

Supplementary Information

Spatiotemporal heterogeneity of social contact patterns related to infectious diseases in the Guangdong Province, China

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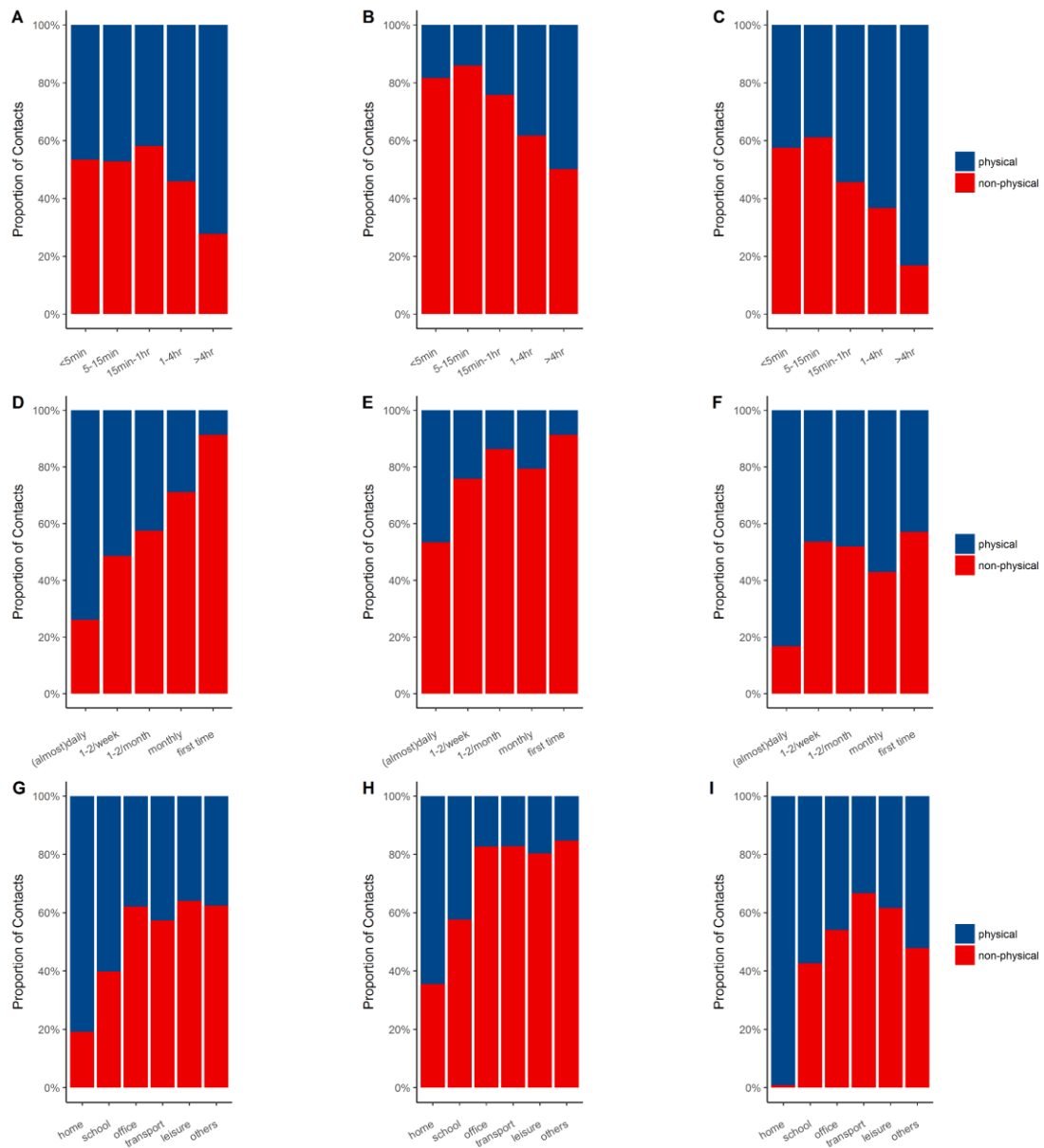
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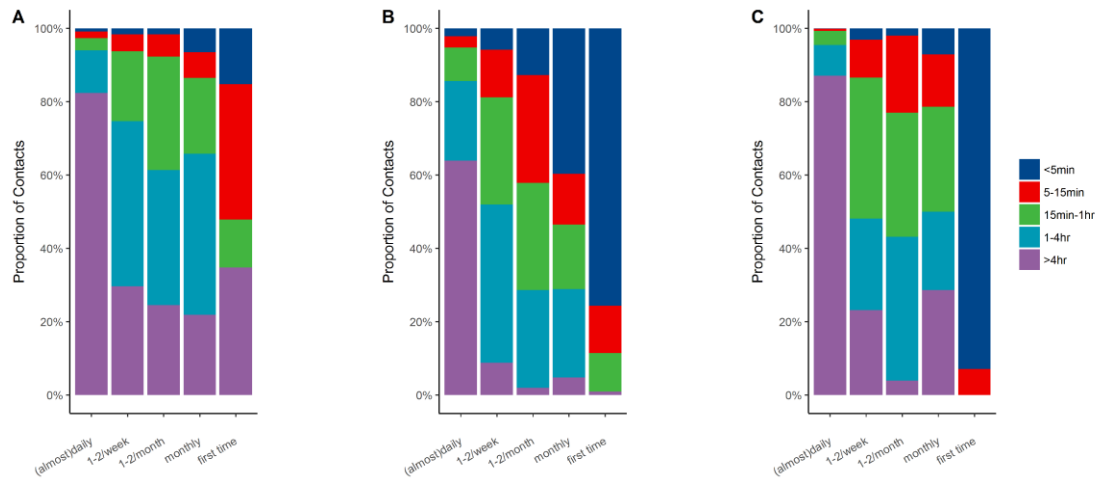
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Figure S1.



