

Comprehensive Profiling of Social Mixing Patterns in Pakistan

Study Site		
1	Study ID	
2	Interview Date (DD/MM/YY)	/ /
3	Interviewer ID	
4	Study Site	0, Matiari (Rural) 1, Karachi (Urban)
5	Is the data being collected for Aim 1 or Aim 2?	0, Aim 1 1, Aim 2
6	For Aim 1, what is the participant ID?	
7	For Aim 2, what is the household number of the index participant?	
Household enrollment		
The following instrument will collect data on household information. This section should be answered by the head of the household.		
Household ID		
8	Are you the head of the household?	0, No 1, Yes
9	Household ID (Enter the ID of the household)	
Head of Household Consent		
10	Date Head of Household signed consent form	/ /
Household Characteristics		
11	How many people live in this household, including yourself?	
12	How many people slept in this house during the previous night?	
House structure		
13	Do you own land/ a field/ the house that you live in?	0, No 1, Yes
14	What is the total number of rooms in your house?	
15	How many rooms are used for sleeping in your house?	
16	What is the main material used to construct the roof of your house?	0, Natural cover (Ex. Straw, palm leaf or grass) 1, Rudimentary roofing (Ex. Rustic mat, rough wood planks or cardboard) and tin 2, Modern roofing (Ex. Reinforced Cement Concrete (RCC), Zinc sheet, concrete, ceramic, tiles, cement, stone with limestone/cement, bricks, cement blocks, adobe covered with cement, wood planks/slats, burnt bricks) 3, Other
16a	If other roof material, please specify	
17	What is the main material of the exterior walls of your house?	0, Natural walls (Ex. No wall, reed/twigs, leaves from palm tree, wood stakes, adobe/mud, tin, cardboard) 1, Rudimentary walls (Ex. Bamboo, pressed wood, adobe stone, wood recycled, adobe-treated stakes, unburnt bricks) 2, Modern walls (Ex. RCC

		cement, stone with limestone/cement, bricks, cement blocks, adobe covered with cement, wood planks/slats, burnt bricks) 3, Other
17a	If other, please specify	
18	Do you sometimes have dampness or mold at home?	0, No 1, Yes 2, I don't know
19	Does your house have any of the following appliances? This should seek to find out what equipment individuals have in the household that are considered a sign of wealth. (Select all that apply)	0, Refrigerator 1, Radio 2, Television 3, Satellite/dishTV connection/Set-top box 4, Microwave 5, Electric or gas stove] 6, Washing machine 7, Cellphone or phone 8, Laptop/ computer 9, Grass Mower 10, None of the above
20	Do you own any piece of land/field or house?	0, No 1, Yes
21	Does your household own any of the following means of transport? (Select all that apply)	0, Bicycle 1, Motorcycle/ Chingchi/ Rickshaw 2, Car 3, Tractor 4, Animal Cart 5, None of the Above
22	How many grazing animals do you have in your home? Grazing animals are those that spend time outside the home and eat grass/hay. For example: cows, goats, sheep, horses, donkeys, etc.)	<input type="text"/> <input type="text"/> <input type="text"/>
23	How many poultry do you have in your home? Poultry are birds like chicken, hen, and duck, etc.	<input type="text"/> <input type="text"/> <input type="text"/>
24	Do you make any major improvements to the home in the last 12 months?	0, No 1, Yes 2, I don't know
Contact with animals		
25	Does anyone in your household touch the following animals at least once per week? Select all that apply.	0, Chicken, ducks, geese, pigeons, parrots 1, Cows, goats, sheep, buffalo, donkey, horses 2, Cats and dogs 3, Monkeys 4, Rodents (rat and mouse) 5, Bats 6, Snakes 4, Other 5, None of the above
25a.	Please specify other	
26	In the last month, has anyone in your household been injured (bitten or	0, Chicken, ducks, geese,

