morbidity and mortality than non-indigenous groups, even though they tend to consume on average less alcohol than non-indigenous (Andersen et al., 2019; Clifford et al., 2017). Evidence also points to different drug use patterns, such as that indigenous

youth often initiate earlier and use more psychoactive substances (e.g., cannabis) than their peers from other ethnic groups (Lehti et al., 2009; Snijder et al., 2020). Due to extensive, often biased and prejudice-driven media coverage of alcohol consumption among Aboriginals in Australia, many have been primed to relate 'indigenous' with 'alcoholism' (Stoneham et al., 2014). Besides worsening health, substance use might lead to substance abuse, which implies a decrease in performance of major life roles, causes legal problems, and contributes to deteriorating social and familial relationships (Calabria et al., 2010; Lavalée et al., 2010). Such consequences have been reported in different societies, in which the recent introduction of foreign and commercial liquors led to public fights, domestic violence and legal issues (Rose et al., 2015; Seale et al., 2002).

The extent of this public health issue has been recognized by such institution as the World Health Organization (WHO), which included alcohol and drug consumption problems worldwide into their sustainable development goals to be reached by 2030, and called for prevention and intervention strategies explicitly targeting indigenous societies

* Corresponding author.

E-mail address: galloissandrine.ethnoeco@gmail.com (S. Gallois).

<https://doi.org/10.1016/j.socscimed.2021.113929>

Received in revised form 5 March 2021; Accepted 9 April 2021

Available online 14 April 2021

0277-9536/© 2021 The Authors.

Published by Elsevier Ltd.

This is an open access article under the CC BY-NC-ND license

(<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

(Muhunthan et al., 2017). Attention to indigenous issues is important because, despite the amount of research produced on this topic, there is still insufficient evidence on substance use among indigenous groups to effectively inform policy making (Clifford and Shakeshaft, 2017). Also, such policies are often biased and prejudice-driven (Proudfoot and Habibis, 2015; Stoneham et al., 2014), rely on methodological tools to assess drinking behaviors that lack of cultural sensitivity, and which results in very little or no involvement of indigenous groups themselves (Barrett and Palo, 1999; Chang et al., 2011; Muhunthan et al., 2017).

Our understanding of substance use among indigenous communities shows another considerable gap, as the existing research is highly concentrated in the richest areas of the world, even when a large part of the estimated 370 million indigenous people live outside these Western societies (for exceptions, see Rose et al. (2015); Seale et al. (2002); Sylvain (2006)). The knowledge gap is even wider for Africa: to our knowledge, only two studies have explored psychoactive substance use and impacts (Morakinyo and Odejide, 2003; Ramirez-Rozzi, 2018). African countries are much exposed to health issues related to substance use, and show the heaviest burden of diseases and injuries due to alcohol (WHO, 2018), but most indigenous communities in the continent are not getting the attention they need.

With this article, we aim to reduce this knowledge gap by exploring substance use among an indigenous society in the Central African forest: the Baka foragers from southeastern Cameroon. To present empirical evidence for substance use behavior, we wanted to go beyond the harmful effect or “alcohol problem” perspective and instead, explored the role substances play in social, cultural and economic exchanges within and between societies (De Garine, 2001; Heath 1982; Marshall et al., 2001; Singer, 2001). Specifically, we explored i) the actual use of alcohol and drugs; ii) the drivers and context of their consumption; and iii) related consequences at the individual and social level. We adopted a multivariable approach, by which we considered individuals’ behavior and perceptions of substances within the psychological, socio-cultural and eco-political and biophysical contexts (Singer, 2001).

2. The Baka

The Baka, an Ubangian-speaking group, indicated in the past as ‘Pygmies’ (Robillard and Bahuchet, 2012), live in four different countries: Gabon, the Democratic Republic of Congo, the Central African Republic and Cameroon, reaching a total population of about 40,000 individuals (Leclerc, 2012). They used to live in forest camps in groups of 30–50 people, relying on hunting, fishing, gathering, and the exchange of forest products for crops with Bantu-speaking sedentary farmers. Nomadic, they used to move between camps depending on the availability of natural resources and on the involvement in agricultural work for the Bantu. In Cameroon, due to governmental sedentarization programs in the 1950s and the scarcity of game in their territories, the Baka started to settle down along the logging roads close to villages occupied by Bantu-speaking farmers (Leclerc, 2012).

The improved transport system offered by logging and mining companies that settled decades ago in the Cameroonian tropical forest attracted poachers, bushmeat and ivory traders, which together had an enormous impact on the local ecological system (Bennett, 2014; Ichikawa, 2001). In response to these changes, international institutions and policy-makers started promoting biodiversity conservation by creating natural parks, faunal reserves, and wildlife sanctuaries. Without any recognized territory, the Baka have been witnessing a gradual reduction of access to forest resources, especially to game and edible wild plants, and as a consequence, have to adapt their livelihood strategies (Hattori, 2014).

Nowadays, most Baka live in permanent settlements, devoting a larger amount of their time working in agricultural fields, either for their Bantu-speaking neighbors or in their own plots (Leclerc, 2012). Nevertheless, they still remain highly dependent on forest resources, both for their diet and subsistence, but are now forced to develop a range of new

practices in order to thrive (Gallois, 2016). Together with foreign parties’ arrival, a need to integrate into local economy occurred, which led to the monetization of exchanged goods and labor. For their services provided to the farmers, the Baka receive payment-in-kind or cash, around 0.41–0.82 USD a day. The Baka also earn money from selling bushmeat or vegetal Non-Timber Forest Products (NTFP) to their neighbors and to middlemen coming from other parts of Cameroon. Every now and then, Baka men are employed by timber companies or individual legal or illegal loggers. The latter employ Baka (and Bantu) men to carry wooden boards from the forest where the tree was felled to the road, where it is loaded on trucks.

Sedentarization also led to a higher access to local shops, mostly owned by the Bantu and migrants from north and west Cameroon. There, the Baka can purchase items such as food, cooking utensils, radios and machetes. The Baka have now access, although limited, to primary education and basic healthcare, such as vaccination (Gallois, 2016). Even if available, the health care system is inadequate mostly because of the distance to health posts, unaffordability of treatments, lack of medical equipment and essential medicine. Therefore, the Baka mostly rely on their own expertise on medicinal plants (Betti, 2004), which they sometimes combine with drugs such as paracetamol and medicine against intestinal parasites that can be bought in local shops.

Despite these changes, the Baka, as other hunter-gatherer societies (Hewlett, 2014), maintain social norms that are cornerstones of their culture. They form an egalitarian society characterized by a respect for the autonomy of every individual (including children), acephalous society attributes, a gender-based division of labor, the presence of allo-maternal care, the extensive sharing of goods and services, and their specific inter-ethnic relation with the Bantu-speaking farmers (Gallois, 2016; Joriss, 1998).

