Real-time population data on depression and suicidal ideation

HKU Med LKS Faculty of Medicine School of Public Health 香港大學公共衞生學院

Family 愛+人

HKU Med LKS Faculty of Medicine Department of Psychiatry 香港大學精神醫學系

American Journal of Epidemiology
© The Author 2016. Published by Oxford University Press on behalf of the Johns Hopkins Bloomberg School of Public Health. All rights reserved. For permissions, please e-mail: journals.permissions@oup.com
Vol. 184, No. 9
DOI: 10.1093/aje/kww103
Advance Access publication: October 19, 2016

Original Contribution

Direct Participation in and Indirect Exposure to the Occupy Central Movement and Depressive Symptoms: A Longitudinal Study of Hong Kong Adults

Michael Y. Ni*, Tom K. Li, Herbert Pang, Brandford H. Y. Chan, Betty Y. Yuan, Ichiro Kawachi, C. Mary Schooling, and Gabriel M. Leung

* Correspondence to Dr. Michael Y. Ni, School of Public Health, Li Ka Shing Faculty of Medicine, The University of Hong Kong, Hong Kong SAR, People's Republic of China (e-mail: nimy@hku.hk).

AJPH

AJPH RESEARCH

Longitudinal Patterns and Predictors of Depression Trajectories Related to the 2014 Occupy Central/Umbrella Movement in Hong Kong

Michael Y. Ni, MBBS, MPH, Tom K. Li, MSc, Herbert Pang, PhD, Brandford H. Y. Chan, PhD, Ichiro Kawachi, MD, PhD, Kasisomayajula Viswanath, PhD, Catherine Mary Schooling, PhD, and Gabriel Matthew Leung, MD, MPH

IJE

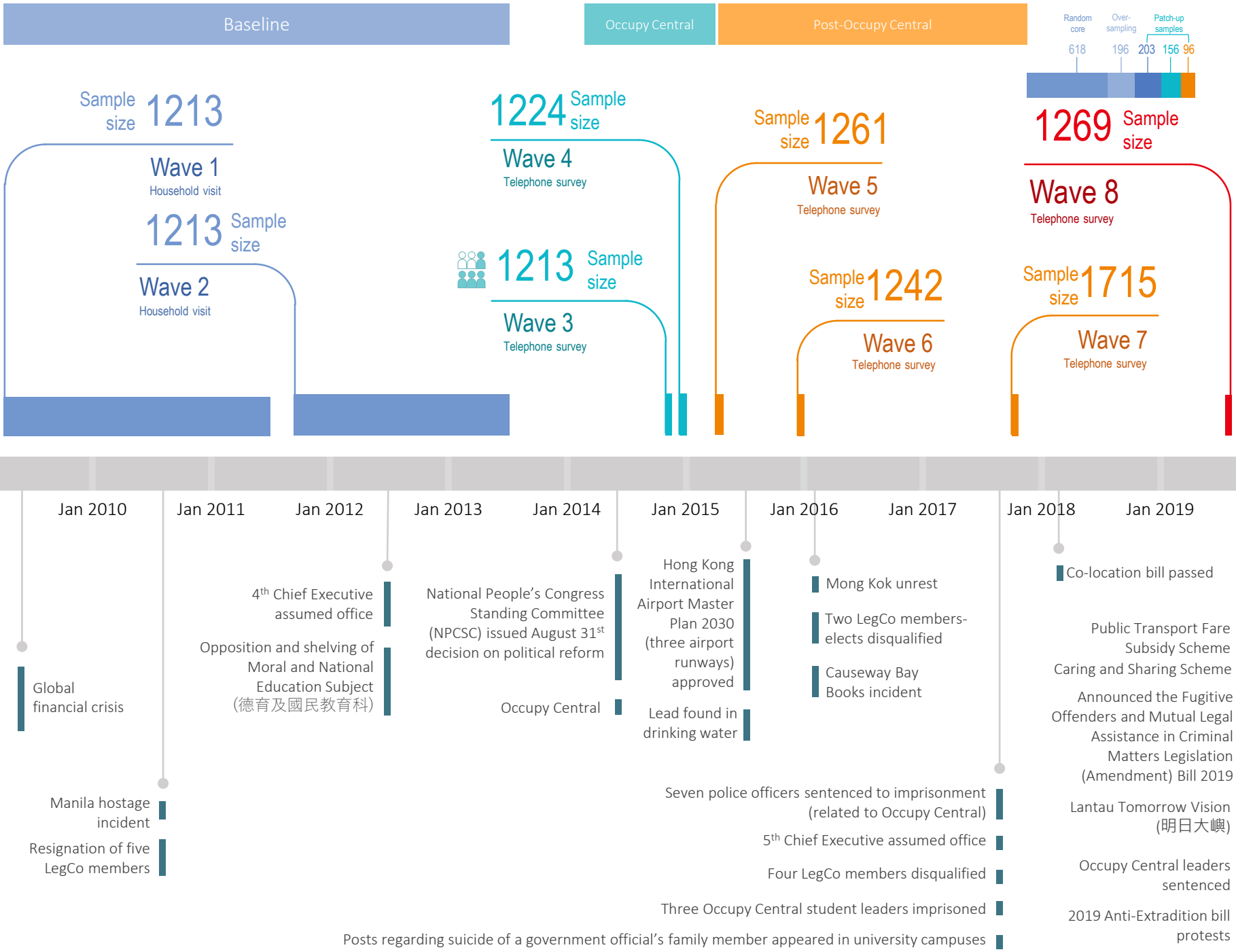
International Journal of Epidemiology, 2017, **e1**(1–13)
doi: 10.1093/ije/dyu257
Advance Access Publication Date: 23 January 2015
Cohort Profile

Cohort Profile

Cohort Profile: FAMILY Cohort

Gabriel M Leung,[1] Michael Y Ni[1,*] Paul TK Wong,[1,2] Paul H Lee,[1,3] Brandford HY Chan,[1] Sunita M Stewart,[4] C Mary Schooling,[1,5] Janice M Johnston,[1] Wendy WT Lam,[1] Sophia SC Chan,[6] Ian McDowell,[7] and Tai Hing Lam[1]

*Corresponding author. School of Public Health, Li Ka Shing Faculty of Medicine, University of Hong Kong, 7 Sassoon Road, Hong Kong SAR, People's Republic of China. E-mail: nimy@hku.hk


Baseline
Occupy Central
Post-Occupy Central
Random core
Over-sampling
Patch-up samples
618
196
203
156
96
Sample size 1213
Wave 1
Household visit
1213 Sample size
Wave 2
Household visit
1224 Sample size
Wave 4
Telephone survey
1213 Sample size
Wave 3
Telephone survey
Sample size 1261
Wave 5
Telephone survey
Sample size 1242
Wave 6
Telephone survey
1269 Sample size
Wave 8
Telephone survey
Sample size 1715
Wave 7
Telephone survey
Jan 2010
Jan 2011
Jan 2012
Jan 2013
Jan 2014
Jan 2015
Jan 2016
Jan 2017
Jan 2018
Jan 2019
Global financial crisis
Manila hostage incident
Resignation of five LegCo members
4th Chief Executive assumed office
Opposition and shelving of Moral and National Education Subject (德育及國民教育科)
National People's Congress Standing Committee (NPCSC) issued August 31st decision on political reform
Occupy Central
Hong Kong International Airport Master Plan 2030 (three airport runways) approved
Lead found in drinking water
Mong Kok unrest
Two LegCo members-elects disqualified
Causeway Bay Books incident
Seven police officers sentenced to imprisonment (related to Occupy Central)
5th Chief Executive assumed office
Four LegCo members disqualified
Three Occupy Central student leaders imprisoned
Posts regarding suicide of a government official's family member appeared in university campuses
Co-location bill passed
Public Transport Fare Subsidy Scheme
Caring and Sharing Scheme
Announced the Fugitive Offenders and Mutual Legal Assistance in Criminal Matters Legislation (Amendment) Bill 2019
Lantau Tomorrow Vision (明日大嶼)
Occupy Central leaders sentenced
2019 Anti-Extradition bill protests

How did we assess mental health?

