

# **Factors Associated with Young Substance Abuser**

Author: Szeto Ching Ho

Institution: Department of Medicine, Yan Chai Hospital

## **Introduction:**

Drug addictions by adults are warning signs for society. Random drug testing in schools have implemented in the hope of creating awareness and reducing the drug addiction by teen. Family, as the building block of the community, may be the starting point of change.

## **Purpose of the Project:**

Elucidate the family factors that are associated with drug abuse, and deduce the weight of peer group pressure and curiosity.

## **Material & Methods:**

Data is collected from Population By-census, the figures given by the Hong Kong Council of Social Service, and the Central Registry of drug Abuse from 1999-2008. Drug abusers with age less than 21 is selected. Marriage, number and the income of household, the divorce rate, single parent family, domestic violence, unemployment, family solidarity index and Gini coefficient of poverty are chosen. The clinical statistic significance is assessed by the Wilcoxon test and the association is assessed by multiple linear regression.

## **Results:**

The decreasing trend of young abuser from 2000 to 2004 had been reversed uptill now (Table 1). Meanwhile, there were changes in demographic parameters. Divorce, single parent family, domestic violence and unemployment were associated with youth drug abuse so as the family Solidarity index and Gini coefficient of poverty with  $p < 0.05$  (Table 2). In the multiple regression analysis, domestic violence and single parent family were highly associated with the increasing number of young abuser as compared with divorce or unemployment (Table 3).

Poverty index had a higher weight than the family solidarity index (Table 4).

## **Conclusions:**

Effort to prevent domestic violence and assistance for the single parent family are of importance. Government strategies to improve the Gini coefficient of poverty

will improved the living standard of the poor. The constant in the regression analysis equation may indicate the summation effect of peer group, curiosity and the community.

Reference:

<sup>1</sup> Census and Statistics Department (2008). Women and Men in Hong Kong Key Statistics.

<sup>2</sup> Census and Statistics Department (03/2006 Email). General Household Survey.

<sup>3</sup> Social Development Index 2006, The Hong Kong Council of Social Service, 2006.

Updated June 2009 Family and Community Services in Hong Kong P.1

<sup>4</sup> Central Registry of Drug Abuse 2008

**Table 1: Empirical data from the Government**

Year	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Reported drug abuser	16314	18335	18513	17966	15790	14854	14115	13252	13591	14175
Age under 21	2482	4020	3902	3002	2207	2186	2278	2578	2999	3430
Population	6759236	6649299	6708389	6768765	6829140	6889516	6949891	6864346	6891803	6919261
Marriage	31137	31981	32825	35373	37921	40470	43018	50328	47453	47331
Household	1993168	2020066	2053412	2088039	2122666	2157292	2191919	2226546	2261173	2295800
Median monthly income for a family of four	19900	20000	20400	20000	19000	19000	20000	21000	21900	22800
Household size	3.18 people	3.14 people	3.1 people	3.08 people	3.06 people	3.04 people	3.02 people	3.0 people	2.88 people	2.86 people
Divorce	11844	12634	13425	13787	14149	14511	14873	17424	18403	17771
Single parents	52000	55230	58460	61233	64006	66779	69553	72326	75100	77872
sub-index of family solidarity	-82	-72	-124	-151	-178	-206	-233	-261	-288	-316
Domestic violence	1111	1072	1358	1665	1977	2289	2593	2897	3202	3506
Gini coefficient for poverty	0.515	0.520	0.525	0.53	0.535	0.540	0.545	0.550	0.554	0.559
unemployment rate	6.2%	5%	5.1%	7.3%	8.0%	6.9%	5.7%	4.8%	4.0%	3.8%

**Table 2: Statistical significance of the proposed factors**

**using Wilcoxon test**

Statistical significance	Divorce	Single	Violence	Unemploy	Solidarity	Gini
p	<0.0002	<0.0002	<0.0006	<0.0002	<0.0002	<0.0002

**Table 3: The association of different measurable factors with young drug abuser**

Divorce rate	Proportion of single parent family	Domestic violence rate	Unemployment rate	Substance abuser with age<21
0.005942	0.007693	0.000557	0.062	0.000367
0.006254	0.008306	0.000531	0.05	0.000605
0.006538	0.008714	0.000661	0.051	0.000582
0.006603	0.009046	0.000797	0.073	0.000444
0.006666	0.009372	0.000931	0.08	0.000323
0.006726	0.009693	0.001061	0.069	0.000317
0.006785	0.010008	0.001183	0.057	0.000328
0.007826	0.010536	0.001301	0.048	0.000376
0.008139	0.010897	0.001416	0.04	0.000435
0.007741	0.011254	0.001527	0.038	0.000496

***Online Multiple Linear Regression, Xuru's Website***

$$y = -3.50218965 \cdot 10^{-2} x_1 + 2.964505706 \cdot 10^{-1} x_2 - 1.068766359 x_3 - 5.814518773 \cdot 10^{-3} x_4 - 7.666542948 \cdot 10^{-4}$$

**Residual Sum of Squares =  $7.630416368 \cdot 10^{-9}$**

**y is rate of substance abuser with age < 21 ,  $x_1$  is divorce rate ,  $x_2$  is single parent family,  $x_3$  is domestic violence and  $x_4$  is unemployment.**

**Table 4. The association of different indices with young drug abuser**

Solidarity	Gini	<21
-82	0.515	0.000367
-72	0.52	0.000605
-124	0.525	0.000582
-151	0.53	0.000444
-178	0.535	0.000323
-206	0.54	0.000317
-233	0.545	0.000328
-261	0.55	0.000376
-288	0.554	0.000435
-316	0.559	0.000496

***Online Multiple Linear Regression, Xuru's Website***

$$y = -5.118769859 \cdot 10^{-6} x_1 + 2.712931856 \cdot 10^{-2} x_2 - 1.317108594 \cdot 10^{-2}$$

Residual Sum of Squares:  $rss = 7.309565392 \cdot 10^{-8}$

**Where y is rate of substance abuser with age < 21 ,  $x_1$  is the solidarity index ,  $x_2$  is the Gini index of poverty.**