3. Methods

3.1. Data collection background

The data used for this research have been collected in a period of 30 months between 2012 and 2019, during which the first author lived in four Baka communities, and sporadically visited other Baka settlements in the Lomie and Messok districts, Haut Nyong department, southeastern Cameroon. First involved in a PhD study and later in a postdoctoral research project, she documented the ethnoecology of the Baka (knowledge, practices and beliefs related to the environment), their livelihood, and the effects of social and ecological changes on the transmission of their culture (Gallois, 2017; Gallois et al., 2020). For these projects, three communities (pop. 350, 400 and 800) were selected and one forest camp (pop. 200), located at a 1,5 h walk from the road. The communities differed in available health facilities, types of schools (private vs. public), and the number of local shops and bars. Only the largest village had a health center, led by Catholic nuns, while Baka from the other villages would have to travel 15–20 km to the nearest health facility. The number of shops, local brewers and traders varied between zero to five.

The author initiated the idea to conduct a study with a focus on alcohol and drug consumption among the Baka after witnessing several severe incidents (violent fights, rape, and ethylic coma) between 2012 and 2014 that were closely related to alcohol use and consumption of Tramadol. Opioid analgesic approved for the treatment of moderate to severe pain in adults (Hassamal et al., 2017), in Cameroon, Tramadol is used illicitly for its psychoactive properties (Mateso, 2019). These observed events raised many concerns in the communities, and encouraged the first author to investigate the issues further in 2018–2019. Before the fieldwork commenced, the author had received the community’s approval to live and to conduct research among them and obtained a free, prior informed consent (FPIC) from each participant to this study. For children, parental consent was also previously sought. Living within the Baka communities allowed the author and her

assistant to maximally immerse in Baka daily life and earn their trust needed to open up. The study was approved by the Ethics Committees of the Universitat Autònoma de Barcelona (CEEAH-04102010), of Leipzig University (196–16/ek), and the Ministry of Health of Cameroon (n°2018/06/1049/CE/CNERSH/SP).

3.2. Data collection and analysis

We aimed to assess substance use among the Baka by exploring the different factors surrounding and shaping alcohol and drug use. We thus explored the social and cultural contexts of substance consumption, including the relations within and between ethnic groups; the psychological drivers of substance use – beliefs on the effects provided by the substances, also referred to as outcome expectancies (Babor et al., 2012; Brown et al., 1987); as well as the consequences of potential harmful use of substance at the individual and socio-cultural level. To do so, we used a mixed-method approach, conducting group and individual interviews, informal talks, and engaging in participant observations in the four Baka settlements. Informal interviews were also conducted with Bantu neighbors, local authorities and health service members. The interviews were conducted with any adult and/or children willing to participate, with the aim of reaching a balanced sample in terms of gender and age categories. We conducted eight group interviews with a total of 30 women, 25 men and 15 children involved, and 13 semi-structured interviews with nine men and four women. For both types of interviews, the topics covered included a) the types of alcohol and drugs consumed; b) the context of consumption; c) the reasons for consumption; and d) the impact of substance use and changes that occurred throughout time (see Supplementary Material for the survey). The surveys were conducted in the Baka language, with the help of a local interpreter/research assistant. The extracts of the interviews presented were translated into French and English. To protect the privacy of Baka participants, interviewees' names were replaced by pseudonyms, and village names and other locations are not mentioned.

To complement these interviews, we added information on substance consumption derived from dietary recalls conducted in 2018–2019 with 164 Baka adults (99 women and 65 men from the four communities). In these interviews, the informants reported any food and drinks they had consumed in the 24 h, as well as the source of those products (Gallois et al., 2020). Data were also retrieved from interviews among children in a previous study conducted by the first author on Baka children daily time allocation, i.e. the way individuals devote their time in different activities (Gallois, 2016). Afterwards, we compared alcohol consumption between the dietary recalls and the time allocation interviews between the gender groups by using Fisher exact tests for statistical significance.

In order to get a general overview of substance use among the Baka, we triangulated the insights collected from these different methods into the following topics: a) substance types and accessibility; b) substance use contexts; c) substance use expectancies; and d) consequences at individual, household and community levels.

4. Results

4.1. Alcohol production and procurement

Different alcoholic beverages are available in the Baka villages, both homemade and commercially produced. The Baka traditionally consumed two drinks before the arrival of commercial products: palm wine, locally named *matango* and derived from the sap of *Elaeis guineensis* and *Raphia* spp. Palms; and a banana distillate called *ariki*, *ah* or *mbotoro*. Both Baka and Bantu men produce palm wine, harvested from palms that are either cultivated or occur naturally in the forest. The strong spirits made by distillation of sweet bananas are mostly produced and sold by Bantu women, even though a few Baka women also make it. Instead of cash, the Bantu farmers and other Cameroonians working in

the area often pay the Baka in palm wine and banana distillate. The farmers sometimes use a credit system – the Baka receive a *conso* of alcohol (the equivalent of 25 cL) from the farmers in advance, for which they later have to work in the fields.

The commercial alcoholic beverages sold at local shops or by nomadic merchants are red wine, beer, and 5 cl Plastic bags of strong spirit. The bags of alcohol, known by many different names, are in fact been prohibited in Cameroon since 2014 due to their potential harm to public health (Fig. 1). Yet they are the most commonly sold alcoholic products, because they are much cheaper than beer and wine. These plastic sachets of alcohol were first introduced in Cameroon by nomadic merchants (Oishi and Hayashi, 2014), and are now illegally sold in local bars and shops (Happi, 2019; Ramirez-Rozzi, 2018). Another commercial drink, known as “*nofia*” (from the English ‘no fear’), a mixture of methanol and ethanol was also sold (illegally) in one of the studied villages (Ramirez-Rozzi, 2018).

4.2. Alcohol consumption

In the dietary recalls collected from 164 adults, 34% reported that they had consumed alcohol in the previous 24 h. The average percentage of respondents mentioning alcohol consumption varied by gender: men reported a higher frequency of intake (48%) than women (24%) ($p < 0.001$ Fisher exact test). Regarding children's consumption, findings from a previous study conducted in two of the four villages showed that 11.2% of the 102 interviewed children (5–16 years old) reported alcohol consumption in the 24 previous hours (Gallois et al., 2015). Consumption was recorded among children as young as 9 years, but was more frequent among adolescents (>12), as almost 45% of the adolescent boys and 20% of the girls reported having consumed alcohol. Alcohol intake seemed to be related to the proximity and number of local bars in the area: 45% of the interviewed children said they went to local bars to listen to music, which facilitated access to alcohol. Although not reported in interviews, we observed that even younger children were consuming small amounts of alcohol, as some were sucking sachets left over by adults.

