The Demography of Drug Abuse in Hong Kong

Stuart Gietel-Basten

Professor of Social Science and Public Policy
Division of Social Science and Division of Public Policy

香港科大
HKUST

Who are drug abusers?

Which groups are growing? Declining?

Where are they? What drugs are they abusing?

CRDA as a core dataset

香港科大
HKUST

Table 1. Number of Drug Abusers in Hong Kong (Continued)

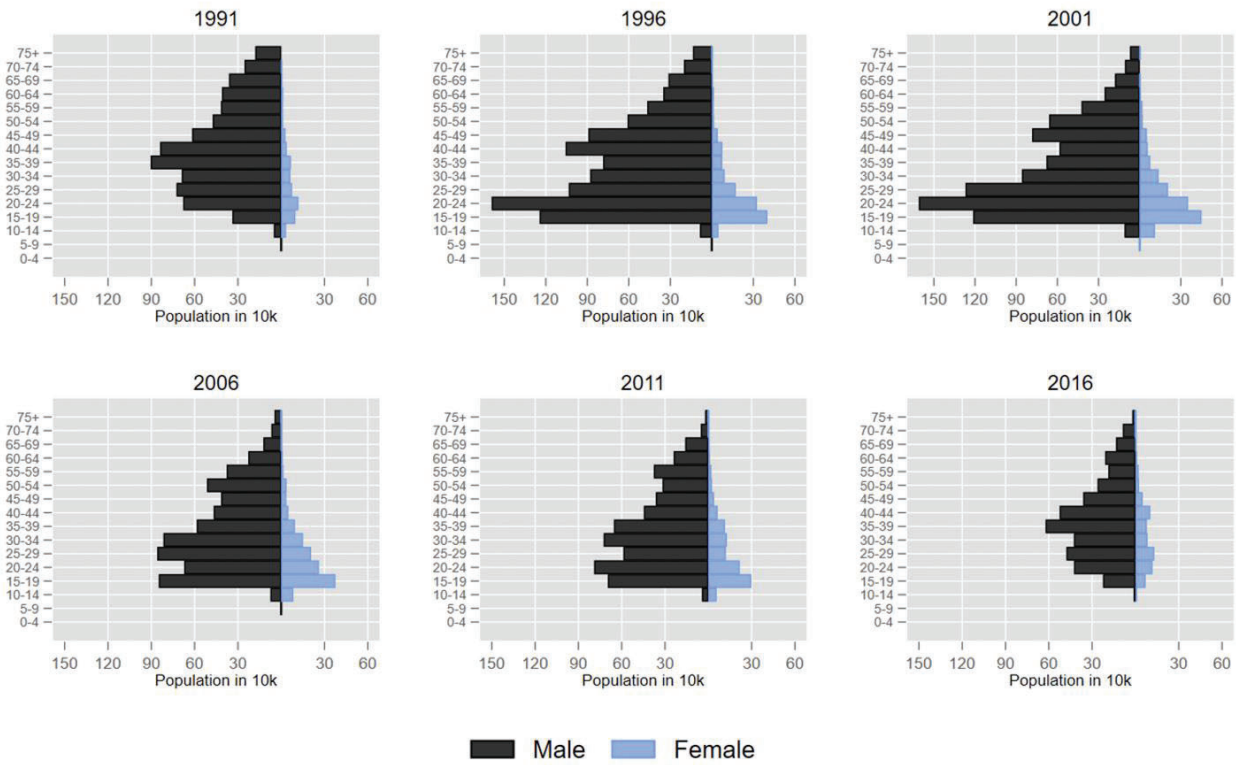|	1991	1996	2001	2006	2011	2016
Age(%)						
10-20	7.4	15.2	17.6	16.7	14.5	4.8
20-30	26.9	29.7	32.7	26.1	25.5	23.3
30-40	31.4	23.5	19.8	23.3	25.3	26.4
40-50	18.1	20.6	17.8	17.2	16.0	23.5
50-60	8.5	6.2	8.7	13.0	13.4	13.4
60-70	5.7	3.6	2.4	2.7	4.6	7.3
70+	1.9	1.2	0.9	0.9	0.7	1.3
Gender(%)						
Male	91.6	87.6	84.5	80.8	81.5	81.9
Female	8.4	12.4	15.5	19.2	18.5	18.1
Ethnicity(%)						
Chinese		95.5	95.3	91.4	91.7	88.9
Nepalese		0.6	1.1	1.3	2.6	3.4
Indian/Pakistani/Bangladeshi/Sri Lankan		0.2	0.2	0.5	1.0	3.2
Vietnamese		1.9	1.5	1.9	1.8	2.5
Other		1.8	1.9	4.9	2.9	2.0

Note: Number and percentage of drug abusers by different categories are listed.

