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# Knowledge, attitudes, practices and HIV testing behaviors among French Guianese and Brazilian border inhabitants

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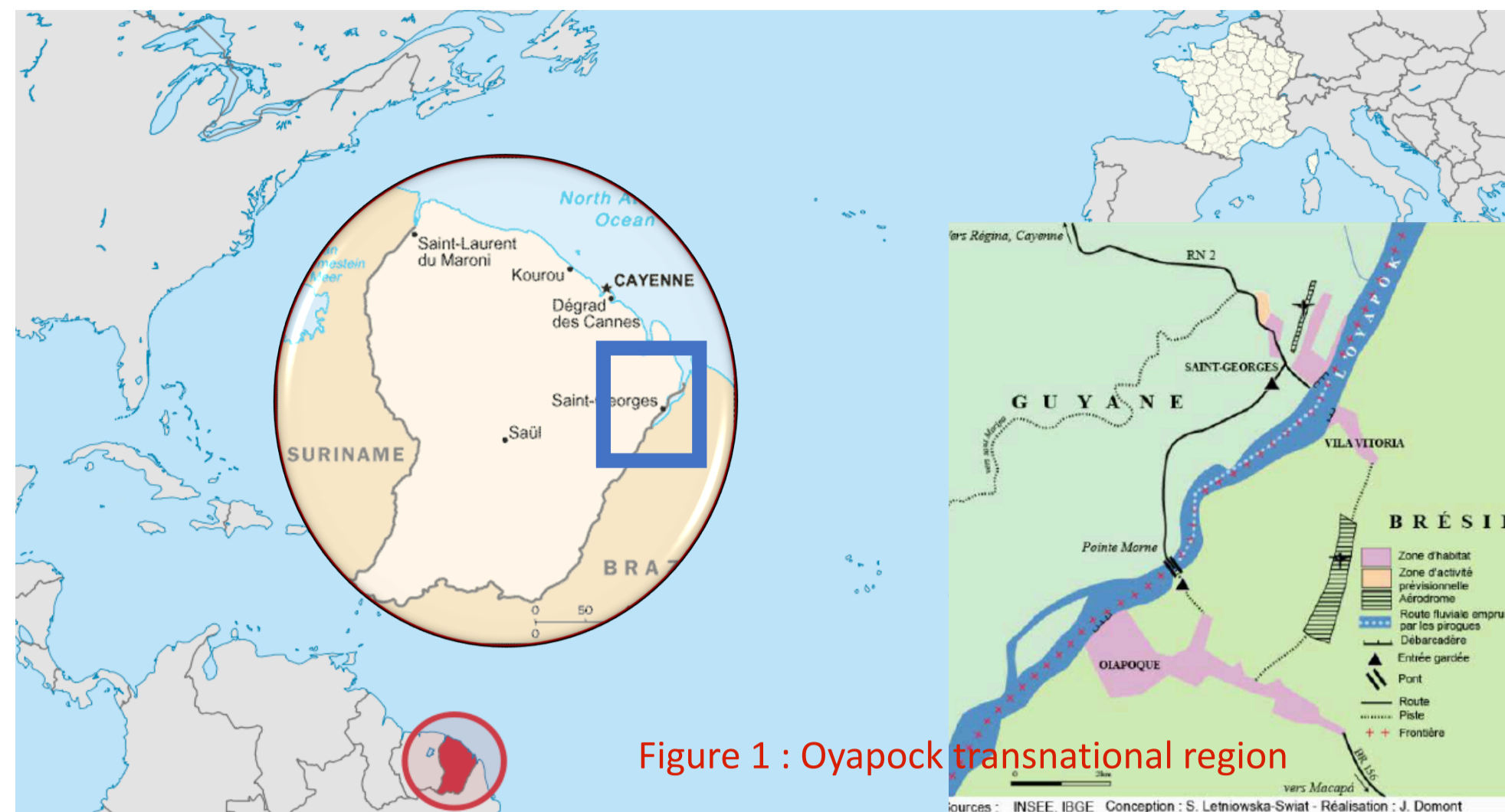
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## Background :

French Guiana is a French overseas territory located in the northern region of Brazil. The border between the 2 countries is a corridor for immigrants and a supply area for illegal gold miners "Garimpos".

