



Generational Differences in Adoption of Smoke Free Home Rules Among Asians in the U.S.

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2017 DNP Conference

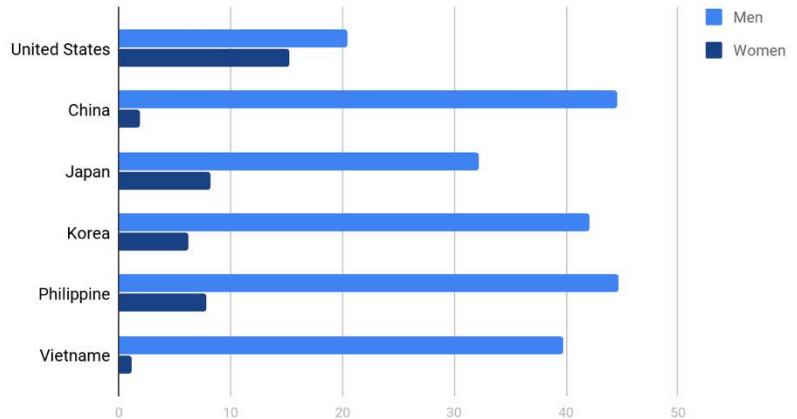
Background:

Smoking rate in Asian countries is much higher than that of the United States.



Picture source: <https://www.asianscientist.com/2012/08/features/smoking-in-asia-looming-health-epidemic-2012/>

Percentage of current smoker



Data source: Who Tobacco control country profiles
http://www.who.int/tobacco/surveillance/policy/country_profile/en/

Background:



Most of the Asian countries do not have specific legislation to prohibit smoking in the public.

According to WHO's tobacco control country profiles 2015 report, China did not have smoke-free legislation in health care facilities, educational facilities, government facilities, indoor offices and workplaces, restaurants, cafes, pubs, and bars.



Source: http://www.who.int/tobacco/surveillance/policy/country_profile/chn.pdf?ua=1

Second hand smoking and third hand smoking

Second hand smoking exposure among never-smoking youth from Western Pacific countries (including China, Japan, and South Korea): 43.3%.



YOUTH SMOKING
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Between **80,000 and 100,000 CHILDREN** worldwide start smoking every day, **ROUGHLY HALF OF WHOM LIVE IN ASIA.**

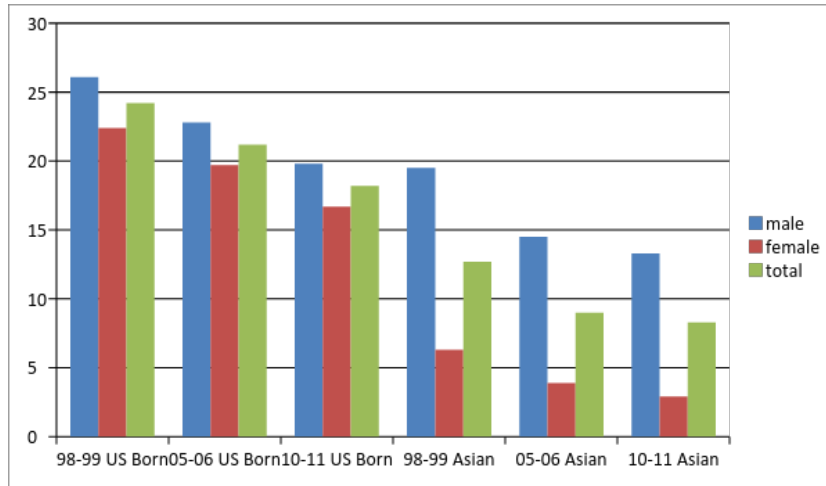
 **1 OUT OF 4 YOUTHS** alive in the Western Pacific Region will **DIE FROM SMOKING.**

Studies show that **50% OF TEENAGE SMOKERS** go on to smoke for **15 TO 20 YEARS.**



Source: Veeranki, S. P., Mamudu, H. M., Zheng, S., John, R. M., Cao, Y., Kioko, D., . . . Ouma, A. E. O. (2015). Secondhand smoke exposure among never-smoking youth in 168 countries. *Journal of Adolescent Health, 56*(2), 167-173. doi://dx.doi.org/10.1016/j.jadohealth.2014.09.014

Asian Immigrants' smoking rate



Source: Kuerban, A. 2016. Healthy migrant effect on smoking behavior among Asian immigrants in the United States. *Journal of Immigrant and Minority Health* 18(1) 94-101.



Data



2010-2011 Current Population Survey-Tobacco Use Supplement (CPS-TUS)

CPS is a multistage, stratified, and nationally representative survey of individuals living in the U.S. who are non-institutionalized and age 15 and older.