According to our adult informants, alcohol consumption increased during the last decades for two main reasons: the presidential change in 1984 and the introduction of commercial drinks. Men explained during a group interview that under the Ahidjo presidency (1960–1982), alcohol consumption was largely prohibited and the Bantu who were producing strong spirits had to hide themselves in forest camps. After Paul Biya took over as president (1984–present), the prohibition was repealed, which reportedly contributed to a higher accessibility and thus



Fig. 1. Plastic bag of strong alcoholic left on a forest walk (2019, credit: author).

increased consumption of alcohol among the Baka.

4.3. Context and drivers of alcohol consumption

The Baka consumed alcohol on different occasions and for a variety of reasons: during social events and ritual gatherings (such as funerals); during the evenings at bars; before, during or after work (buying it themselves or receiving it as payment from the Bantu); and during official meetings organized by local authorities, governmental institutions, (inter-) national NGOs or political parties. During official meetings, it was common for every participant to receive a '*per diem*' payment, which consisted either of alcoholic beverages or cash that was later often used to buy alcohol. It was generally perceived as a rule that official meetings should be accompanied by offering alcohol as a way to motivate the villagers to attend, and as a sign of gratitude for the time devoted.

From the interviews, it appeared that the main reasons why the Baka consumed alcohol were recreational reasons, a need for "motivation", and to reduce physical pain (Table 1).

At the end of the day, the Baka bought alcohol when socializing with others, usually in bars in Bantu villages, where popular African music was frequently played. The Baka regarded alcohol as a facilitator, enabling easier and more enjoyable social interactions ("*it makes us have more fun with our friends*", 30 year old man), boosting self-confidence ("*alcohol inhibits shame when interacting with others*", man, 28), improving dancing skills ("*I am a better dancer when I take alcohol*", man, 43; "*with alcohol, I don't feel the shame and can dance in front of others*", man, 35). Alcohol was also used as a motivation to perform physical work. It was said to "*give blood*" (man, 30), provide energy and motivate

Table 1

Occurrence of the different reasons and consequences of substance consumption from the focus groups (n = 8) and semi-structured interviews (n = 13).

		Alcohol		Tramadol	
		SSI	Focus group	SSI	Focus group
Reasons of substance consumption					
Number of interviews in which reasons were given		7	6	2	3
Recreational	Enjoying social relations	2	1		
	Having fun	1			1
	Singing/dancing	2			
Motivation	Energy provider for work	2	2	2	1
	Overcome shyness	2	4		
Relaxation	Reducing physical pain	1	1		1
	Relaxation	3			1
Others	Engaging in sexual relations				2
	Suppress hunger		1		
Do not know		3	1		1
Consequences of substance consumption					
Number of interviews in which consequences were given		10	7	4	4
Village level	Conflicts	4	3		
	Rapes	1	1		1
	Violence/doing "bad things"	5	1		1
Household level	Household maintenance disengagement	3	1		
	Household conflicts	3	3		
Individual level	Sterility/problem with delivery	2	2		1
	Itches/Scratching			2	3
	Sleeping				2
	Epilepsy			1	
	Body changes/weight loss			2	
	Lack of concentration	2	4		1
	Harmful effects	1	1		
	Accidents		7		1

to conduct agricultural work. Considered by some Bantu as an effective way to get Baka people working, they sometimes shared drinks with the Baka before starting to work. Alcohol was also consumed as a painkiller after a physical labor. With the money earned, the most accessible beverages were the small sachets, which costed 0.08–0.016 USD each, or the "*conso*" of banana distillate (0.82 USD). Some informants reported that taking one to two sachets of alcohol helped their body to get 'softer' and pain-free. While both men and women reported these similar reasons, women interviewed said that they tended to avoid drinking alcohol before work, and preferred doing it at the end of the day, after work or in the evenings at bars.

Children reported drinking alcohol for having fun. Many initiated alcohol consumption themselves, mostly when visiting bars. Some asked for alcohol from their parents or other adults. While many parents reported that they were not giving alcohol to their children because it would negatively affect their development, some said that they did not mind sharing with their children. "*We share alcohol as we share food. What is good is shared*" (man, 40).

4.4. Reported effects of alcohol

The majority of participants (ten of the 13 individuals interviews and seven out of the eight focus groups) recognized the negative effects of alcohol intake, even though palm wine was not often considered as a harmful substance. "*Except matango, other alcohols do not give blood, it sucks the blood*" (man, 62). At the individual level, the Baka reported that the excess consumption of alcohol, or when drinking without eating made people inattentive. Informants also talked about incidents that happened to drunk people who had hurt themselves due to body incoordination, or who fell asleep in the middle of the road, where timber trucks drive very fast and cause many deadly accidents. During fieldwork, the first author witnessed a number of injuries and accidents related to binge drinking. Moreover, both women and men were relating alcohol use to fertility problems. As suggested by the locals, drinking made one less responsible, resulting in extramarital relationships that increased the risk of sexually transmitted diseases, which were in turn related with a decrease in fertility. Another consequence of excessive alcohol consumption was the initiation of sexual relationships with women at bars, which sometimes lead to sex without consent "*With alcohol, there are men, sometimes there are several of them on the same woman*" (man, 35). Many informants reported that such behavior was more prevalent among the Bantu and outsiders (like truck drivers), who would spend an occasional night in villages looking for girls to have sex with. "*They (the drivers) make women drink to sleep with them*" (woman, 20).

Alcohol consumption consequences were felt at the household level as well. Both women and men reported that alcohol drinking often led to conflictive situations: "*Wine also excites people to make problems*" (man, 40); "*When you drink, even if you have no problem, you create them*" (man, 30); "*You become jealous, and you cannot bear the jokes between your wife and her friends*" (man, 40). Observations and interviews revealed that jealousy among the Baka was quite common, especially among couples. Suspicion of adultery often led to heated and long arguments, provoking violence and the use of pestles, pieces of wood, and even machetes as weapons. Besides conflicts, women in a focus group explained that their husbands often came back home intoxicated, making them incapable of carrying out various household-, agriculture-, or forest-related tasks, depriving the family of food and money. Women complained about this a lot, as testified by a 38-year old participant: "*Before, early in the morning, we were planning with my husband what we would do during the day. Now, we don't plan anything anymore. The man goes to drink his wine, and the woman does her work from her side.*"

Conflicts related to drinking occurred also at a community level, affecting the social balance. This was indicated as of the main reasons why some Baka preferred staying in forest camps rather than living in villages along the road. Elders seemed to be dissatisfied with the

situation, not only because the Baka were slowly neglecting their families and harming themselves, but also abandoning their community and culture. *“Before, my parents were living great, because they were doing all in the forest. Now, because many Baka just want to drink alcohol, they stay in the village. Baka are losing their culture”* (man, 45). One of the most common expressions used to illustrate how much some Baka were drinking nowadays was: *“His job: it is the wine”*. In general, drinking used to be reserved only for men and elder people. The violation of this tradition and the disinterest of some Baka for their social and cultural life in the community made the elders feel disrespected and hesitant to share their knowledge with the youth.