	scratched or cut) by any of these animals? Select all that apply.	pigeons, parrots 1, Cows, goats, sheep, buffalo, donkeys and horses 2, Cats and dogs 3, Monkeys 4, Rodents (rat and mouse) 5, Bats 6, Snakes 4, Other 5, None of the above
26a	Please specify other	
27	In the last month, has anyone in your household killed, sacrificed, or cooked any of these animals? Select all that apply.	0, Chickens, ducks, geese, pigeons, parrots 1, Cows, goats, sheep, buffalo, donkeys and horses 2, Cats and dogs 3, Monkeys 4, Rodents (rat and mouse) 5, Bats 6, Snakes 4, Other 5, None of the above
27a	Please specify other	
Water, Sanitation, and Health		
28	What is the main source of drinking water for members of your household?	0, Piped water (indoors, outside, in the yard, neighbor's house) 1, Protected hole water (hand pump, boring) 2, Unprotected dug well 3, Rainwater 4, Lorry tank water/Water Tanker/ Water Suzuki 5, Surface water (River/Lake) 6, Bottled or Packed water/Mineral Water
29	What is the main source of water for members of your household for other purposes such as cooking and handwashing?	0, Piped water (indoors, outside, in the yard, neighbor's house) 1, Protected hole water (hand pump, boring) 2, Unprotected dug well 3, Rainwater 4, Lorry tank water/Water Tanker/ Water Suzuki 5, Surface water (River/Lake) 6, Bottled or Packed water/Mineral Water
30	Does your household do anything to the water to make it safer to drink?	0, No 1, Yes 2, I don't know
31	If yes, what does your household usually do to make the water safer to drink? Select all that apply.	0, Boil 1, Add Alum/ Chlorine 2, Strain through cloth

		3, Use water filter 4, Solar disinfection 5, Let it stand and settle 6, I don't know 7, None of the above
32	Do you wash your hands after helping a child defecate?	0, Never 1, Rarely – not all the time. 2, Sometimes – most of the time 3, Always – all the time 4, Not applicable (do not help child defecate)
33	Do members of your household wash their hands before touching food (Ex. Cooking, preparing, before eating)?	0, Never 1, Rarely 2, Sometimes 3, Always
34	Do members of your household wash their hands after using the toilet?	0, Never 1, Rarely 2, Sometimes 3, Always
35	What kind of toilet facility do members of your household usually use?	0, Flush toilet (Commode/WC) 1, Toilet with pour flush (Commode/WC without flush) 2, Dug 3, Bush or field
36	Where is this toilet facility located?	0, Inside house 1, Outside house but within structure 2, Outside of the structure
37	The last time the youngest child in your household passed stool, what was done to dispose of the stool?	0, Child used toilet/ WC/ Commode 1, Put into toilet/ WC/ Commode 2, Put into drain or ditch 3, Thrown into garbage 4, Buried 5, Left it in the open 7, I don't know 8, Does not apply (there is no child in the house)
Respiratory diseases		
38	Does anyone in your household (including yourself) smoke tobacco products?	0, No 1, Yes, 2, I don't know
39	Do you cook food inside or outside the house?	0, Inside 1, Outside 3, Both
40	What fuel do you use to cook food? (Select all that apply)	0, Biomass (Wood, Coal, Manure) 1, Gas/ Cylinder Gas/ LPG 2, Kerosine 3, Electricity
41	Does anyone in your household currently have asthma?	0, No 1, Yes

		2, I don't know
42	Has anyone in your household been diagnosed with Tuberculosis (TB) in the past year?	0, No 1, Yes 2, I don't know
Household Member		
The following instrument will collect data on household members. This section should be answered by the household head. You should add an instance for each household member and answer all questions for each member. For example, if there are 10 household members, you should have 10 instances.		
List of household members (Repeat for each household member)		
43	What is the name or code name of this household member?	
44	What is the gender of this household member?	0, Female 1, Male
45	How old is this household member (in years or months)?	
46	How is this member related to you?	0, Spouse 1, Sibling 2, Child 3, Grandparent 4, Uncle/Aunt 5, Other family 6, Unrelated
47	Does this household member share a room to sleep with anyone?	0, No 1, Yes
48	Does this household member share the same bed with anyone?	0, No 1, Yes
49	Does this person cook food for the household?	0, No 1, Yes
Participant enrollment		
The following instrument will collect data on the individual participant. This is the participant that has been selected to participate in the study. This section should be answered by the participant.		
50	Date participant signed consent	
Personal details		
51	Full Name	
52	Gender	0, Female 1, Male
53	Please let me know your age (in years)/ date of birth.	
54	Can the participant read and write on their own?	0, No 1, Yes
Personal Contact Information		
55	Where do you live: Street, Location, etc.	
56	Do you have a telephone or access to a telephone? (This can be the participant's phone or any other person's phone through which the participant can be reached e.g., a neighbor or friend.)	0, No 1, Yes
57	Please give us a telephone number on which we can reach you	
School and work		
58	What is your current work/occupation?	0, Unemployed 1, Student 2, Salaried/ professional 3, Shopkeeper/ small business 4, Semi-skilled or skilled worker 5, Farmer 6, Retired 7, Homemaker/ Housewife 8, Other - specify