Collected in May, August, and January.

CPS data used frequently by those who are interested in population based outcomes and parameters

CPS data can be used by DNPs to discover the general population characteristics and trends in a large scale.



Definition of generation and reference group

Foreign born immigrants:

first generation. Those who borned in Asian countries to non-U.S. citizen parents

U.S. born Asians:

second generation. Those who borned in the U.S. to parents who were borned in Asian countries.

Reference group:

U.S. born non-Hispanic whites.

General characteristics

	U.S. born non-Hispanic White	U.S. born non-Hispanic Asians---Second Generation	Foreign-born Asian Immigrants---First Generation
Total Number	117935	1508	4556
Age (Mean)	50.5	43.1	45.0
Gender (Male)	44.6	48.9	46.5
Married	28.1	44.5	71.9
Education (Mode)	High school graduate	Bachelor degree	Bachelor degree
Income (Mean)	2.3246	2.5763	2.4460
Youngest child age 18 and younger	27.6	22.8	41.8

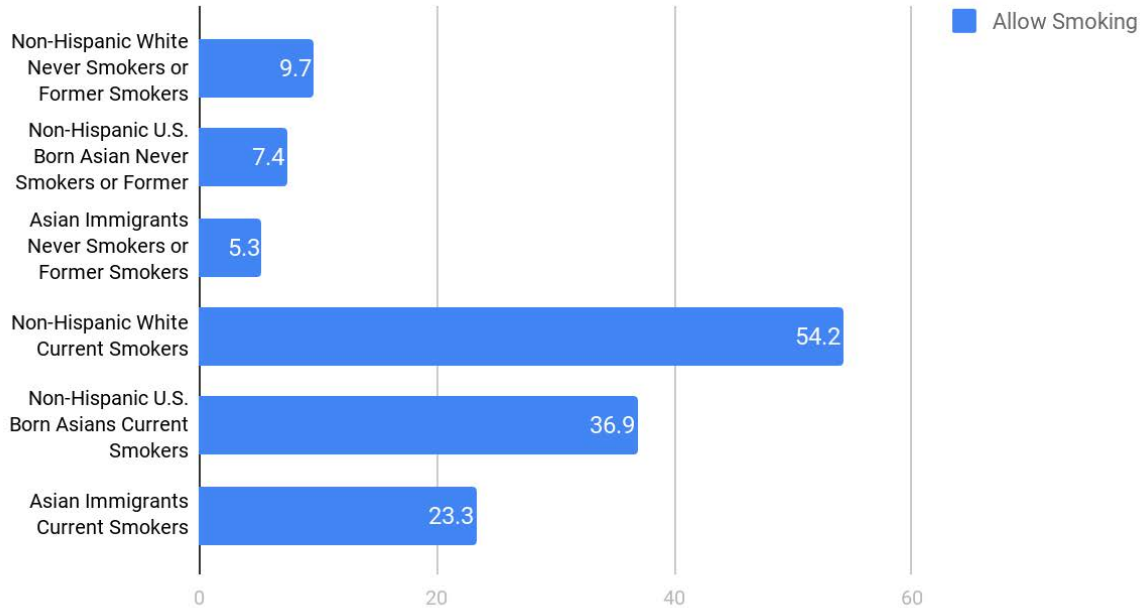