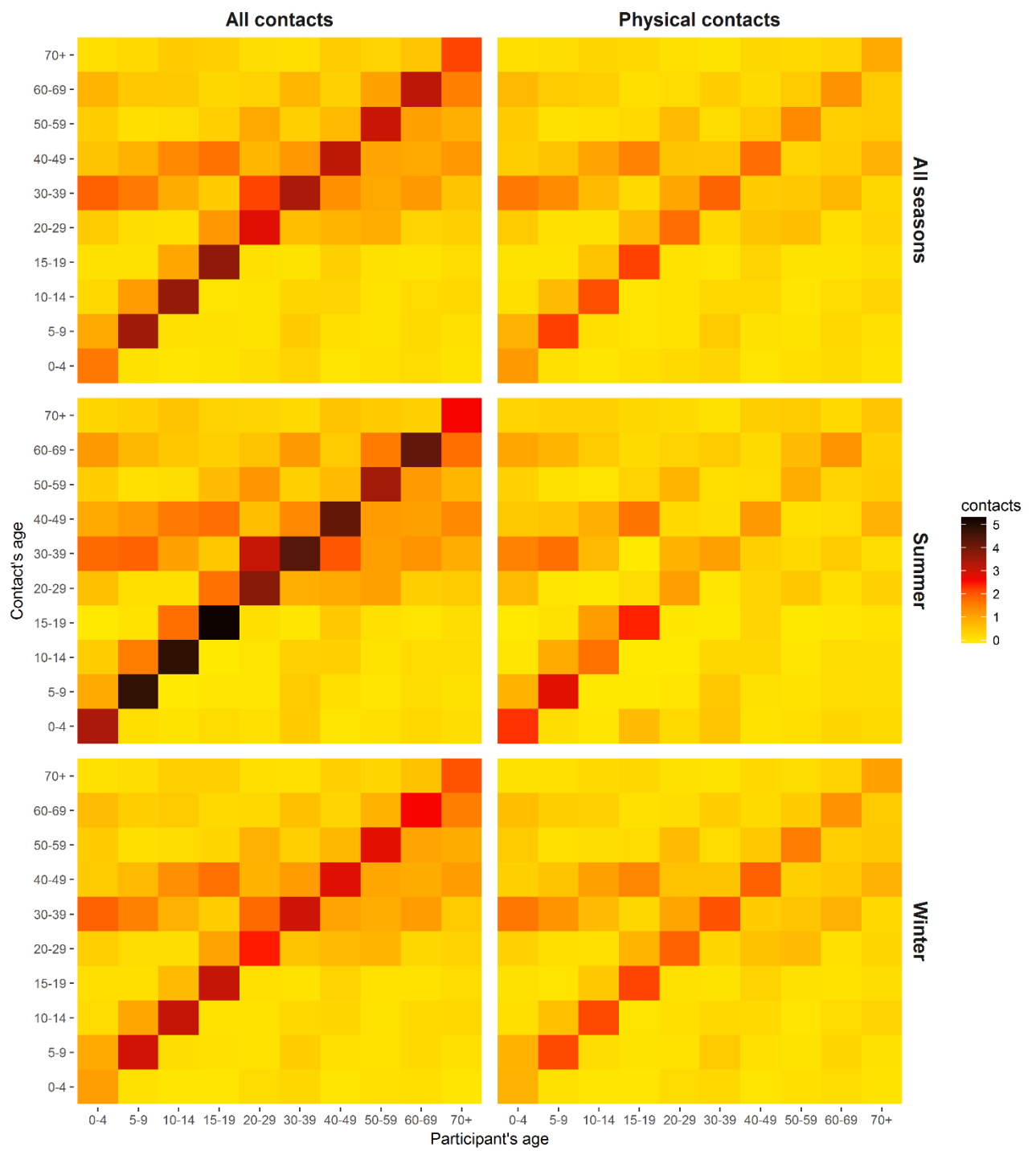
S1 Fig. Percentage of physical or non-physical contacts by duration, frequency, and location in Foshan (Panel: A, D, and G), Guangzhou (Panel: B, E, and H) and Zhuhai (Panel: C, F, and I) of Guangdong China. Abbreviations: hr, hours; min, minutes