Table 1. Number of Drug Abusers in Hong Kong (Continued)

	1991	1996	2001	2006	2011	2016
Education(%)						
No schooling/kindergarten	5.7	4.3	1.9	1.7	1.1	1.4
Primary	45.2	34.6	26.0	26.3	20.9	17.0
Lower secondary(S1-S3)	32.6	47.6	50.3	50.1	51.8	44.4
Upper secondary(S4-S7)	9.6	11.3	18.0	18.1	20.8	21.6
Tertiary	0.5	0.7	0.8	1.0	1.7	2.8
Economic Activity(%)						
Unemployed	31.7	43.2	45.6	50.1	44.6	41.0
Full-time workers	62.5	42.8	34.7	29.8	31.8	27.7
Casual/part-time worker		7.9	6.8	7.3	11.3	10.6
Workers in illicit trade		0.3	0.5	1.0	0.9	0.9
Home-makers		0.7	1.3	1.4	1.7	2.2
Students		1.9	4.9	4.6	3.9	1.1
Retired persons		1.0	1.4	1.4	1.9	2.6
Others		0.4	0.3	0.3	0.1	0
Unknown	5.9	1.7	4.7	4.1	3.8	13.9

Note: Number and percentage of drug abusers by different categories are listed.

Drug Population by Age and Gender

1991

Population in 10k

1996

Population in 10k

2001

Population in 10k

2006

Population in 10k
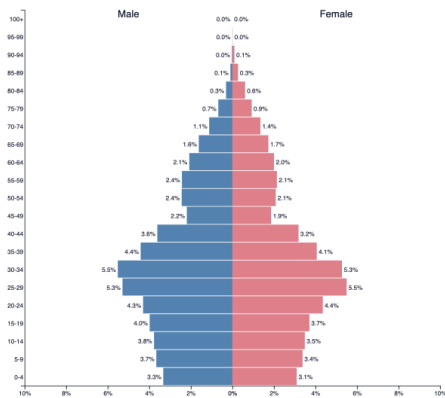
2011

Population in 10k

2016

Population in 10k

■ Male ■ Female

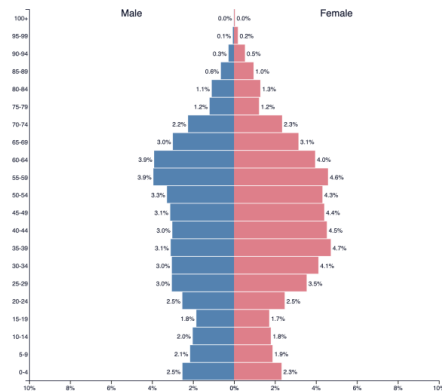# From numbers to rates

China, Hong Kong SAR ▾
1990
Population: 5,727,941

China, Hong Kong SAR ▾
2020
Population: 7,496,987

香港科大
HKUST

Other dimensions

Differential growth across Hong Kong

Data and methods

Link CRDA across to Census and By-Census (Requires extrapolation)