59	What is your current work/occupation, if other?	
60	Are you currently in school? (If answering for child, respond for child.)	0, No 1, Yes
61	Where are you getting/receiving your education? Select all that apply.	0, Formal education 1, Home schooling 2, Madrassah
61a	Formal education: What class are you in? (If answering for child, respond for child.)	0, Primary school (1-5) 1, Middle school (6-8) 2, Secondary school (9-10) 3, Higher Secondary (11-12) 3, 1-3 years of college (<16) 4, Bachelors 5, More than Bachelors
61b	Home schooling: What class are you in? (If answering for child, respond for child.)	0, Primary school (1-5) 1, Middle school (6-8)
61c	Madrassah: What class are you in?	0, Nazrah (elementary) 1, Hafiz and Quari (secondary) 2, Alim (higher education)
62	What is the highest class of education that you have completed? (If answering for child, respond for child.)	0, No formal schooling 1, Primary school (1-5) 2, Middle school (6-8) 3, Secondary school (9-10) 4, Higher Secondary (11-12) 5, 1-3 years of college (<16) 6, Bachelors completed 7, More than Bachelors
63	What is the highest level of madrassah you have completed?	0, Madrassah- Nazrah 1, Madrassah- Hafiz and Quari 2, Madrassah- Alim 3, Does Not Apply
Transport use		
64	How often did you use local transport in the past 3 months?	0, Never 1, Monthly 2, Weekly 3, Daily
65	Were you exposed to persons with respiratory complaints within your household in the past one week?	0, No 1, Yes 2, I don't know
Children's section		
66	Did you breastfeed your last-born child?	0, Yes, exclusively for 6 months 1, Yes, for >6 months 2, Yes, for <6 months 3, No 4, Not applicable
67	How many siblings do you have? (Siblings is defined as any sibling from either the mother or the father's side)	
Contact Diary Metadata: Day 1		
The following instrument will collect data on overall contact information for day 1 of the diary. This section should be answered by the participant after two days of diary-keeping.		
Caretaker: A family member (for example: grandparents, siblings, aunts, cousins) whom the parents of the child trust		

to care for their children. They can keep records on behalf of participants aged ≤ 10 years.

Assistant: For those that are unable to read and write, an assistant is a person who will record the contacts of the participants in the paper diary on behalf of the participant. Examples of assistants can be family members, neighbors, community workers, or any other individual able to read and write that the participant selects.

For children < 10 years, the caretaker/ assistant will be someone who spends time throughout the day with the child and is able to accurately record the contacts of the child.

68	Who recorded the contact details in the paper dairy?	0, Participant 1, Caretaker/Assistant
68a	What is the caretaker/ assistant's age?	
69	What is the gender of the caretaker/assistant?	0, Female 1, Male
70	What is the relationship between participant and the caretaker/assistant?	0, Spouse 1, Sibling 2, Child 3, Parent 4, Grandparent 5, Uncle/ Aunt 6, Cousin 7, Community Worker 8, Friend 9, Neighbor 10, Other
70a	Specify if other:	
71	Interview Date	/ /
72	What was the date for first day of contact diary?	/ /
73	What was the day of week for the first day of contact diary?	/ /
Contact diary day 1		
74	How many individuals did you contact (either physical or non-physical) on day 1 of the assigned survey days?	
Contact with Household members		
75	Did you have contact with XXX [household member name]?	0, No 1, Yes
76	Did you touch?	0, No 1, Yes 2, Do not remember
77	Did the contact occur indoors or outdoors?	0, Indoors 1, Outdoors 2, Both
78	Where did you have the contact?	0, My home 1, Other home 2, School 3, Work 4, Transport 5, Local transport station 6, Market/ shop 7, Street 8, Well/ Boring (tube well) 9, Fields 10, Place of worship 11, Garden/ Playground 12, Sugar mill