For more than 10 years, the HIV prevalence rates among pregnant women in French Guiana and in Amapá have exceeded 1%, in spite of a "test and treat" program free of charge. However, the epidemic remains active in vulnerable key populations, notably among immigrants and border area inhabitants.



## Oyapock Coopération Santé

- International health project created to improve sexual health.
- Transborder program with three major components:
  - Biomedical with implementation of TASP, PREP and access to AART
  - Outreach and accommodation
  - Educational in sexual health.

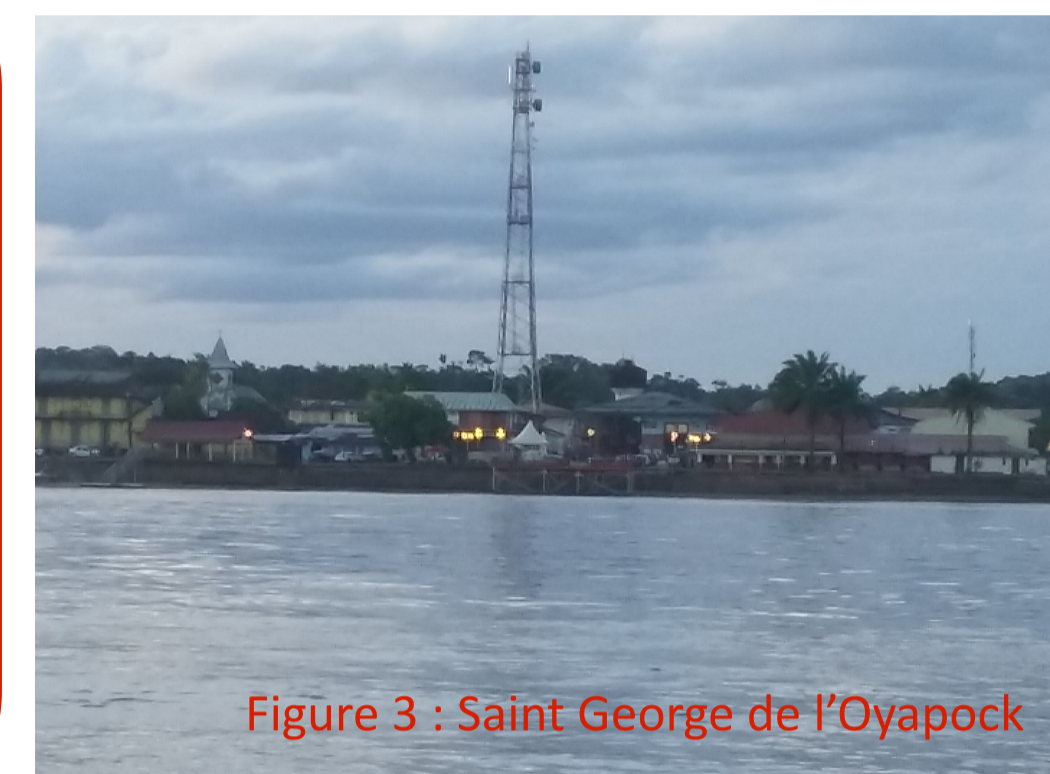
## Aim of the present study

Describe the level of knowledge, attitudes and practices regarding HIV among the populations living on both sides of the border between French Guiana and Brazil.