CRDA: robust data source

But

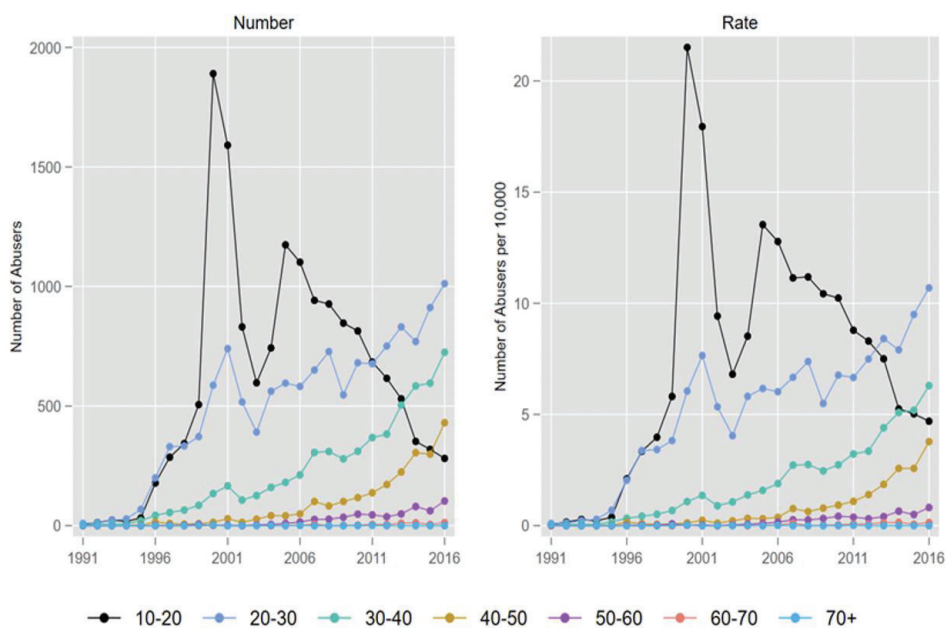Patterns of change can be linked to other activities (e.g. cost, police)

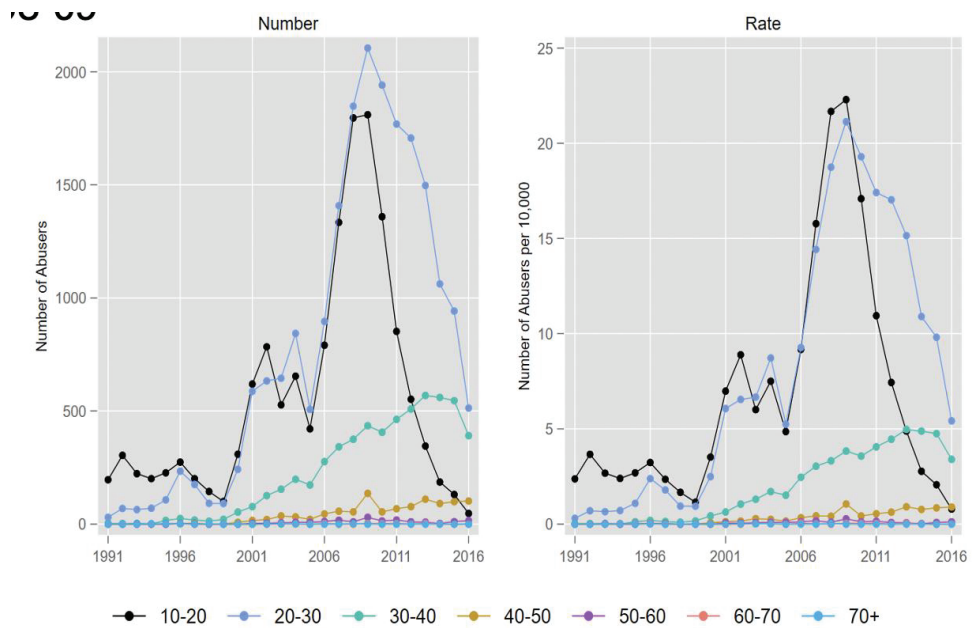Not measure of abuse; but of engagement with organisations