Patient Health Questionnaire (PHQ-9): **Depressive symptoms**

Validated in FAMILY Cohort (Yu X et al 2012)

Total score ≥10: **Probable Depression**

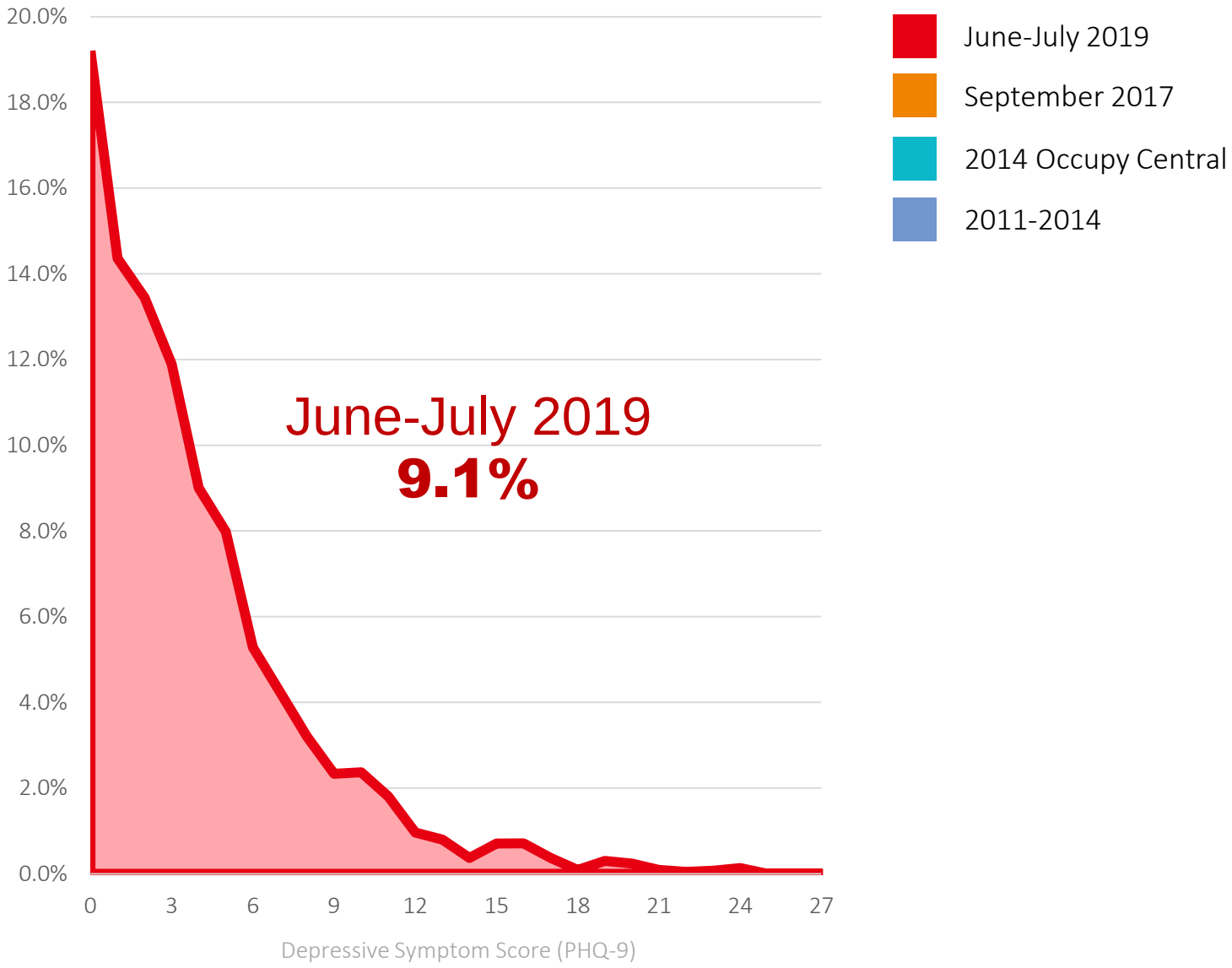
85% sensitivity & 80% specificity for diagnosis of major depression (meta-analysis by Manea L et al 2012)

PHQ-9 ninth item score ≥1: **Potential Suicidal Ideation**

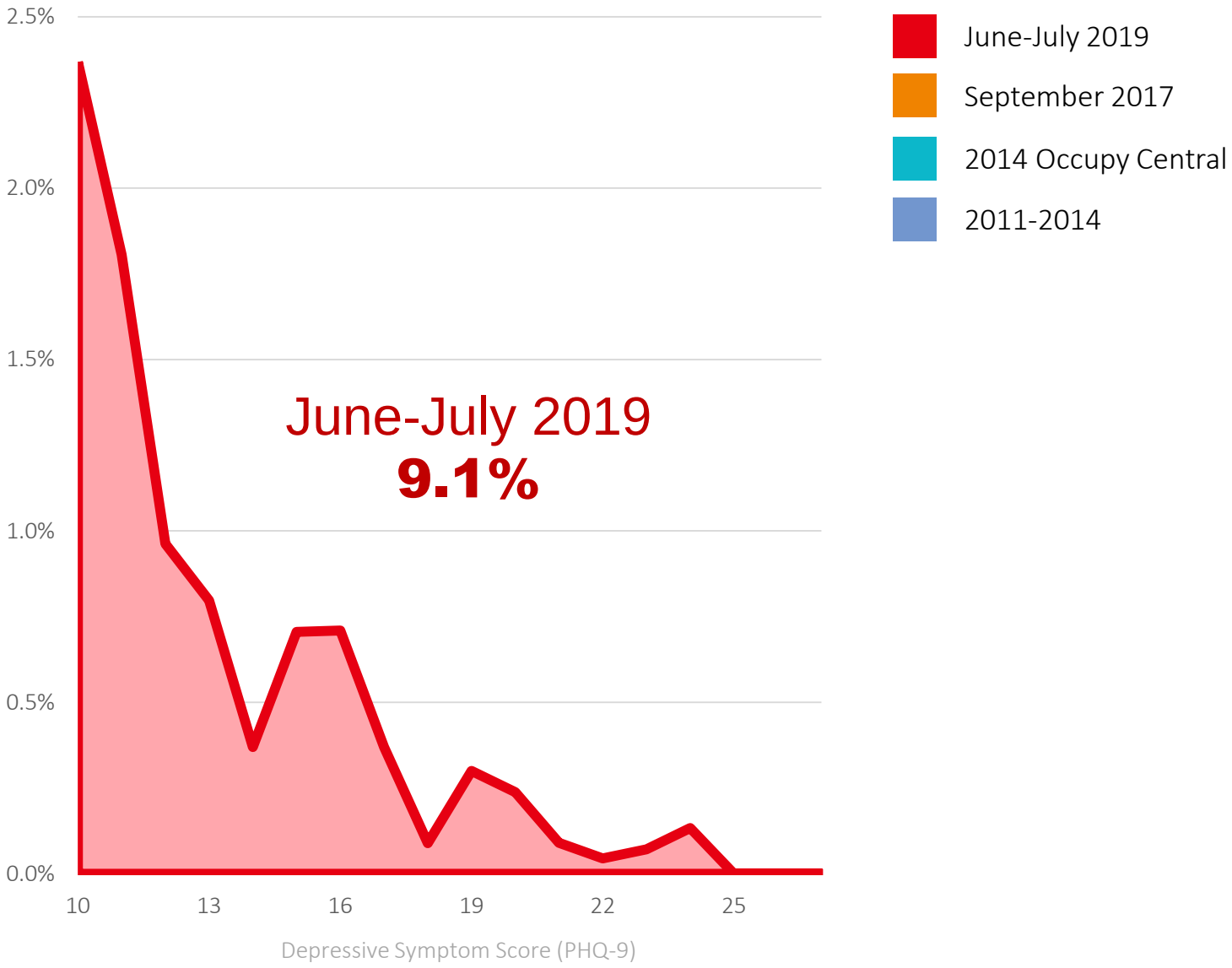
Yu X, Tam W, Wong P, Lam T, Stewart S. The Patient Health Questionnaire-9 for measuring depressive symptoms among the general population in Hong Kong. *Comprehensive Psychiatry* 2012