## Methods :

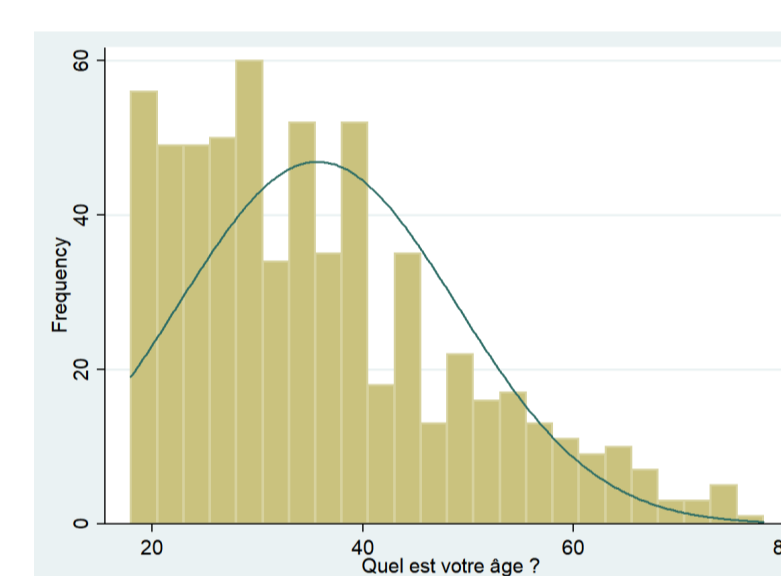
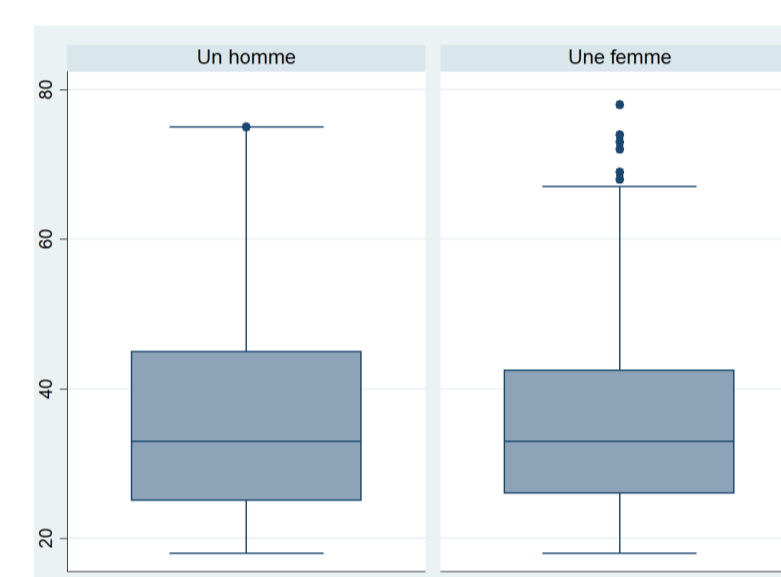
- Randomization of all participants over 18 years old according to the street of their household.
- Data collection from an anonymous structured questionnaire of 77 questions, in Portuguese or in French.
- Individual interview setting by trained local interviewers from the local UNIFAP university or from local NGOs: DPAC or !Dsanté.
- Comparison of socio-demographic characteristics and sexual behaviors between participants of STG and those of Oiapoque
- Multivariate logistic regression for "prior HIV testing" (ST 0.05)

- Cross-sectional and descriptive study.
- Data collection from October 2017 to February 2018 (5 months).
- Two sites : Oiapoque in Brazil and Saint Georges de l'Oyapock (STG) in French Guiana (Figure 1).



## Results :

- 621 study participants : 252 (40.6%) resided in STG and 369 (59.4%) in Oiapoque
- M/F sex ratio = 0.65 ( figure 4).
- Mean age = 35.7 IC95% [34.6- 36.7] years old (figure 5)
- Portuguese as native language for the majority of participants (76.9%, n=478/621).



	N (%)	Factors of realizing at least one prior HIV test (467 vs 122)	
		Bivariate chi test p values	Multivariate logistic regression Odds Ratio p values
<b>Sex</b>			
Male	228 (38.7)	<0.001	Ref.
Female	361 (61.3)		2,43 <0.001
<b>Age</b>			
18-29	227 (38.5)	0,012	0,48 0,006
30-44	218 (37)		Ref. Ref.
≥45	144 (24.5)		0,45 0,005
<b>School level</b>			
Any level to middle school	255 (43.3)	0,011	Ref. Ref.
High school to University	334 (56.7)		1,52 0,069
<b>Native language</b>			
Portuguese	470 (79.8)	0,009	Ref. Ref.
French	30 (5.1)		1,05 0,917
French Guiana or Haitian creole	61 (10.4)		0,58 0,091
Palikur	28 (4.8)		0,37 0,019
<b>HIV knowledge</b>			
Poor	260 (44.1)	0,006	Ref. Ref.
Good	329 (55.9)		1,72 0,012
<b>HIV risk behavior</b>			
Low	471 (80)	0,010	Ref. Ref.
High	118 (20)		0,63 0,068

Table 2: Factors of realizing at least one prior HIV test

467 (79,29%) respondents had already made at least one HIV test during their life.