Narcotics Analgesics Opium, Heroin, Fentanyl, Pentazocine, Tilidate or Tilidine
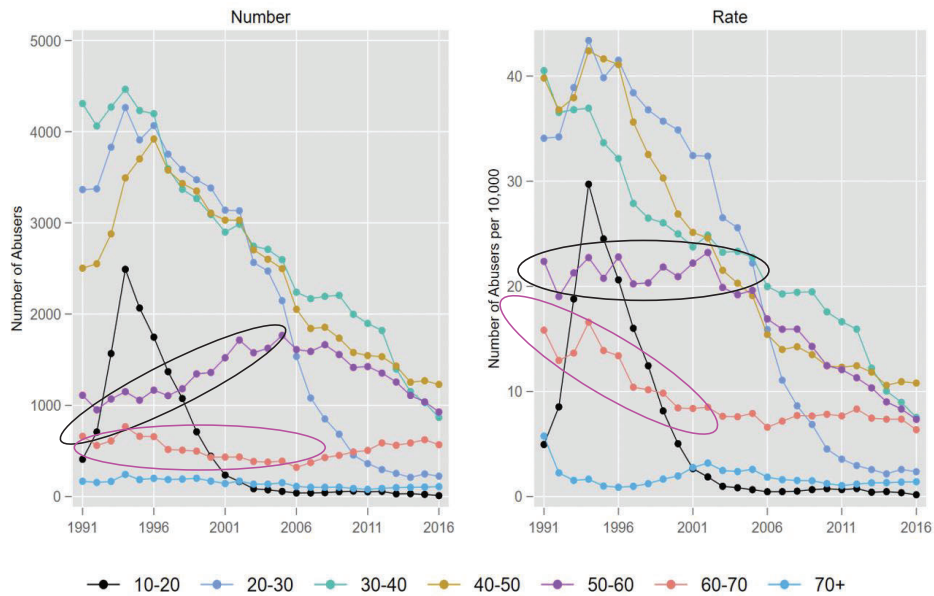
Stimulants Amphetamines, Cocaine, Methamphetamine and anti-depressants

Ketamine

Beyond rates...

Statistical analysis

Multiple factors at play

3. Determinants of Drug Abuse: Gender, Age, Education

Table 2. Difference in Drug Use Rate by Gender, Age and Education

VARIABLES	(1) All	(2) New	(3) Previous
Gender			
Female	-60.44***	-14.87***	-45.57***
	(3.18)	(1.55)	(2.17)
Age			
10-20	66.72***	35.82***	30.90***
	(7.08)	(4.69)	(4.39)
20-30	137.23***	48.87***	88.35***
	(8.83)	(3.53)	(6.15)
30-40	95.72***	21.86***	73.86***
	(7.97)	(3.96)	(5.30)
40-50	64.21***	9.85***	54.36***
	(4.66)	(1.64)	(3.98)
50-60	44.78***	7.46***	37.32***
	(4.19)	(1.60)	(3.30)
60-70	33.32***	7.08***	26.23***
	(4.29)	(1.60)	(3.26)
>=70	26.93***	6.94***	19.99***
	(4.52)	(1.60)	(3.45)
Education			
Primary	17.21***	-7.01**	24.22***
	(6.13)	(3.41)	(3.99)
Lower secondary	8.83	-4.15	12.98***
	(5.92)	(3.52)	(3.63)
Upper secondary	-44.92***	-17.54***	-27.39***
	(5.02)	(3.38)	(2.78)
Tertiary	-56.88***	-22.35***	-34.53***
	(5.26)	(3.44)	(2.97)
Observations	1,919	1,919	1,919
R-squared	0.39	0.23	0.42

Note: The differences in drug use rate by gender, age, and education are listed in each panel. Results on all drug users, newly reported users, and previously reported users are listed in each column. The males, age group at 0-10, and people with no schooling/kindergarten are the reference groups, respectively. Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

3. Determinants of Drug Abuse: Age by Drug Type

- Concave over age
  - Narcotics Analgesics, Sedatives/Hypnotics
- Monotonically decreasing over age
  - Stimulants/depressants/tranquillizers/hallucinogens/ketamine

Table 3. Drug Use Rate by Drug Type and Age

VARIABLES	(1) Narcotics Analgesics	(2) Stimulants	(3) Depressants	(4) Tranquillizers	(5) Sedatives/ Hypnotics	(6) Hallucinogens	(7) Other (Ketamine)
10-20	7.33***	9.73***	0.12***	0.92***	0.02***	3.16***	8.92***
	(1.97)	(1.44)	(0.03)	(0.13)	(0.01)	(0.37)	(1.67)
20-30	27.34***	6.82***	0.03***	0.98***	0.12***	3.19***	10.61***
	(3.58)	(0.82)	(0.01)	(0.12)	(0.02)	(0.41)	(1.86)
30-40	29.05***	2.59***	0.01***	0.89***	0.19***	0.79***	2.62***
	(1.72)	(0.48)	(0.00)	(0.13)	(0.03)	(0.07)	(0.50)
40-50	29.32***	0.96***	0.00***	0.48***	0.09***	0.15***	0.44***
	(2.41)	(0.26)	(0.00)	(0.05)	(0.01)	(0.02)	(0.09)
50-60	21.88***	0.25***	0.00	0.27***	0.05***	0.02***	0.09***
	(1.15)	(0.06)	(0.00)	(0.05)	(0.01)	(0.00)	(0.02)
60-70	11.86***	0.04***	0.00	0.10***	0.01***	0.00	0.02***
	(0.50)	(0.01)	(0.00)	(0.02)	(0.00)	(0.00)	(0.01)
>=70	2.31***	0.00	0.00	0.01***	0.00	0.00	0.00**
	(0.20)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Observations	208	208	208	208	208	208	208
R-squared	0.61	0.56	0.38	0.48	0.41	0.65	0.45