Manea L, Gilbody S, McMillan D. Optimal cut-off score for diagnosing depression with the Patient Health Questionnaire (PHQ-9): a meta-analysis. *Canadian Medical Association Journal* 2012

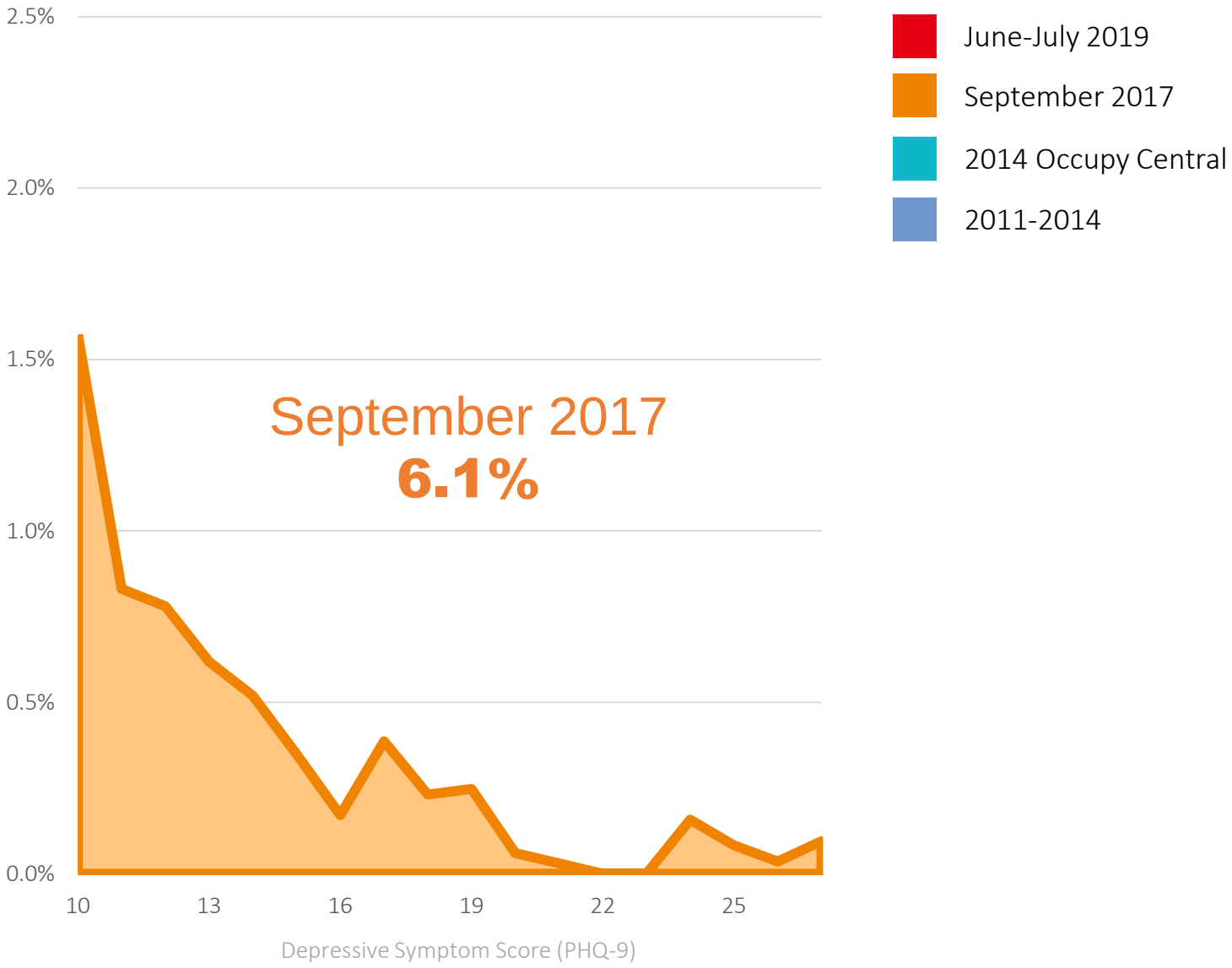
PHQ-9


20.0%
18.0%
16.0%
14.0%
12.0%
10.0%
8.0%
6.0%
4.0%
2.0%
0.0%
0
3
6
9
12
15
18
21
24
27
June-July 2019
9.1%
Depressive Symptom Score (PHQ-9)
June-July 2019
September 2017
2014 Occupy Central
2011-2014