4.5. Tramadol: uses and procurement

According to the interviewees and local authorities, Tramadol, also locally known as “Tramol” or “Gbe”, was first introduced in the area in 2014 by employees of timber companies that operated in the communal forests. One to three tablets of Tramadol were sometimes given to Baka workers before work *“because it allows them not to feel pain and thus to work more efficiently”* (man, 35). While in 2014, only young men in two of the studied villages were taking the tablets, in 2018 Tramadol was reported to be used by other adults as well. Even when logging activities were suspended, people continued to take Tramadol, which was either sold by motorcycle taxi drivers who brought it from the nearest towns, or by the Bantu neighbors. One strip of 10 pills was sold for about 0.82 USD. Some adults mentioned that on average they took two to three pills a time, consuming them sometimes together with either alcohol or cannabis.

The consumption of Tramadol was observed not only among adults. In one village, children indicated that it was a common substance to take.

Researcher: *Do you prefer alcohol or Tramol?*

Boy 1 (13 years old): *Everyone prefers the Tramol. Even women, even young girls prefer it.*

Boy 2 (16): *There is no age [limit] for children who take the Tramol. The boys, and also all the girls you see here in this village, everyone takes the Tramol.*

Researcher: *Do the adults take it?*

Boy 1: *No, it is much more children who are taking it.*

When adults were asked whether their own children were taking Tramadol, most (66%) of them denied it, even when we had already collected evidence from the children themselves. The autonomy of children from an early age limits adults' awareness and control of the situation: *“Parents do not control their kids. Children come home in the evening, but we don't know what they have done. For instance, they pretend they go to school, but then, on the way, they flee and go to the Bantu for a job, in order to get money for buying the pills.”* (man, 43). The autonomy of the youth challenged parent authority, and made some adults feel powerless with regards to controlling their children's substance consumption, as explained during a women group interview: *“Young people do not listen. They drink. When they say to their daughter that alcohol is not good because it can complicate the delivery, the first thing the young people answer is “Are you the one who gives me the money for me to drink? If you keep telling me that, I am going to hurt you”* (woman, 52).

While adolescents from the group interview mentioned that all children between six and 16 years had tried or used Tramadol, during an informal interaction with much younger children, it was clear that many of them had also tried Tramadol at least once. In 2018, at midday, the first author overheard a conversation between her assistant and two young girls. That day, these children, who were playing around, stayed at the door of the assistant's room, looking inside. When they saw a tablet left by on a stool in his room, one of them asked him:

“What kind of tablets do you have in there?”

Assistant: *“I do not know what it is.”*

Girl 1 (4 years): *“This looks like the types of tablets that are not sweet”*

Assistant: *“What kind of non-sweet pills do you know?”*

Girl 1: *“Tramol is the only non-sweet pill I know”*

Girl 2 (5 years): *“It's not good, it's not sweet”*

Assistant: *“How did you get these pills?”*

Girl 1: *“Daddy gave us two Tramol pills one day. He crushed it and divided it between the four of us.”*

We could not verify this information with the girls' father, but we learned from other adults and children that it was not unusual for parents to give parts of Tramadol pills to children as young as five years old.

4.6. Context and reasons of tramadol use

The initial use of Tramadol was related to carrying timber, as it would give energy and increase the efficiency of the work. *“When you take Tramol, it gives you a lot of energy. Once I tried it. I went to the plot, and then, I worked, I worked. I came back and I was about to cook but could not. (...) But the day after, I arrived to my plot. I could not believe I had worked so much the previous day. It was like if two persons had worked there.”* (woman, 55).

Other reasons that were mentioned by women were pain relief *“it allows not to feel the pain”* and easier intercourse with men *“women can sleep with a man without problem”*. While some referred to sexual relationships with their official partners, others referred to sex with strangers for which they got paid, as was illustrated by a 20-year old woman: *“It is mostly the young ones [women] who take the pills. They do it because they want money.”*

Children highlighted the recreational properties of Tramadol as the main motivation to use it, but also mentioned other reasons, such as enhancement of sexual performance and more energy for work. *“When I take my drugs, I'm not looking for a problem. I observe how God created the world. Right now, my goal is to make love to a woman because I am really excited lately. But I like to take the Tramol without wine, with little tobacco because the Tramol gives the desire to smoke and it is good when you smoke”* (boy, ca. 16).

4.7. Reported effects of tramadol

At the same time the interviewed adults recognized the reasons why they like consuming Tramadol, they also reported that they sometimes refrained from Tramadol consumption because they considered it too dangerous, much more so than alcohol. Some called the drug a *“tablet for animals”* and *“an anti-inflammatory given to horses”*. Several side effects were reported, either from their own experiences or from observations of others. When the researcher asked what Tramadol did to him, a 40-year old man answered: *“It scrapes the body. It's sleepy and it's itching. He scratches the body like a monkey.”* A 38-year old woman explained: *“When people take it, we see them, sometimes, it makes them stand upright without doing anything. They stay there, without moving. You see their body changing, it makes them lose weight and the body becomes all black”*. Other long-term effects reported were a loss of attention and of physical coordination, as illustrated by the examples given during a group interview with adolescents:

Boy 3 (14 years old): *This guy takes it, he took it and all his slippers burned in the fire. He did not even feel it when the fire was catching his shoes.*

Boy 2 (13): *We went hunting with X (a Baka man), a Bantu gave us four pills strips (10 pills by strip) to hunt. We finished them in two days. We*

did not hunt (laughs). We only killed one duiker! During the day, we found the monkeys at close range, X missed them! He had the shotgun and he could not even catch them! (Laughs)

During our stay in the community, we witnessed a case of convulsions experienced by an adolescent, and heard about a number of accidents and even deaths in the neighboring villages that were attributed by local people to Tramadol consumption.

As was the case with alcohol, Tramadol was used in local bars too. One day at night, drivers of logging truck arrived to the village to spend time in the bar with the Baka. After handing out Tramadol to young men and women, truck drivers took girls to have sex with them in exchange of money. The Bantu also used Tramadol to lure Baka girls into sexual activities that did not involve money. In one village, we learnt from some adult interviewees that before our arrival in November 2018, several girls, between eight to twelve years of age, were raped by a Bantu man who owned a small shop in the Baka settlement. He was accused of encouraging these girls to drink alcohol and take Tramadol, showing them pornographic videos on his smartphone, and engaging in “sexual play” with most of them. These crimes were reported to local Bantu authorities and the police, but by the time they took action, the man had already run away from the area.