Smoking Status and Home restriction

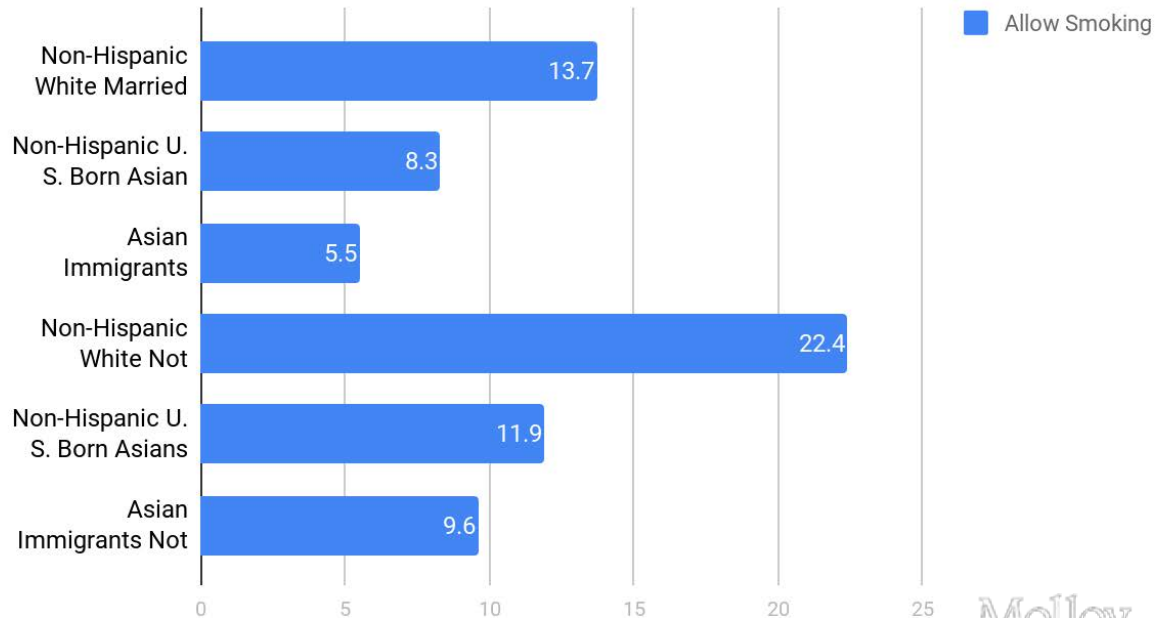
	U.S. born non-Hispanic White	U.S. born non-Hispanic Asians—Second Generation	Foreign-born Asian Immigrants—First Generation
No smoking allowed	82.8	89.7	93.4
Current smoker	16.9	9.9	7.6



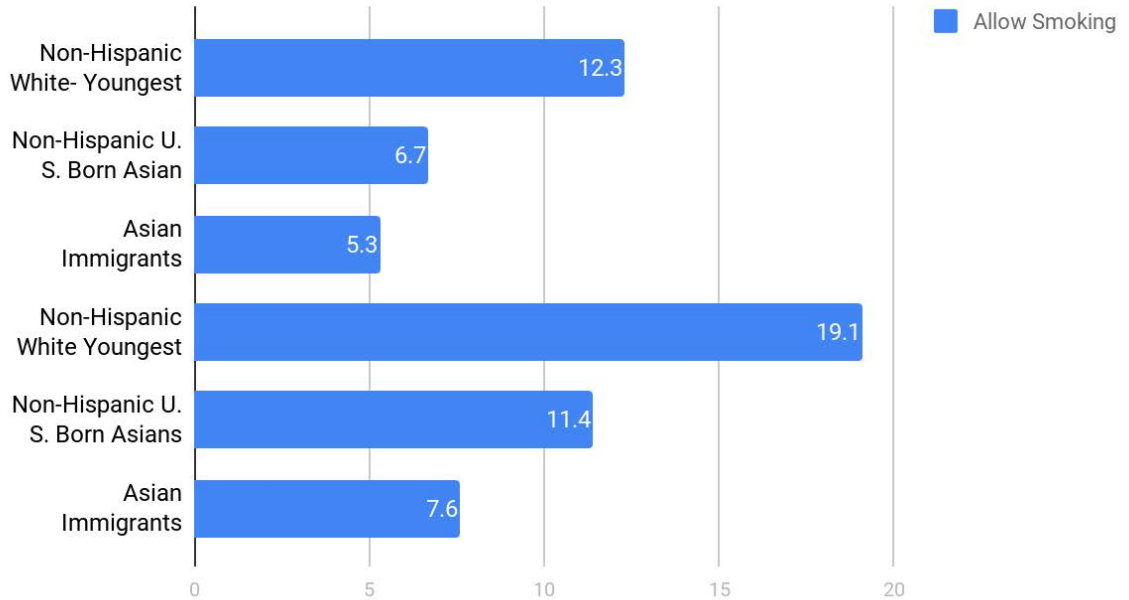
Smoking Status and Home Smoking Rules



Marital Status and Home Smoking Rules



Whether youngest child is 18 or younger and home smoking rules



Bivariate correlation matrix: dependent v.s. independent variables

Relationship with whether smoking at home is allowed	Non-Hispanic White	Non-Hispanic Asian	Asian Immigrants
Smoking status	.440**	.290**	.192**
Gender	.031**	.112**	.020
Marital status	-.113**	-.059*	-.075**
Age	.019**	.032	.020
Education	-.195**	-.098**	-.109**
Family income	-.195**	-.094**	-.086**
Youngest child at home < 19 y/o	-.061**	-.058*	-.045**
Citizenship status	-----	-----	-.061**
Years of migration	-----	-----	-.005

Using Spearman's correlation coefficients. ** Correlation is significant at the 0.01 level.