		13, Social gathering/ event 14, Place to keep animals 15, Airport 16, Health facilities (clinic, hospital) 17, Other
78a	If other location, please specify.	
79	Was this individual wearing a mask when you had contact?	0, No, mask was NOT worn during the encounter 1, Yes, for the entire encounter 2, Yes, during parts of encounter 3, I don't remember
80	What was the total time spent with the contact on this day?	0, < 5 mins 1, 5-15 mins 2, 16 – 30 mins 3, 31 mins – 1 hr. 4, 1-4 hrs. 5, > 4 hrs.
81	In the past 6 months, how often have you had contact with this person?	0, Never met before 1, Daily 2, 1 to 3 times per week 3, 1 to 3 times per month 4, Never met before
82	How long have you known this person?	0, Never met before 1, Daily 2, 1 to 3 times per week 3, 1 to 3 times per month 4, Never met before
Place use Day 1		
83	What is the name or code name of the place you visited?	
84	Select the type of location that you visited	0, My home 1, Other home 2, School 3, Work 4, Transport 5, Local transport station 6, Market/ shop 7, Street 8, Well/ Boring (tube well) 9, Fields 10, Place of worship 11, Garden/ Playground 12, Sugar mill 13, Social gathering/ event 14, Place to keep animals 15, Airport 16, Health facilities (clinic, hospital) 17, Other
84a	If other, please specify	
85	Approximately how many people were in this location?	
86	How much time did you spend at this location over the entire day?	0, < 5 mins

		1, 5-15 mins 2, 16-30 mins 3, 31 mins - 1 hr 4, 1-4 hrs 5, >4 hrs
87	Other than this visit, in the last 6 months, how often do you visit this place?	1, Daily 2, 1 to 3 times per week 3, 1 to 3 times per month 4, Never met before
Contact Diary Day 2 of 2		
The following instrument will collect data on each contact contacted by the participant on day 2 of the diary. This section should be answered by the participant after two days of diary-keeping. You should add an instance for each contact contacted on day 2 and answer all questions for each contact. For example, if the participant had 10 contacts in day 2, you should have 10 instances. You should start by with the household members that were listed in the enrollment form and use the code names for each household member. You should also ensure that contacts from day 1 who were also contacted on day 2 have the same code name.		
88	Contact person name, nickname, code, ID, etc	
89	Do you know the age of the contact?	0, No 1, Yes
90	What is the age of contact (Enter if exact age is known)?	
91	If you do not know the exact age, please estimate the age group of the contact.	0, < 6 months 1, 6 – 11 months 2, 1 – 4 yrs 3, 5-9 yrs 4, 10 – 14 yrs 5, 15 – 19 yrs 6, 20 – 29 yrs 7, 30 – 39 yrs 8, 40 –59 yrs 9, 60+ yrs 10, I don't know
92	What is the gender of the contact?	0, Female 1, Male
93	Did you touch?	0, No 1, Yes 2, Do not remember
94	Did the contact occur indoors or outdoors?	0, Indoors 1, Outdoors 2, Both
95	Where did you have the contact?	0, My home 1, Other home 2, School 3, Work 4, Transport 5, Local transport station 6, Market/ shop 7, Street 8, Well/ Boring (tube well) 9, Fields 10, Place of worship 11, Garden/ Playground 12, Sugar mill 13, Social gathering/ event 14, Place to keep animals