5. Discussion

5.1. Substances uses

The use of alcohol and Tramadol are embedded in the Baka's social and cultural life and are driven by individuals' expectancies towards the use of these substances. For them, drinking alcohol relates to the quality of social events and ritual ceremonies, it increases cohesion among groups, it is a sign of hospitality and unites people for collective activities and work. These contexts and reasons are common to many other societies (De Garine, 2001; Douglas, 2013; Epelboin, 2012; Platt, 1955). Substances are also used for enhancing labor motivation and efficiency. Known as the motivational syndrome, it has been also reported among the Aka, hunter-gatherers from the Central African Republic, with regard to cannabis consumption (Roulette and Hewlett, 2019). Drinking wine and beer, the most expensive substances, is also a sign of prestige, as they are mainly consumed by the local elite. Relaxation and pain relief, recreation, the improvement of self-esteem and assertiveness reported by the Baka are also positive substance outcomes expectancies commonly found in many societies (Nicolai et al., 2010). Tramadol was perceived by the Baka as an enhancer of sexual performance, which was also reported in Egypt, where its illicit use is recognized as aphrodisiac, energy provider and mood elevator (Hassamal et al., 2017; Magb et al., 2018).

Although alcohol and drugs have been used for generations, our insights show that substance use patterns have significantly changed over the last decades, both in terms of the category of consumers and the variety and quantity of substance consumed. While in the past alcohol was mostly consumed by elder men and reserved to dancers and singers during ritual ceremonies, it is now used among all the community members, including women and children, a pattern also reported in other settings (Seale et al., 2002). Political development and integration to the market increased the Baka's access to these substances (Oishi and Hayashi, 2014), specifically the plastic sachets of alcohol and Tramadol. In the same line, while the use of Tramadol was recently reported mostly in urban areas of Cameroon (Mateo, 2019; Mbanga et al., 2018), this study shows the spread of this substance in a remote area of Cameroon, affecting both adults and children.

The use and spread of alcohol and drugs within Baka society can be attributed to their unique socio-cultural norms. Just like other hunter-gatherers from the Congo Basin (Hewlett, 2014), the Baka show a high degree of sharing, egalitarianism, and respect of autonomy (including towards children). As much as food is shared within and between

households, alcohol and drugs are also part of what is good to share with other adults and children. The Baka also tend not to judge each other and respect everyone's choices, as other hunter-gatherers (Roulette and Hewlett, 2019). In this context, children who learn life skills through observation and imitation of their peers and adults (Gallois et al., 2015) tend to imitate adults when consuming alcohol and drugs. This is in contrast with other societies that have a more hierarchical social organization, and hold internal social and/or religious rules that limit substance use to certain individuals, disapprove drunkenness, and thus may restrain the spread of substance consumption among the community (Herbert, 1976). Among the Baka, all their socio-cultural values hardly limit the spread of alcohol and drug uses or inhibit children's substance consumption, what might lead to substance misuses or and abuses observed in this study. Therefore, our insights further support that, in any society under study, the socio-cultural norms regarding substance use and the social and political organization should be considered in order to understand the pattern of substance use and the potential spread of abuse and misuse, as highlighted by previous scholars (Muhuntan et al., 2017).

5.2. Local consequences

Alcohol and drug abuse and misuse negatively impact health, social cohesion and cultural resilience. Beyond the known effects of alcohol excess and drug consumption on adult and children's health (WHO, 2018), the type of cheap alcohol most commonly purchased by the Baka contains methanol (Ramirez-Rozzi, 2018), a toxic agent causing profound damage to the body (Kumar et al., 2015). Recently, Ramirez-Rozzi (2018) confirmed that Baka women's fertility drastically decreased after the opening of a bar in a village, which, according to the Baka, led to multiple incidents of rapes, especially of adolescents. Indirectly, the disengagement of adults – especially men – in household maintenance and subsistence activities implied that women who consumed alcohol less frequently had more workload to procure their daily food. This may have potential nutritional implications at the household level, and also on women's own health. Tramadol consumption can affect people's memory, visuo-spatial and executive functions (Khalifa et al., 2018), and also leads to psychiatric diagnoses such as mood, anxiety and borderline personality disorders (Magb et al., 2018). In Egypt, Iraq and the United Arab Emirates, this drug has emerged as a significant public health problem (Hassamal et al., 2017; Magb et al., 2018; Rodieus et al., 2018). The fact that young children also consume these substances is even more alarming. Indeed, the early exposure to alcohol and drugs among children holds a high risk for physical and cognitive development, as well as the apparition of psychopathological behavior and dependence (McGue and Iacono, 2008). Specifically, the use of Tramadol by children implies a risk of respiratory depression, including death, as recently warned by the US Food and Drug administration (Rodieus et al., 2018). The empirical evidence of harmful substance use brought forward by this study urgently calls for research to quantify the direct and indirect effects of alcohol and drug abuses on the health and nutritional status of Baka households. The intake of illicit alcohol and Tramadol during childhood poses a real public health threat for the Baka, and more generally, for other affected communities in Cameroon.

Substance consumption affects socio-economic and cultural aspects of Baka lives as well. The observed increase of violence and conflictive situations among family and community members due to substance abuse we observed was also reported in other settings (Seale et al., 2002). It affects the social cohesion of the community, especially because traditional rituals that play a key role for maintaining respect and equality within the community are currently challenged by the economic and social changes (Townsend, 2015). In this sense, the changing or often complete absence of rituals is slowly translating into the loss of egalitarian values (Townsend, 2015). In this context, alcohol overconsumption is one of the factors that increase not only internal political but also gender inequalities among Baka people. Substance

abuse may also lead more inequality between genders, as women have to take up more household responsibilities and workload, and thus become more sensible to health issues, and are also more exposed to sexual harassment related to substance abuse.

Baka culture is also threatened by substances use. As highlighted elsewhere (Gallois, 2017), the attraction for the sedentary lifestyle has reduced the frequency and duration of visit to the forest camps. This means that opportunities to share intergenerational knowledge and practices, especially the ones related to the subsistence, are decreasing. Elders have difficulties accepting the changes taking place in the community, making them more hesitant to share cultural knowledge. This conflictive generational relation can have serious consequences for the transmission of important cultural and ecological knowledge. In a context of global changes, the erosion of Baka culture might affect their livelihood resilience, as testified in many other small-scale societies (Diaz et al., 2019).

While this study shown the local consequences of harmful use of substance among the Baka, its exploratory nature does not allow to precisely quantify the extent of substance abuse and misuse among these communities. Considering the potential impact on public health, future studies are urgently needed to quantitatively assess the extent of substance abuses and misuses and their effects among the Baka, employing methods that are culturally adapted.

5.3. Context of substance consumption

The patterns of substance consumption and their consequences for Baka health, social and cultural integrity need to be regarded in the broader socio-political and economic context: the long history of discrimination faced by the Baka and the relations between the Baka and members of other ethnic groups. Although it is important to stress that the Baka are active agents responsible for their own behavior, yet the influences of external actors cannot be denied (Baer et al., 1986; Singer, 1986).