Figure S2.



S2 Fig. Percentage of contact duration according to frequency in Foshan (A), Guangzhou (B) and Zhuhai(C) of Guangdong China. Abbreviations: hr, hours; min, minutes

Figure S3. Non-symmetrized contact intensity matrices of all contacts and physical contacts across the entire year, summer and winter.



Supplementary Table S1. Comparison of age structure between census data (2015) and samples of Guangdong Province.

Age	Sample		Census		Ratio C/S
	N	%	N	%	Sampling weights
0-	301	5.17%	5624736	5.39%	1.043
5-	310	5.33%	5167116	4.95%	0.929
10-	246	4.23%	6812178	6.53%	1.544
15-	205	3.52%	9989559	9.58%	2.720
20-	682	11.72%	22896757	21.95%	1.873
30-	1,002	17.22%	18468133	17.70%	1.028
40-	979	16.83%	15911579	15.25%	0.906
50-	822	14.13%	9298010	8.91%	0.631
60-	756	12.99%	5234040	5.02%	0.386
70-	515	8.85%	4918351	4.71%	0.533
All	5818	100%	104320459	100%	1.000

Supplementary Text S1. Study questionnaire.

Survey ID:

Survey Date:

一、 Demographic data

1.Name: _____

2.Gender: Male Female

3.Age: _____ years

3.Household size (number of people living in your household) : _____

4.Occupation: _____

5 Address: _____ Postcode:

二、 Social contacts

Relationship	Age (or Range)	Gender	Physical Contact	Contact Frequency	location of contact	Total time spent with person during whole day
colleagues/ Relatives/ classmates		Male Female	Yes No	almost every day once or twice per week once or twice per month less than once per month upon first meet	home school office Trans po-rtation leisure areas other areas	less than 5mins 5-15 mins 15-60 mins 1-4 hrs more than 4 hrs
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We do ask you to include every contact you had, but if you were unable to include every single contact (for instance, because you work in a shop till and have a large number of contacts in a day), please could you indicate this?

I included every person I had contact with. I did not include every person I had contact with.

If you did not include every person you had contact with, approximately how many people you left out did you have:

Physical contact with: _____ No physical contact with: _____

Instructions:

1. A contact is defined as: ① EITHER a **two-way conversation** with three or more words in the physical presence of another person; ② OR physical **skin-to-skin contact** (for example a handshake, hug, kiss or contact sports).
2. The order in which you write down your contact persons is not important.
3. Contacts made exclusively by telephone or mobile phone should NOT be recorded.
4. If you contact the same person several times in the course of the day, only record him/her once, and record the total time you spent with that person over the entire day. So each person you meet during the day and have contact with should only have one line in the diary: one person, one line.◦
5. If you don't know the exact age, give an estimate of the age range (e.g. 40-45) and try to make it as narrow as possible.◦
6. Questionnaires for young children should be responded by a parent or guardian on their behalf.