		15, Airport 16, Health facilities (clinic, hospital) 17, Other
95a	If other location, please specify.	
96	Was this individual wearing a mask when you had contact?	0, No, mask was NOT worn during the encounter 1, Yes, for the entire encounter 2, Yes, during parts of encounter 3, I don't remember
97	What was the total time spent with the contact on this day?	0, < 5 mins 1, 5-15 mins 2, 16 – 30 mins 3, 31 mins – 1 hr. 4, 1-4 hrs. 5, > 4 hrs.
98	In the past 6 months, how often have you had contact with this person?	0, Never met before 1, Daily 2, 1 to 3 times per week 3, 1 to 3 times per month 4, Never met before
99	How long have you known this person?	0, Never met before 1, Daily 2, 1 to 3 times per week 3, 1 to 3 times per month 4, Never met before
Contact Day 2 of 2 (Repeat contacts)		
100	Did you have contact with XXX [contact's name] on the second day of contact diary?	0, No 1, Yes 2, I don't remember
101	Did you touch?	0, No 1, Yes 2, Do not remember
102	Did the contact occur indoors or outdoors?	0, Indoors 1, Outdoors 2, Both
103	Where did you have the contact?	0, My home 1, Other home 2, School 3, Work 4, Transport 5, Local transport station 6, Market/ shop 7, Street 8, Well/ Boring (tube well) 9, Fields 10, Place of worship 11, Garden/ Playground 12, Sugar mill 13, Social gathering/ event 14, Place to keep animals 15, Airport

		16, Health facilities (clinic, hospital) 17, Other
103a	If other location, please specify.	
104	Was this individual wearing a mask when you had contact?	0, No, mask was NOT worn during the encounter 1, Yes, for the entire encounter 2, Yes, during parts of encounter 3, I don't remember
105	What was the total time spent with the contact on this day?	0, < 5 mins 1, 5-15 mins 2, 16 – 30 mins 3, 31 mins – 1 hr. 4, 1-4 hrs. 5, > 4 hrs.
106	In the past 6 months, how often have you had contact with this person?	1, Daily 2, 1 to 3 times per week 3, 1 to 3 times per month 4, Never met before
117	How long have you known this person?	1, Daily 2, 1 to 3 times per week 3, 1 to 3 times per month 4, Never met before
Place use Day 2		
108	What is the name or code name of the place you visited?	
109	Select the type of location that you visited	0, My home 1, Other home 2, School 3, Work 4, Transport 5, Local transport station 6, Market/ shop 7, Street 8, Well/ Boring (tube well) 9, Fields 10, Place of worship 11, Garden/ Playground 12, Sugar mill 13, Social gathering/ event 14, Place to keep animals 15, Airport 16, Health facilities (clinic, hospital) 17, Other
109a	If other, please specify	
110	Approximately how many people were in this location?	
111	How much time did you spend at this location over the entire day?	0, < 5 mins 1, 5-15 mins 2, 16-30 mins 3, 31 mins - 1 hr 4, 1-4 hrs

		5, >4 hrs
112	Other than this visit, in the last 6 months, how often do you visit this place?	1, Daily 2, 1 to 3 times per week 3, 1 to 3 times per month 4, Never met before
Exit Survey		
The following interview will be administered to participants who completed the contact diaries for the 48 consecutive hours allocated. This questionnaire will cover the experience of filling in the contact diaries, perceptions and exposure to COVID-19 and access to a mobile phone.		
Experience of filling the contact diaries		
113	Date of exit interview (Month/Day/Year)	
114	Were you able to include every single contact?	0, No 1, Yes 2, Do not remember
115	On a scale from 1 to 5, how did the 2 days in which you reported your contacts compare to a typical day?	1, Much fewer contacts than usual 2, Fewer contacts than usual 3, About the same as usual 4, More contacts than usual 5, Much more contacts than usual
116	If both days were not typical, why?	
Behavior Change		
117	How do you think your social behavior has changed in the past six months? Social behavior refers to your interactions with other people, such as talking face-to-face, visiting their homes, meeting outside home, etc.	1, No change. I still move around the same way that I used to before 2, My movements have increased 3, My movements have reduced 4, Do not know
118	If there was change in your social behavior, was this change due to COVID-19?	1, Yes 2, No
119	During the past 14 days, how many days did you leave your home?	0,0 (Did not leave the house) 1, 1-3 times 2, 4-7 times 3, More than 7 times 4, No not know 5, I prefer not to answer
120	For which activities have you left your home for in the last 14 days? Select all that apply.	0, Go to work 1, Go to school 2, Attend religious services 3, Seek health care 4, Go to the market 5, Go out to eat/ restaurant 6, Visiting friends /family 7, Leisure (seaside, gym, movies, salon, etc) 8, Have not left the house 9, Others