The use of alcohol to exploit, oppress and marginalize native communities has been a constant throughout the history of the colonization process (Jankowiak and Bradburd, 2003). While it has been widely condemned, this form of subordination still happens in many indigenous societies worldwide. Here, the use of alcohol and drugs is still a form to exploit the Baka's labor. Bantu farmers have extensively exploited them this way. Some studies have used the terms "clientage", "ownership" or even "slavery" to describe the relation between the Baka and their Bantu-speaking people neighbors (Robillard and Bahuchet, 2013), depicting it as one of subordination. While there is evidence of some power unbalance between families from both ethnic groups, it is worth reminding that generalizing would hide the complexity of their relation, which also includes a social dimension defined through pseudo-kinship alliances, "friendship", and solidarity bonds acquired through initiation (Joiris, 2003). However, the use of substances to obtain not only manual labor force but also sexual services is increasing the Baka's vulnerability and exposure to injustice.

Since the colonial period, the Baka have suffered from marginalization and discrimination. People from other parts of the country still commonly consider the Baka to be forest experts, good traditional healers, elephant hunters, great singers (reasons for which national and international agents come to meet the Baka), while at the same time they perceive them as uncivilized, 'savages to educate', generally inferior rather than equal human beings (Hattori, 2014). This perception was also reported about other hunter-gatherers in Africa (Epelboin, 2012). The introduction of alcohol and drugs by actors from other parts of Cameroon might be driven by this prejudicial view. Therefore, the Baka are not really considered in official meetings, such as those led by timber companies for deciding the logging locations and retributions for local communities. In such meetings, in which both Bantu and Baka participate, the fact that the majority of the Baka adults have not completed more than primary education, and many are illiterate (Reyes-García

et al., 2016), pushes the community even further away from important decision making.

This context of discrimination is settled in a global context of national marginalization. Even though Cameroon ratified the United Nations Declaration on the rights of indigenous peoples (UNDRIP, 2007), the Baka are not recognized as "indigenous" and thus no policy has been made on an institutional level. Despite efforts made by (inter)national NGOs and national organizations to recognize Baka's rights, their voice is still hardly heard (Pyhälä, 2012). Due to a widespread corruption in Cameroon (Fombad, 2000) and the frequent discrimination and prejudice against them, the Baka do not receive much protection, so cases of rape and other violence are rarely considered for prosecution. Often the system works against the community, as largely reported for bushmeat traffic tracking (Duda, 2017), increasing fear and making the Baka less likely to report serious offenses to the police. At the same time, the help the police could offer is limited, because the control of illegal substances trade in the area is difficult due to existing rivalries, close and complicated ties between the traders, and powerful individuals controlling the trade. As one Bantu village chief said: "*it is such a corrupted network that even if we catch the local sellers, they (being powerful people) will find other people to carry their drugs.*" The complexity of the situation follows patterns similar to those in bushmeat and ivory trafficking, where local authorities are powerless (Bennett, 2014; Duda, 2017). Although the situation faced by the Baka often violates the basic human rights, it is hardly noticed by the officials. It seems urgent to call for the establishment of a justice institution that helps the Baka to claim for their rights and establishes a better control on the illicit alcohol and drug traffic, and more broadly, improves the national policies against corruption. It calls for more attention and interference from (inter-)national policy makers, who should assess human rights offenses and potential health issues and take action accordingly.

6. Conclusion

Alcohol and drug abuse and misuse are present in indigenous communities in remote areas in Africa. Using an interdisciplinary and multivariable approach, this study sheds light on the importance of further exploring substance use patterns outside western societies. This paper calls upon any study aiming to understand substance uses and abuses, with potential prevention or intervention policies, to deeply explore the cultural values and social norms inherent to any cultural or ethnic group. Considering both the health and human right issues brought by substance abuse, we call for more research on similar problems in small-scale societies and stimulate governments, human rights activists, and other important parties to take action.

Credit author statement

SG designed, collected and analyzed the data and conducted the writing of the manuscript. GP participated to the design of the study, to the analysis of the data and the writing of the manuscript. TvA participated to the analysis of the data and the writing of the manuscript.

Declaration of competing interest

None.

Acknowledgments

The research leading to these results has received funding from the European Research Council under the European Union's Seventh Framework Program (FP7/2007–2013)/ERC grant agreement n° FP7-261971-LEK, and under the European Union's Horizon 2020 research and innovation program, grant agreement n° ERC-STG-677576 (HARVEST). We warmly thank our collaborators in the field, namely Ernest Simpoh, Appolinaire Ambassa and Alain Fezeu, as well as the IRD in

Yaoundé. We are really grateful to A. G. Henry who allowed the creation of this work, and all the colleagues who have reviewed this article: Isabel Diaz-Reviriego, Álvaro Fernández-Llamazares, Victoria Reyes-García and Fernando Ramirez-Rozzi. Most importantly, we would like to deeply thank all the adults, adolescents and children who trusted in us and opened their houses and hearts.

Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.socscimed.2021.113929>.