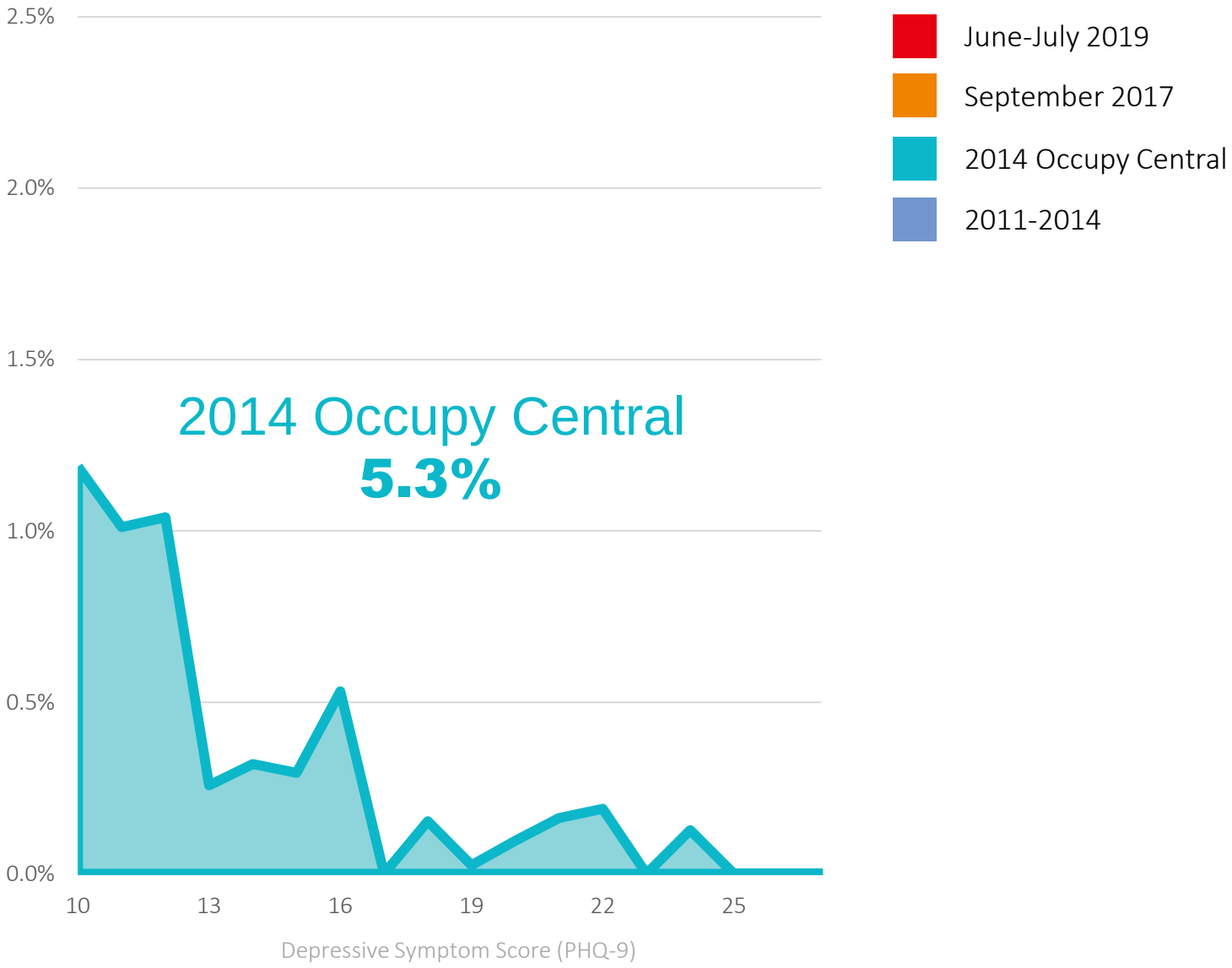
PHQ-9


2.5%
2.0%
1.5%
1.0%
0.5%
0.0%
June-July 2019
9.1%
10
13
16
19
22
25
Depressive Symptom Score (PHQ-9)
June-July 2019
September 2017
2014 Occupy Central
2011-2014

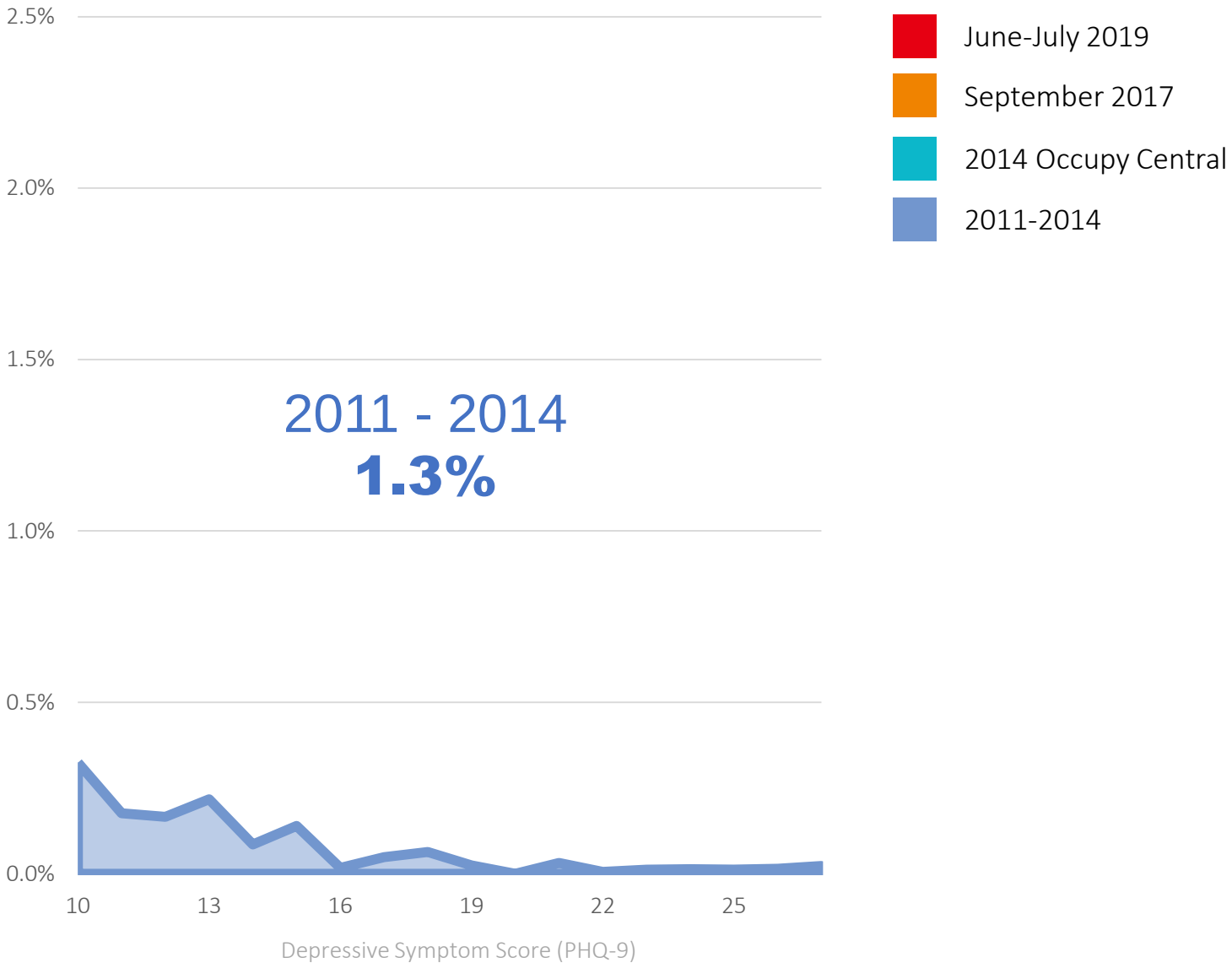
PHQ-9


2.5%
2.0%
1.5%
1.0%
0.5%
0.0%
September 2017
6.1%
10
13
16
19
22
25
Depressive Symptom Score (PHQ-9)
June-July 2019
September 2017
2014 Occupy Central
2011-2014