3. Drug Abuse: Income

- If monthly income increases by HKD 10,000 in a district, the drug use rate will decrease by 22 people per 10,000
  – 9 new / 13 previous

- A 10% (58%) increase in monthly income is associated with a 14% (82%) drop in drug use rate

- The highest new addiction rates are in Wan Chai and Central/Western

Table 4. Rate of Drug Use by Income and District (per 10,000)

VARIABLES	(1) All	(2) All	(3) All	(4) New	(5) Previous
Income (HKD)	-0.0015***	-0.0027***	-0.0022***	-0.0009***	-0.0013***
	(0.0001)	(0.0001)	(0.0004)	(0.0001)	(0.0003)
Wan Chai		8.01***	7.74***	0.89**	6.84***
		(1.56)	(1.34)	(0.43)	(1.12)
Eastern		-16.90***	-12.80***	-6.05***	-6.75***
		(1.54)	(2.98)	(0.94)	(2.40)
Southern		-4.53***	-1.22	-1.52*	0.31
		(1.43)	(2.50)	(0.79)	(2.02)
Yau Tsim Mong		18.83***	24.00***	0.88	23.12***
		(2.15)	(4.08)	(1.07)	(3.44)
Sham Shui Po		5.37***	11.74***	-5.40***	17.15***
		(2.07)	(4.46)	(1.41)	(3.62)
Kowloon City		-14.00***	-9.73***	-5.84***	-3.89
		(1.54)	(3.08)	(0.99)	(2.49)
Wong Tai Sin		-19.11***	-11.37**	-9.73***	-1.64
		(2.33)	(5.46)	(1.67)	(4.47)
Kwun Tong		-17.98***	-10.72**	-8.31***	-2.41
		(2.34)	(5.17)	(1.58)	(4.21)
Kwai Tsing		-27.27***	-19.57***	-8.84***	-10.73**
		(2.04)	(5.28)	(1.67)	(4.25)
Tsuen Wan		-12.59***	-7.15*	-6.07***	-1.08
		(1.94)	(3.89)	(1.25)	(3.14)
Tuen Mun		-19.80***	-12.32**	-7.95***	-4.37
		(2.03)	(5.14)	(1.64)	(4.13)
Yuen Long		-17.92***	-10.86**	-5.29***	-5.56
		(1.95)	(4.85)	(1.52)	(3.92)
North		-16.25***	-9.06*	-4.39***	-4.68
		(1.90)	(4.96)	(1.62)	(3.99)
Tai Po		-16.84***	-10.62**	-4.98***	-5.65
		(1.82)	(4.33)	(1.38)	(3.49)
Sha Tin		-23.25***	-17.80***	-7.19***	-10.61***
		(1.78)	(3.88)	(1.20)	(3.14)
Sai Kung		-25.58***	-20.19***	-7.43***	-12.76***
		(1.98)	(3.96)	(1.21)	(3.20)
Islands		-8.04***	-3.78	-0.83	-2.96
		(1.72)	(3.39)	(1.18)	(2.72)
Observations	378	378	378	378	378
R-squared	0.27	0.88	0.92	0.83	0.92
District FE		Y	Y	Y	Y
Year FE		Y	Y	Y	Y

Note: Central/Western is the reference group.

Policy review

Learning from other settings

But often difficult to apply direct lessons

Needs a more comprehensive assessment and deeper understandings

Beyond our project

What is CRDA capturing?

Location of registration? Abuser?
Abuse?

Correlation - *but what about **cause***

Qualitative reassessment

Number of Drug Abusers by District in 2016