References

- Andersen, L.A.K., Munk, S., Nielsen, A.S., Bilberg, R., 2019. What is known about treatment aimed at indigenous people suffering from alcohol use disorder? *J. Ethn. Subst. Abuse* 1–35. <https://doi.org/10.1080/15332640.2019.1679317>.
- Babor, T.F., Higgins-Biddle, J.C., Saunders, J.B., Monteiro, M.G., 2012. AUDIT. The Alcohol Use Disorders Identification Test. Guidelines for Use in Primary Care, second ed. World Health Organization, Geneva, Switzerland. <https://doi.org/10.1177/0269881110393051>.
- Baer, H.A., Singer, M., Johnsen, J.H., 1986. Toward a critical medical anthropology. *Soc. Sci. Med.* 23 (2), 95–98. [https://doi.org/10.1016/0277-9536\(86\)90358-8](https://doi.org/10.1016/0277-9536(86)90358-8).
- Barrett, M.E., de Palo, M.-P., 1999. Community-based intervention to reduce demand for drugs in Northern Thai tribal villages. *Subst. Use Misuse* 34 (13), 1837–1879. <https://doi.org/10.3109/10826089909039429>.
- Bennett, E.L., 2014. Legal ivory trade in a corrupt world and its impact on African elephant populations. *Conserv. Biol.* 29 (1), 54–60.
- Betti, J.L., 2004. An ethnobotanical study of medicinal plants among the Baka Pygmies in the Dja biosphere reserve. *Cameroon. Afr. Stud. Monogr.* 25 (1), 1–27.
- Brown, S.A., Christiansen, B.A., Goldman, M.S., 1987. The alcohol expectancy questionnaire: an instrument for the assessment of adolescent and adult alcohol expectancies. *J. Stud. Alcohol* 48 (5), 483–491.
- Calabria, B., Doran, C.M., Vos, T., Shakeshaft, A.P., Hall, W., 2010. Epidemiology of alcohol-related burden of disease among Indigenous Australians. *Aust. N. Z. J. Publ. Health* 34 (s1), 47–51.
- Chang, L.J., Lo, S.F., Hayter, M., 2011. Drinking behaviors: the life narratives of indigenous Bunun women in Taiwan. *J. Nurs. Res.* 19 (2), 83–93. <https://doi.org/10.1097/JNR.0b013e31821cbbd0>.
- Clifford, A., Shakeshaft, A., 2017. A bibliometric review of drug and alcohol research focused on Indigenous peoples of Australia, New Zealand, Canada and the United States. *Drug Alcohol Rev.* (November), 509–522. <https://doi.org/10.1111/dar.12510>.
- De Garine, I., 2001. For a pluridisciplinary approach to drinking. In: de Garine, I., de Garine, V. (Eds.), *Drinking: Anthropological Approaches*. Berghahn books, pp. 1–21.
- Díaz, S.M., Settle, J., Brondizio, E., Ngo, H., Guéze, M., Agard, J., et al., 2019. The Global Assessment Report on Biodiversity and Ecosystem Services: Summary for Policy Makers. Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services, vol. 56. IPBES.
- Douglas, M., 2013. *Constructive Drinking: Perspectives on Drink from Anthropology*. Routledge, New York.
- Duda, R., 2017. *Ethnoecology of Hunting in an Empty Forest. Practices, Local Perceptions and Social Change Among the Baka (Cameroon)*. Doctoral Dissertation. Universidad Autònoma de Barcelona, Spain.
- Epelboin, A., 2012. Fierté pygmée et «pygmitude»: racismes et discriminations positives. *J. Afr. Stud.* 82 (82–1/2), 73–105.
- Fombad, C.M., 2000. Endemic corruption in Cameroon: insights on consequences and control. In: Hope, K.R., Chikulo, B.C. (Eds.), *Corruption and Development in Africa*. Palgrave Macmillan, London, pp. 234–260.
- Gallois, S., 2016. Dynamics of Local Ecological Knowledge A Case Study Among the Baka Children from Southeastern Cameroon. Doctoral dissertation. Universitat Autònoma de Barcelona, Spain. available at: https://ddd.uab.cat/pub/tesis/2016/hdl_10803_382477/ssg1de1.pdf.
- Gallois, S., 2017. Growing up in a changing world. A case study among Baka children from southeastern Cameroon. *Anthropochildren* 7. <https://popups.uliege.be/443/2034-8517/index.php?id=2755>.
- Gallois, S., Duda, R., Hewlett, B.S., Reyes-García, V., 2015. Children's daily activities and knowledge acquisition: a case study among the Baka from southeastern Cameroon. *J. Ethnobiol. Ethnomed.* 11 (1), 86. <https://doi.org/10.1186/s13002-015-0072-9>.
- Gallois, S., Heger, T., Van Andel, T., Sonké, B., Henry, A., 2020. From bush mangoes to bouillon cubes: wild plants and diet among the Baka (Cameroon). *Econ. Bot.* 74 (1), 46–58. <https://doi.org/10.1007/s12231-020-09489-x>.
- Happi, C., 2019. Activité illégale: le commerce des whiskys en sachet toujours répandus malgré l'interdiction. *Actu Cameroun*. https://actu.cameroun.com/2019/08/20/activite-illegale-le-commerce-des-whiskys-en-sachet-toujours-repandus-malgre-linterdiction/?utm_source=notification&utm_medium=push&utm_campaign=fcm.
- Hassamal, S., Miotto, K., Dale, W., Danovitch, I., 2017. Tramadol: understanding the risk of serotonin syndrome and seizures. *Am. J. Med.* 131 (11), 1382.e1–1382.e6. <https://doi.org/10.1016/j.amjmed.2018.04.025>.
- Hattori, F., 2014. Current issues facing the forest people in southeastern Cameroon: the dynamics of Baka life and their ethnic relationship with farmers. *Afr. Stud. Monogr.* 47, 97–199.
- Heath, D.B., 1982. Sociocultural variants in alcoholism. In: Pattison, E., Kaufman, E. (Eds.), *Encyclopedic Handbook of Alcoholism*. Gardner Press, New York, pp. 426–440.
- Herbert, B., 1976. Cross-Cultural Evidence that dependency conflict motivates drunkenness. In: Everett, M.W., Wadell, J.O., Heath, D.B., De Gruyter, M. (Eds.), *Cross-Cultural Approaches to the Study of Alcohol*. World Anthropology, Paris, pp. 249–263.
- Hewlett, B.S., 2014. *Hunter-gatherer of the Congo Basin Cultures, Histories and Biology on African Pygmies*. Transaction Publishers, New Brunswick, New Jersey.
- Ichikawa, M., 2001. Persisting cultures and contemporary problems among African hunter-gatherers. *Afr. Stud. Monogr.* S26 (March), 1–8.
- Jankowiak, W.R., Bradburd, D. (Eds.), 2003. *Drugs, Labor, and Colonial Expansion*. University of Arizona Press.
- Joiris, D.V., 1998. La chasse, la chance, le chant: Aspects du système rituel des Baka du Cameroun. Université Libre de Bruxelles, Faculté de Sciences Sociales, Politiques et Économiques.
- Joiris, D.V., 2003. The framework of Central African hunter-gatherers and neighbouring societies. *Afr. Stud. Monogr.* S28 (November), 57–79.
- Khalifa, H.E., Darweesh, A., Hassaan, S., Mostafa, S., 2018. Assessment of cognitive functions in Tramadol-dependent patients. *Middle East Current Psychiatry* (25), 2–5. <https://doi.org/10.1097/01.XME.0000526928.54570>.
- Kumar, P., Gogia, A., Kakar, A., Pratyush, M., 2015. An interesting case of characteristic methanol toxicity through inhalational exposure. *J. Fam. Med. Prim. Care* 4 (3), 470–473.
- Lavallee, Lynn F., Poole, J.M., 2010. Beyond recovery: colonization, health and healing for indigenous people in Canada. *Int. J. Ment. Health Addiction* 8 (2), 271–281.
- Leclerc, C., 2012. L'adoption de l'agriculture chez les pygmées Baka du Cameroun, Dynamique sociale et continuité structurelle. MSH/Quae, Paris/Versailles.
- Lehti, V., Niemelä, S., Hoven, C., Mandell, D., Sourander, A., 2009. Mental health, substance use and suicidal behaviour among young indigenous people in the Arctic: a systematic review. *Soc. Sci. Med.* 69 (8), 1194–1203.
- Magb, S.A. el, Khalil, M.A., Gohar, S.M., Abdelgawad, T.M.S., Hasan, N.M., Miotto, K., Rawson, R., 2018. Tramadol misuse and dependence in Egypt and the UAE: user characteristics and drug use patterns. *International Addiction Review* 2 (1), 6–13.
- Marshall, M., Ames, G.M., Bennett, L.A., 2001. Anthropological perspectives on alcohol and drugs at the turn of the new millennium. *Soc. Sci. Med.* 53 (2), 153–164.
- Mateso, M., 2019. Cameroun: des morts subites et des motards qui plantent, quand l'addiction au Tramadol vire au cauchemar. *France24info*. https://www.france24info.fr/monde/afrique/societe-africaine/cameroun-des-morts-subites-et-des-motards-qui-plantent-quand-l-addiction-au-tramadol-vire-au-cauchemar_3624565.html.
- Mbanga, C.M., Effe, D.T., Aroke, D., Njim, T., 2018. Prevalence and predictors of recreational drug use among medical and nursing students in Cameroon: a cross sectional analysis. *BMC Res. Notes* 11 (1), 1–7. <https://doi.org/10.1186/s13104-018-3631-z>.
- Mcgue, M., Iacono, W.G., 2008. The adolescent origins of substance use disorders. *Int. J. Methods Psychiatr. Res.* 17, 1–13.
- Morakinyo, J., Odeji, A.O., 2003. A community-based study of patterns of psychoactive substance use among street children in a local government area of Nigeria. *Drug Alcohol Depend.* 71 (2), 109–116.
- Muhunthan, J., Angell, B., Hackett, M.L., Wilson, A., Latimer, J., Eades, A., Jan, S., 2017. Global systematic review of Indigenous community-led legal interventions to control alcohol. *BMJ Open* 7 (3). <https://doi.org/10.1136/bmjopen-2016-013932>.
- Nicolai, J., Demmel, R., Moshagen, M., 2010. The comprehensive alcohol expectancy questionnaire: confirmatory factor analysis, scale refinement, and further validation. *J. Pers. Assess.* 95 (5), 400–409. <https://doi.org/10.1080/00223891.2010.497396>.
- Oishi, T., Hayashi, K., 2014. From ritual dance to disco: change in habitual use of tobacco and alcohol among the Baka hunter-gatherers of southeastern Cameroon. *Afr. Stud. Monogr.* (March), 143–163.
- Platt, B.S., 1955. Some traditional alcoholic beverages and their importance in Indigenous African communities. *Proc. Nutr. Soc.* 14 (2), 115–124. <https://doi.org/10.1079/pns19550026>.
- Proudfoot, F., Habibi, D., 2015. Separate worlds: a discourse analysis of mainstream and Aboriginal populist media accounts of the Northern Territory Emergency Response in 2007. *J. Sociol.* 51 (2), 170–188.
- Pyhälä, A., 2012. What Future for the Baka? Indigenous Peoples' Rights and Livelihood Opportunities in South-East Cameroon. (Human Rights Reports, 13). International Work Group for Indigenous Affairs and Plan Finland.
- Ramirez-Rozzi, F.V., 2018. Reproduction in the Baka pygmies and drop in their fertility with the arrival of alcohol. *Proc. Natl. Acad. Sci. Unit. States Am.* 115 (27), E6126–E6134. <https://doi.org/10.1073/pnas.1719637115>.
- Reyes-García, V., Guéze, M., Díaz-Reviriego, I., Duda, R., Fernández-Llamazares, Á., Gallois, S., Napitupulu, L., Orta-Martínez, M., Pyhälä, A., 2016. The adaptive nature of culture. A cross-cultural analysis of the returns of local environmental knowledge in three indigenous societies. *Curr. Anthropol.* 57 (6), 761–784.
- Robillard, M., Bahuchet, S., 2012. Les Pygmées et les autres: terminologie, catégorisation et politique. *J. Afr. Stud.* 82 (1/2), 15–51.
- Rodieux, F., Vutsits, L., Posfay-Barbe, K.M., Habre, W., Piguet, V., Desmeules, J.A., Samer, C.F., 2018. When the safe alternative is not that safe: Tramadol prescribing in children. <https://doi.org/10.3389/fphar.2018.00148>, 9-March-1-13.
- Rose, A., Arun, R., Minz, S., Manohari, G.P., Vinodh, A., George, K., 2015. Community perspectives on alcohol use among a tribal population in rural southern India. *NMJI (Natl. Med. J. India)* 28 (3), 117–121.
- Roulette, A.C.J., Hewlett, B.S., 2019. Patterns of cannabis use among Congo basin hunter-gatherers patterns of cannabis use among Congo basin hunter-gatherers. *J. Ethnobiol.* 38 (4), 517–532.