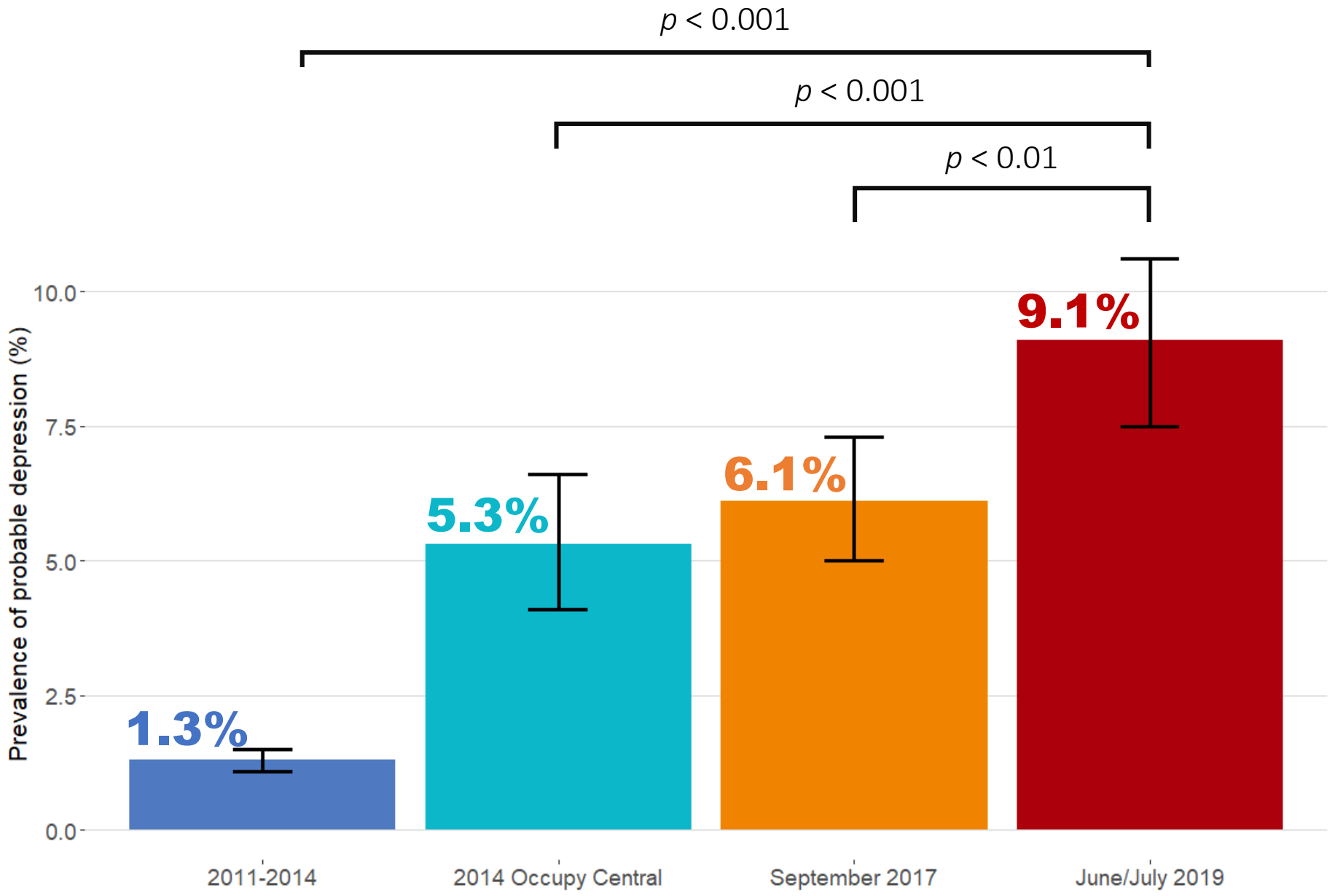
PHQ-9


June-July 2019
September 2017
2014 Occupy Central
2011-2014
2.5%
2.0%
1.5%
1.0%
0.5%
0.0%
2014 Occupy Central
5.3%
10
13
16
19
22
25
Depressive Symptom Score (PHQ-9)

PHQ-9


2.5%
2.0%
1.5%
1.0%
0.5%
0.0%
2011 - 2014
1.3%
10
13
16
19
22
25
Depressive Symptom Score (PHQ-9)
June-July 2019
September 2017
2014 Occupy Central
2011-2014