* Correlation is significant at 0.05 level.



References:

- Ahn, A., Edwards, K. M., Grijalva, C. G., Self, W. H., Zhu, Y., Chappell, J. D., . . . Williams, D. J. (2015). Secondhand smoke exposure and illness severity among children hospitalized with pneumonia. *The Journal of Pediatrics*, *167*(4), 874.e1. doi:10.1016/j.jpeds.2015.06.049
- Bartholomew, K. S. (2015). Policy options to promote smokefree environments for children and adolescents. *Current Problems in Pediatric and Adolescent Health Care*, *45*(6), 146-181. doi://dx.doi.org/10.1016/j.cppeds.2015.04.001
- Biener, L., Cullen, D., Di, Z. X., & Hammond, S. K. (1997). *Household smoking restrictions and adolescents' exposure to environmental tobacco smoke* doi://dx.doi.org/10.1006/pmed.1997.0152
- Hansen, K., Mangrio, E., Lindström, M., & Rosvall, M. (2010). Early exposure to secondhand tobacco smoke and the development of allergic diseases in 4 year old children in malmö, sweden. *BMC Pediatrics*, *10*(1), 61. doi:10.1186/1471-2431-10-61
- Katanoda, K., Jiang, Y., Park, S., Lim, M. K., Qiao, Y., & Inoue, M. (2014). Tobacco control challenges in east asia: Proposals for change in the world's largest epidemic region. *Tobacco Control*, *23*(4), 359-368. doi:10.1136/tobaccocontrol-2012-050852
- Klepeis, N. E., Dhaliwal, N., Hayward, G., Acevedo-Bolton, V., Ott, W. R., Read, N., . . . Moore, R. S. (2016). Measuring indoor air quality and engaging california indian stakeholders at the win-river resort and casino: Collaborative smoke-free policy development. *International Journal of Environmental Research and Public Health*, *13*(1), 143. doi:10.3390/ijerph13010143



References:

- Kuerban, A. 2016. Healthy migrant effect on smoking behavior among Asian immigrants in the United States. *Journal of Immigrant and Minority Health* 18(1) 94-101.
- Li, Q., Hyland, A., O'Connor, R., Zhao, G., Du, L., Li, X., & Fong, G. T. (2010). Support for smoke-free policies among smokers and non-smokers in six cities in china: ITC china survey. *Tobacco Control, 19 Suppl 2*, i46. doi:10.1136/tc.2009.029850
- Matt, G. E., Quintana, P. J. E., Hovell, M. F., Bernert, J. T., Song, S., Novianti, N., . . . Larson, S. (2004). Households contaminated by environmental tobacco smoke: Sources of infant exposures. *Tobacco Control, 13*(1), 29-37.
- Mills, A. L., Messer, K., Gilpin, E. A., & Pierce, J. P. (2009). The effect of smoke-free homes on adult smoking behavior: A review. *Nicotine & Tobacco Research, 11*(10), 1131-1141. doi:10.1093/ntr/ntp122
- Pizacani, B. A., Maher, J. E., Rohde, K., Drach, L., & Stark, M. J. (2012). Implementation of a smoke-free policy in subsidized multiunit housing: Effects on smoking cessation and secondhand smoke exposure. *Nicotine & Tobacco Research: Official Journal of the Society for Research on Nicotine and Tobacco, 14*(9), 1027-1034. doi:10.1093/ntr/ntr334
- Veeranki, S. P., Mamudu, H. M., Zheng, S., John, R. M., Cao, Y., Kioko, D., . . . Ouma, A. E. O. (2015). Secondhand smoke exposure among never-smoking youth in 168 countries. *Journal of Adolescent Health, 56*(2), 167-173. doi://dx.doi.org/10.1016/j.jadohealth.2014.09.014



References:

Winickoff, J. P., Friebely, J., Tanski, S., Sherrod, C., Matt, G. E., Hovell, M. F., & McMillen, R. C. (2009). Beliefs about the health effects of "thirdhand" smoke and home smoking bans. *Pediatrics*, *123*(1), e79.

Xisca Sureda, Esteve Fernández, María J López, & Manel Nebot. (2013). *Secondhand tobacco smoke exposure in open and semi-open settings: A systematic review*. United States: National Institute of Environmental Health Sciences. doi:10.1289/ehp.1205806

Zhang, X., Martinez-Donate, A., & Rhoads, N. (2015). Parental practices and attitudes related to smoke-free rules in homes, cars, and outdoor playgrounds in US households with underage children and smokers, 2010-2011. *Preventing Chronic Disease*, *12*(E96), 1-11. doi: 10.5888/pcd12.140553