120a	If other, please specify	
121	On how many days did you go to work in the last 14 days?	<input type="text"/> <input type="text"/> <input type="text"/>
122	On how many days did you go to school in the last 14 days?	<input type="text"/> <input type="text"/> <input type="text"/>
123	Did you leave your home yesterday?	0, No 1, Yes 2, I prefer not to answer
Social distancing measures and personal hygiene in relation to COVID-19		
124	If you were diagnosed with COVID-19, would you be able to isolate yourself from other members of the home?	0, No 1, Yes 2, I prefer not to answer 3, Not relevant
125	Did you use a face mask in the last 14 days?	0, No 1, Yes 2, I prefer not to answer
126a	If 129 was Yes, where did you use the face mask? (Select all that apply)	0, At home 1, Everywhere outside my house 2, When walking on the street; 3, On public transport 4, In supermarkets/shops 5, In cinema/bar/restaurant 6, At work/ school/ college/ university 7, Other
Contact with SARS-CoV-2 infected individuals		
127	Have you had close contact with someone positive with coronavirus in the last 14 days? Select multiple if applicable.	1, None that I know of 2, Member of my household; 3, Close friend 4, Other non-household member 5, Coworker 6, Patient (in case of a health care worker) 7, Client/ Customer 8, Not relevant 9, Prefer not to answer 10, Other
127a	If other, please specify	
128	Have you experienced any of these symptoms in the last two days?	0, Breathing difficulties 1, Chest discomfort 2, Chills 3, Cough 4, Fever 5, Sore throat 6, Loss of taste or smell 7, Muscle or joint aches 8, Tiredness or exhaustion 9, Nausea or vomiting 10, Diarrhea 11, None of these
129	Did you visit a health facility for any of these symptoms?	0, No 1, Yes

		2, I prefer not to answer
130	Have you been tested for COVID-19?	0, No, I don't think I need it 1, No, my doctor recommended it but there were no kits 2, No, I need one because I am taking care of a person who is sick 3, Yes, negative 4, Yes, positive 5, Yes, waiting for results 6, Yes, positive but recovered 7, Prefer not to answer
131	If yes, when were you tested?	(Month/Day/Year)
132	Has anyone else in your household exhibited COVID-19 symptoms in the last 14 days?	0, No 1, Yes 2, I prefer not to answer
133	Has someone else from your household been tested for COVID-19?	0, No 1, Yes 2, I prefer not to answer
134	Among those tested, how many tested positives for COVID-19?	<input type="text"/> <input type="text"/> <input type="text"/>
135	Have you received a COVID-19 vaccine?	0, No 1, Yes 2, Prefer not to answer
135a	If Yes, which vaccine did you receive? If you have the vaccine card can you please show me?	0, Pfizer 1, Moderna 2, AstraZeneca 3, Sputnik 4, CanSino 5, SinoPharm/SinoVac 6, PakVac 5, Other 6, I do not know 7, Prefer not to answer
Cellphone Use		
136	Do you have access to a mobile phone?	0, No 1, Yes
136a	If Yes, do you own the mobile phone?	0, No 1, Yes
137	If you use (own or borrow) a mobile phone, what is the functionality?	1, Basic feature phone, no internet 2, Smartphone, has internet
138	If smartphone, what is your preferred mode of communication?	1, Normal call and text 2, Internet calls and text e.g. using Whatsapp
139	If you use a mobile phone, rate the signal in most locations that you visit during the day?	1, Poor 2, Ok 3, Good
140	In the last day/ 24 hours, how often did you call/ text using your mobile phone?	1, Never 2, 1-5 times 3, 5-10 times, 4, 10 times or more