Probable depression over time

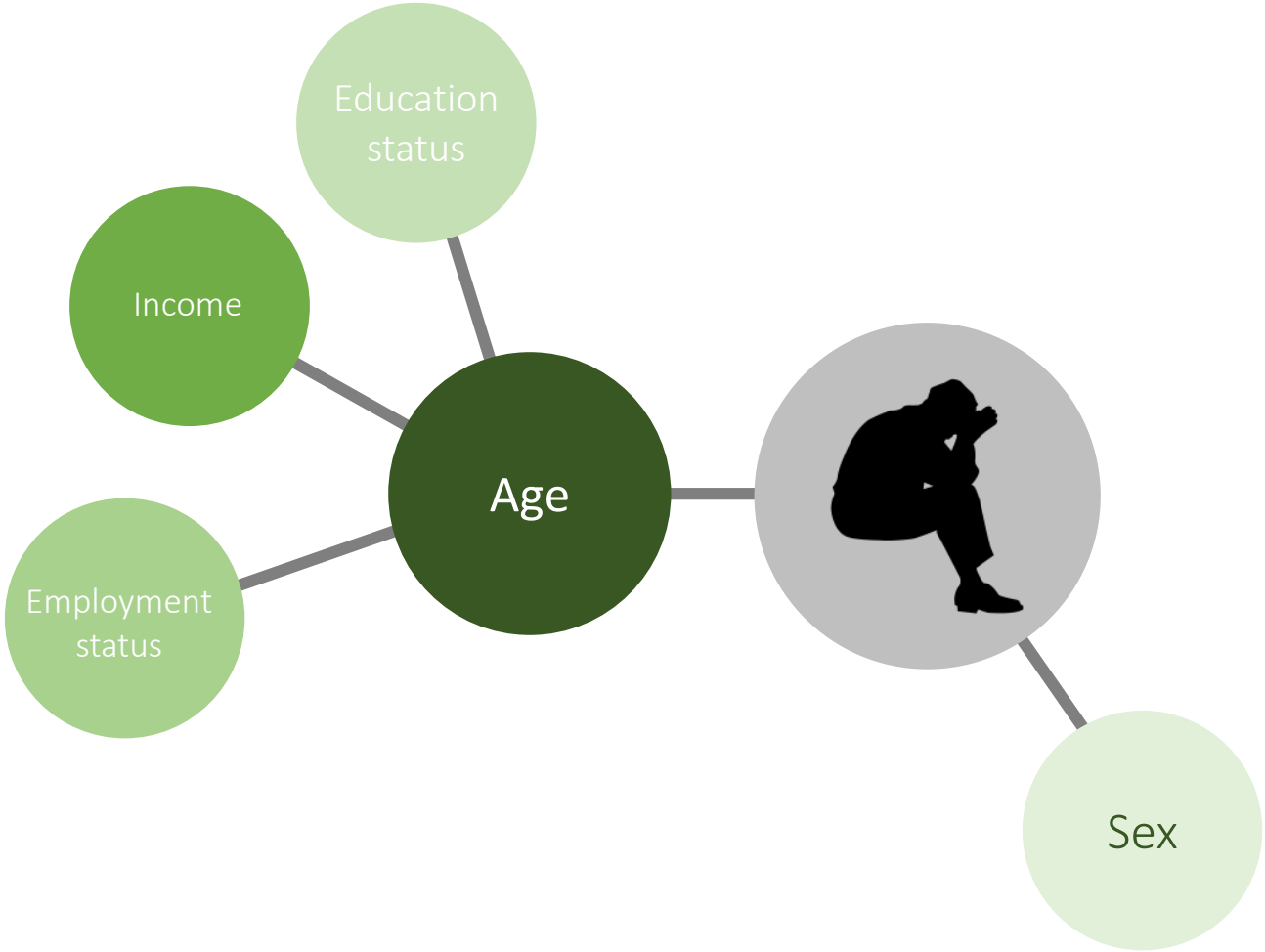


Probable depression by demographics

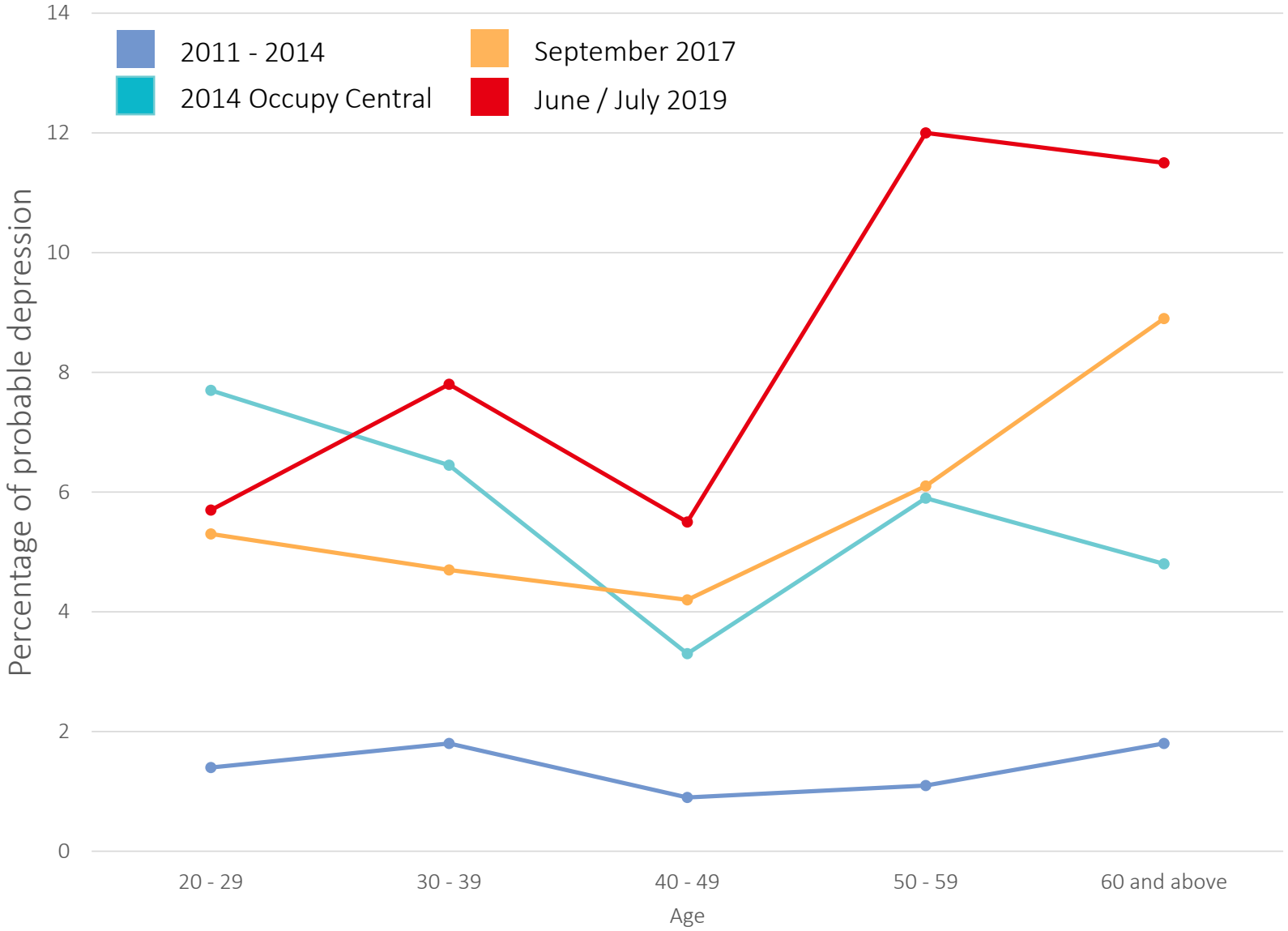
Demographics	June-July 2019 % Probable depression (95% CI)
Overall	9.1 (7.5, 10.6)
Age	
20-29	5.7 (2.2, 9.1)
30-39	7.8 (4.2, 11.4)
40-49	5.5 (2.6, 8.3)
50-59	12.0 (8.2, 15.8)
60 and above	11.5 (8.2, 14.9)
Sex	
Men	10.7 (8.1, 13.2)
Women	7.8 (5.8, 9.8)
Education	
Primary	11.5 (7.6, 15.5)
Secondary	9.8 (7.4, 12.3)
Tertiary	6.8 (4.5, 9.1)
Household income	
Under 10,000	12.9 (8.5, 17.3)
10,000-19,999	6.5 (3.5, 9.6)
20,000-39,999	8.9 (5.7, 12.0)
40,000 and above	4.6 (2.1, 7.2)
Unknown	13.6 (9.1, 18.2)
Employment status	
Employed	6.4 (4.7, 8.1)
Economically Inactive	14.2 (10.9, 17.6)
Unemployed	7.4 (-1.0, 15.8)

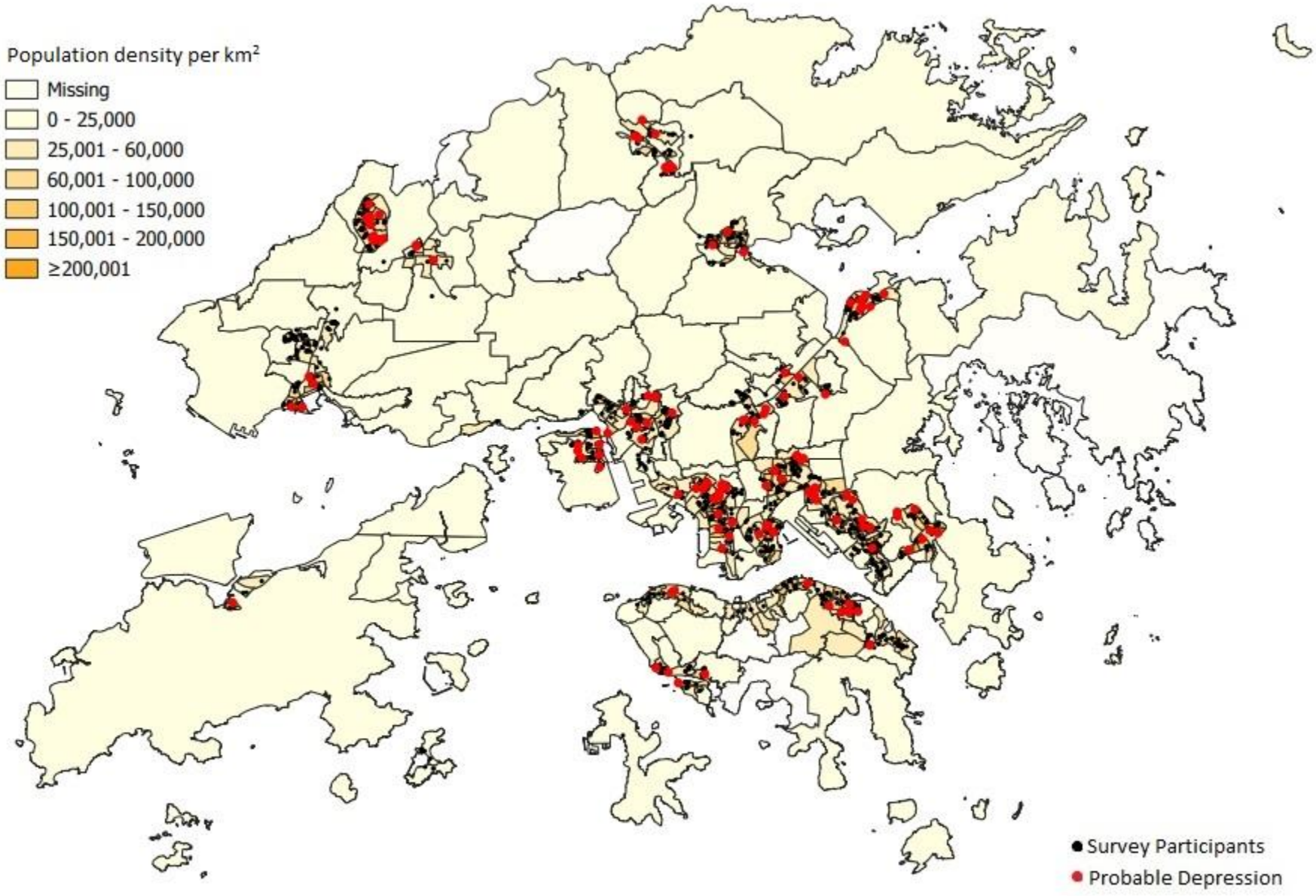
Factors associated with probable depression