## Who are more likely to have made a HIV test ?

Women (2.43 more likely, p<0.001).

People aged between 30 and 44 years compare to people aged between 18-29 years (OR=0.48, p=0.006) or people over 45 (OR=0.45, p=0.005).

Portuguese or French native speaker more than Creole speaking people (not significant result, OR=0.58, p=0.091) or Palikur native speaker (OR=0.39, p=0.019).

Educated respondents (but not significant in the multivariate regression, OR=1.52, p=0.069).

People with good HIV knowledge (55.9%) had 1.72 more chance to have already done a test (p=0.012).

Respondents with high HIV risk behavior (20%) were less likely to have done a HIV test (Not significant in the multivariate regression. OR=0.63, p=0.068).

Characteristics	Inhabitants of Oiapoque (Brazil)	Inhabitants of STG (French Guiana)	Total	Bivariate chi test
	Frequency N (row %) N=369	Frequency N (col %) N=252	Frequency N (col %) N=621	p value
<b>Sex</b>				
Male	137 (56.4)	106 (43.6)	243 (39.1)	0.216
Female	232 (61.4)	146 (38.6)	378 (60.9)	
<b>Sexual orientation</b>				
Heterosexual	340 (59.6)	230 (40.4)	571 (92.0)	0.002
Homosexual	13 (100.0)	0 (0.0)	13 (2.0)	
Bisexual	5 (71.4)	2 (28.6)	7 (1.2)	
Missing data	10 (33.3)	20 (66.7)	30 (4.8)	
<b>Age</b>				
18-29	138 (56.3)	107 (53.7)	245 (39.5)	0.336
30-44	143 (62.9)	84 (37.0)	227 (36.5)	
≥45	88 (59.1)	61 (40.9)	149 (24.0)	
<b>Native language</b>				
French	2 (6.3)	30 (93.8)	32 (5.2)	<0.001
French Guianese creole	3 (4.8)	60 (95.2)	63 (10.1)	
Portuguese	353 (73.9)	125 (25.2)	478 (77)	
Amerindian	1 (3.1)	31 (96.9)	32 (5.2)	
Others	10 (62.5)	6 (37.5)	16 (2.6)	
<b>Education level</b>				
Any level to middle school	137 (50.6)	134 (49.4)	271 (43.6)	<0.001
High school to University	232 (66.3)	118 (33.7)	350 (56.4)	
<b>Income</b>				
Paid employment	67 (65.7)	35 (34.3)	102 (16.4)	<0.001
Informal activity	60 (87)	9 (13)	69 (11.1)	
Social allowance	64 (38.3)	103 (61.7)	167 (26.9)	
None	138 (59.7)	93 (40.3)	231 (37.2)	
Others	37 (80.4)	9 (19.6)	46 (7.4)	
Missing data	3 (50)	3 (50)	6 (1.0)	

Table 1: Socio-demographics of survey participants

## Conclusion :

Good levels of knowledge and to not have a risky behavior have been found to be associated to a better HIV screening rate. HIV testing was also negatively linked to HIV risk behavior. Although the causal arrow could point either direction, this is a reassuring factor for prevention campaigns and could participate in reducing undiagnosed infections which drive the epidemic in this area. These results show the importance of developing HIV education program. These programs should include specific interest on autochthonous and creole communities speaking as they do fewer tests and as previous studies shown have lower HIV knowledge. This suggests that this area needs more community information on HIV delivered in native languages by community health workers.

E. Mosnier, M. Nacher, MC Parriault Knowledge, attitudes, practices about HIV and implication in risk and stigma prevention among French Guianese and Brazilian border inhabitants. BMC Pub Health, in press 2019

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