- Seale, J.P., Shellenberger, S., Rodriguez, C., Seale, J.D., Alvarado, M., 2002. Alcohol use and cultural change in an indigenous population: a case study from Venezuela. *Alcohol Alcohol* 37 (6), 603–608.
- Singer, M., 1986. Toward a political-economy of alcoholism: the missing link in the anthropology of drinking. *Soc. Sci. Med.* 23 (2), 113–130. [https://doi.org/10.1016/0277-9536\(86\)90360-6](https://doi.org/10.1016/0277-9536(86)90360-6).
- Singer, M., 2001. Toward a bio-cultural and political economic integration of alcohol, tobacco and drug studies in the coming century. *Soc. Sci. Med.* 53 (2), 199–213.
- Snijder, M., Stapinski, L., Lees, B., Ward, J., Conrod, P., Mushquash, C., Belone, L., Champion, K., Chapman, C., Teesson, M., Newton, N., 2020. Preventing substance use among indigenous adolescents in the USA, Canada, Australia and New Zealand: a systematic review of the literature. *Prev. Sci.* 21 (1), 65–85. <https://doi.org/10.1007/s11121-019-01038-w>.
- Stoneham, M., Goodman, J., Daube, M., 2014. The portrayal of indigenous health in selected Australian media. *The International Indigenous Policy Journal* 5 (1), 1–13.
- Sussman, S.Y., Ames, S.L., 2001. *The Social Psychology of Drug Abuse*. Open University Press, Buckingham.
- Sylvain, R., 2006. Drinking, fighting, and healing: san struggles for survival and solidarity in the Omaheke region, Namibia. *Senri Ethnol. Stud.* 70, 131–150.
- Townsend, C., 2015. Baka ritual flow diverted. *Hunt. Gatherer Res.* 1 (2), 197–224. <https://doi.org/10.3828/hgr.2015.11>.
- Valeggia, C.R., Snodgrass, J.J., 2015. Health of indigenous peoples. *Annu. Rev. Anthropol.* 44 (11), 117–135.
- Who, 2018. *Global Status Report on Alcohol and Health 2018*. World Health Organization, Geneva. https://www.who.int/substance_abuse/publications/global_alcohol_report/gsr_2018/en/.