Factors associated with probable depression

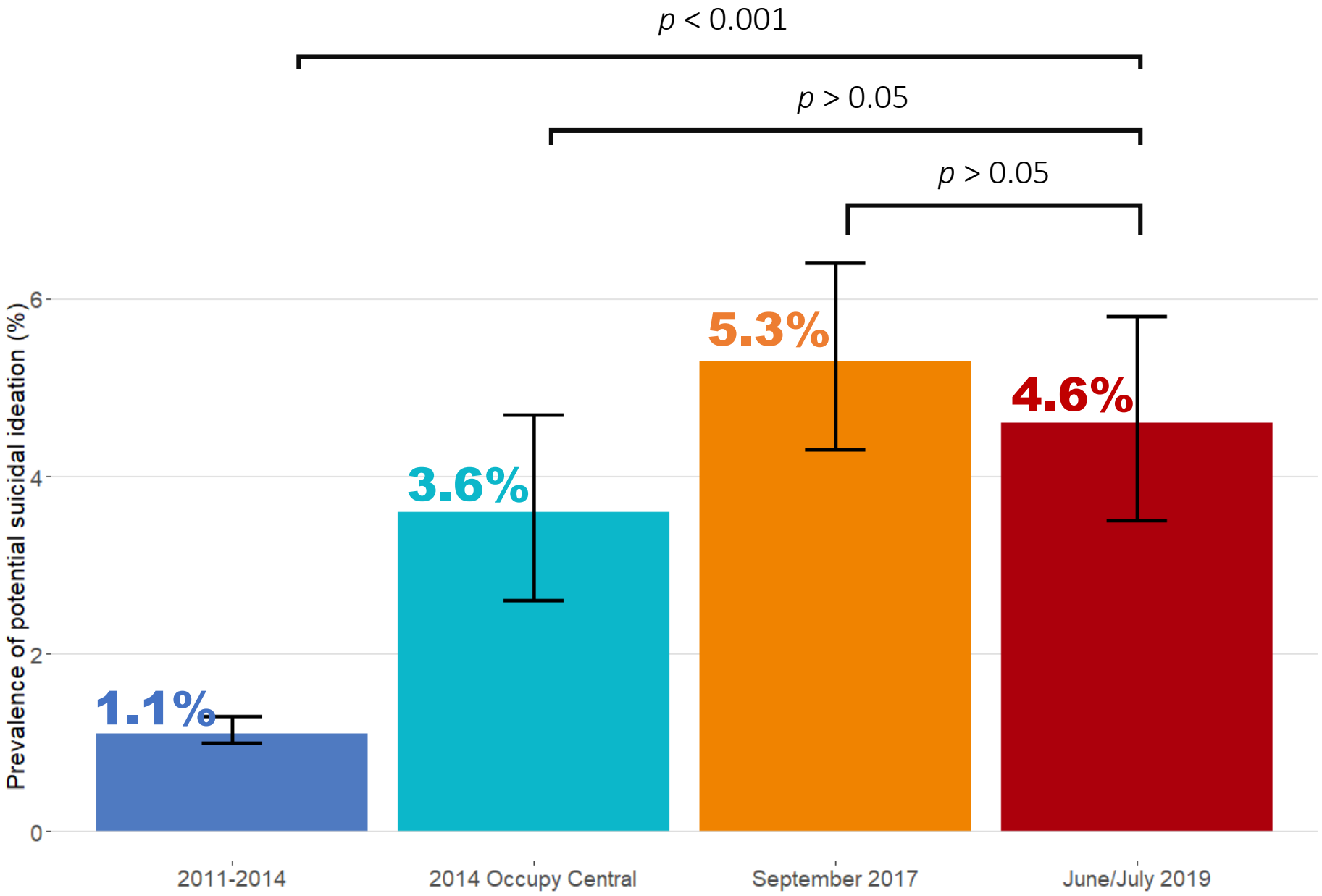


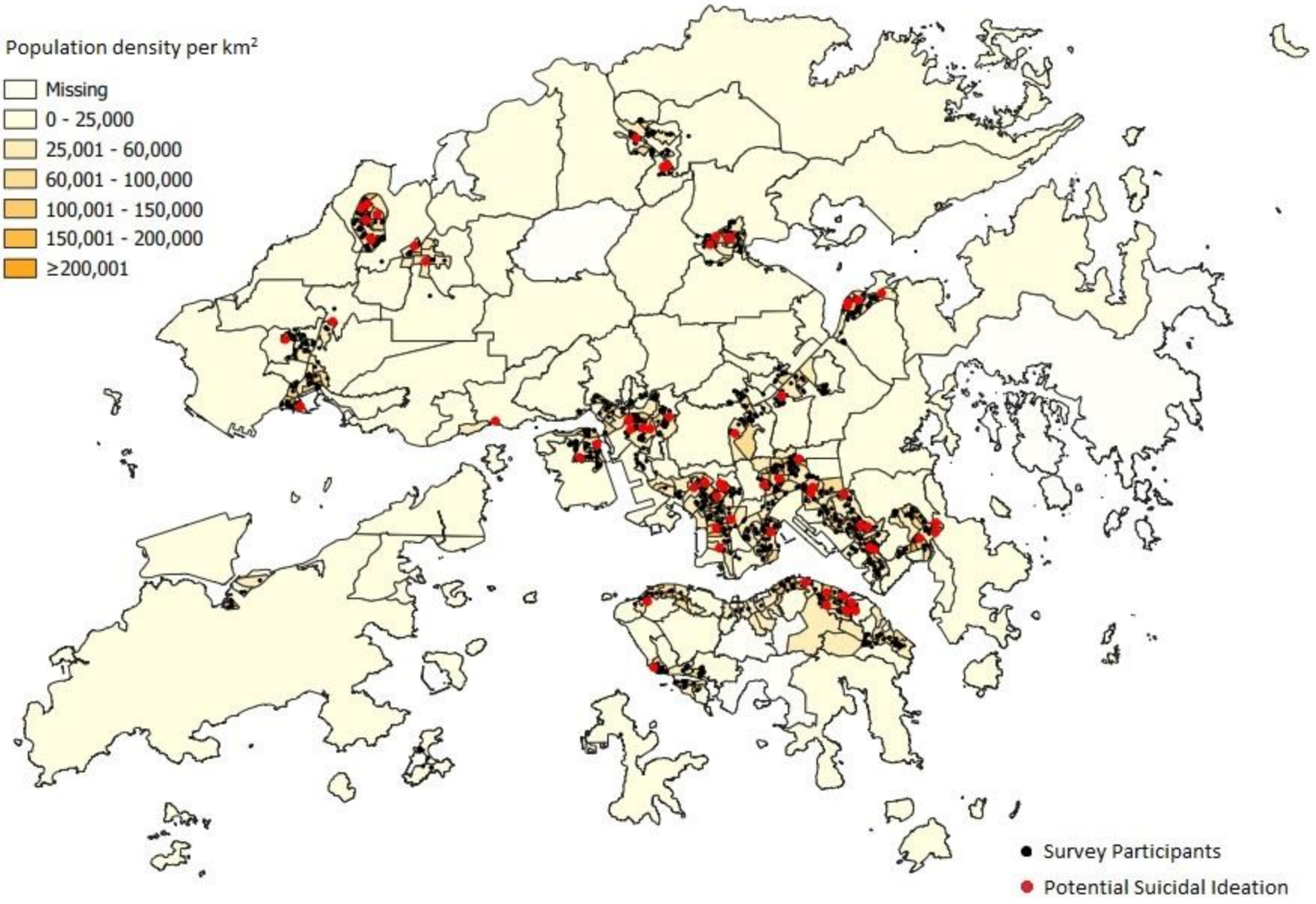
Probable depression by age groups




Population density per km²
Missing
0 - 25,000
25,001 - 60,000
60,001 - 100,000
100,001 - 150,000
150,001 - 200,000
≥200,001
Survey Participants
Probable Depression

Potential suicidal ideation over time




Population density per km²
Missing
0 - 25,000
25,001 - 60,000
60,001 - 100,000
100,001 - 150,000
150,001 - 200,000
≥200,001
Survey Participants
Potential Suicidal Ideation

Management of suicidal cases

Clinical psychologist contacted at-risk participants

Provided information on Integrated Community Centres for Mental Wellness and mental health hotlines

Provided referral letters to health care professionals

Advised participants to attend Accident & Emergency Departments when needed

醫院管理局 HOSPITAL AUTHORITY

2466 7350

生命熱線 Suicide Prevention Services 讓我們用心聆聽 .....

2382 0000

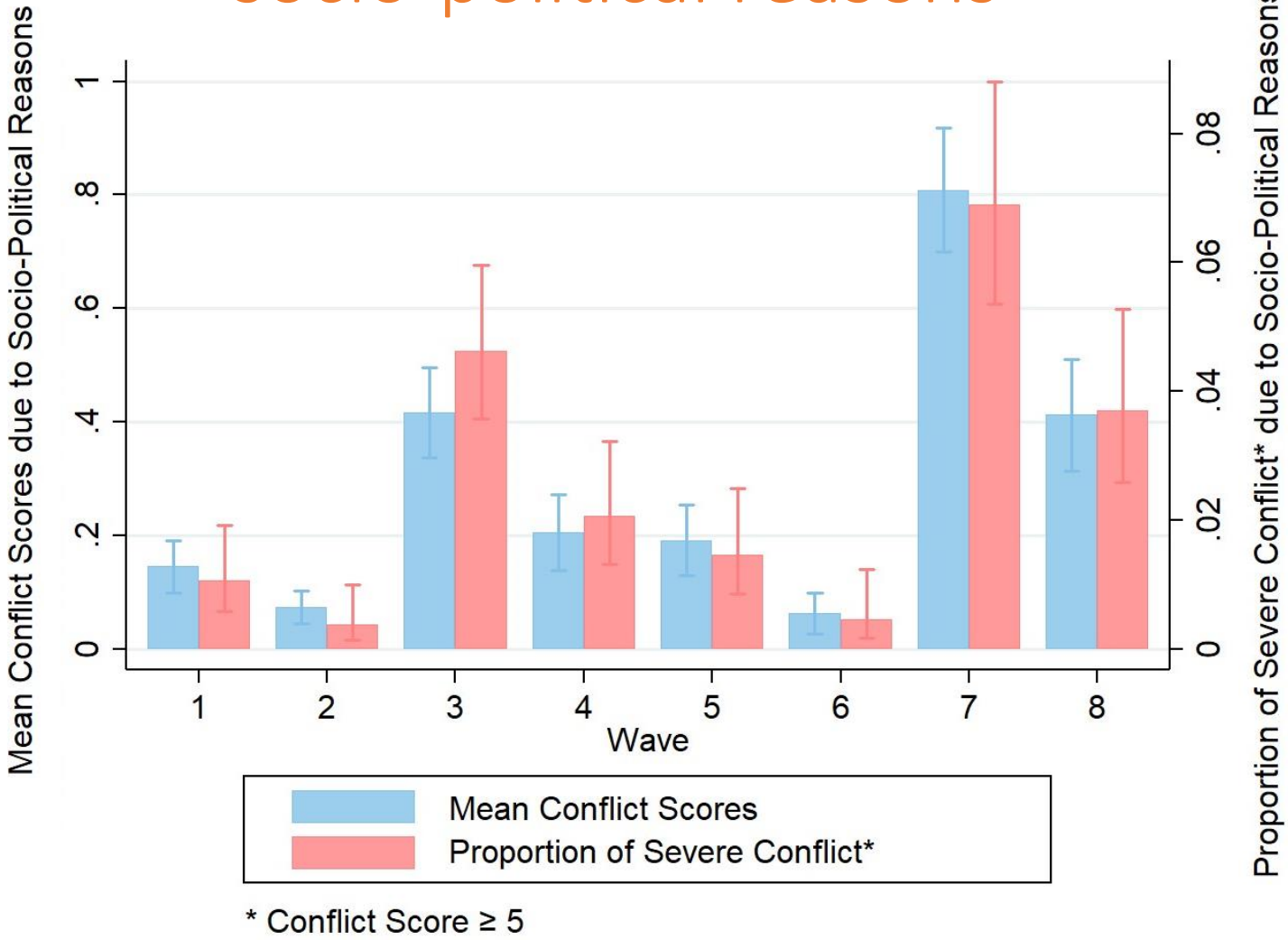
撒瑪利亞會 The Samaritans 24 Hour Multi-Lingual Suicide Prevention Services 24小時中文及多種語言防止自殺服務

2896 0000

The Samaritan Befrienders Hong Kong 香港撒瑪利亞防止自殺會

2389 2222

Intra-familial conflicts due to socio-political reasons



Source of conflict scale: Yau & Smetana, 1996; Yau & Smetana, 2003

Limitations

Our sample did not include children and youths below the age of 18. This will be addressed in a newly commissioned survey beginning next week, drawing on the FAMILY cohort, Children of 1997 cohort and a de novo sample of randomly chosen youth between 15-25 years old.

Take-home Messages

- Health care professionals need to be vigilant about the mental health impact during and indeed long after significant social events, including potential community spillover effects.

- This should translate into carefully hearing out, listening to and heeding the voices of young people as appropriate; while at the same time be on the alert for mental distress in older adults.

- Prior evidence from Occupy Central also cautions against rumination on the news and social media during and after major social upheavals.

- Proper and adequate social support and reducing intra-familial and society-wide socio-political conflicts may mitigate these adverse mental health effects.

Take-home Messages

- Individuals should raise self-awareness of their own and their family's mental state.
- Specifically, people should be vigilant of the emergence of depressive symptoms which include pervasive low mood, diminished motivation, loss of interest, sleeplessness, reduced appetite, negative rumination (e.g. sense of guilt, helplessness, worthlessness and hopelessness), and thoughts or even plans of self-harm.
- Progression or persistence of these symptoms, or impairment in daily, social and/or role functioning may already indicate the presence of a depressive disorder.
- Those who recognize these symptoms should seek help from mental health professionals promptly, and proper treatment is key to preventing undesirable outcomes and to achieving a quick recovery.