

# The experience of SARS-related stigma at Amoy Gardens

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## Abstract

Severe Acute Respiratory Syndrome (SARS) possesses characteristics that render it particularly prone to stigmatization. SARS-related stigma, despite its salience for public health and stigma research, has had little examination. This study combines survey and case study methods to examine subjective stigma among residents of Amoy Gardens (AG), the first officially recognized site of community outbreak of SARS in Hong Kong. A total of 903 residents of AG completed a self-report questionnaire derived from two focus groups conducted toward the end of the 3-month outbreak. Case studies of two residents who lived in Block E, the heart of the SARS epidemic at AG, complement the survey data. Findings show that stigma affected most residents and took various forms of being shunned, insulted, marginalized, and rejected in the domains of work, interpersonal relationships, use of services and schooling. Stigma was also associated with psychosomatic distress. Residents' strategies for diminishing stigma varied with gender, age, education, occupation, and proximity to perceived risk factors for SARS such as residential location, previous SARS infection and the presence of ex-SARS household members. Residents attributed stigma to government mismanagement, contagiousness of the mysterious SARS virus, and alarmist media reporting. Stigma clearly decreased, but never completely disappeared, after the outbreak. The findings confirm and add to existing knowledge on the varied origins, correlates, and impacts of stigma. They also highlight the synergistic roles of inconsistent health policy responses and risk miscommunication by the media in rapidly amplifying stigma toward an unfamiliar illness. While recognizing the intrinsically stigmatizing nature of public health measures to control SARS, we recommend that a consistent inter-sectoral approach is needed to minimize stigma and to make an effective health response to future outbreaks.

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## Introduction

Stigma has been defined as an attribute or characteristic that an individual possesses, or is believed to

possess, and that conveys a social identity which is devalued in a particular social context (Crocker, Major, & Steele, 1998, p. 505). The origins of stigma toward health conditions are complex. According to existing theories, a combination of interactive elements may bring about stigmatization. Briefly stated, they include perceived threat, information processing bias, self-interest, negative labeling, social communication of

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bias, exclusion, status loss, and power difference (Haghighat, 2001; Link & Phelan, 2001; Stangor & Crandall, 2000). Illnesses that are associated with more of these elements are conceivably more likely to be stigmatized.

From the above perspective, Severe Acute Respiratory Syndrome (SARS) may be particularly subject to stigmatization. SARS is a novel infectious disease that broke out in Guangdong, People's Republic of China, before March 2003, progressed to involve 29 countries globally, and subsided in June the same year. Early in the epidemic, there were widespread fears that SARS would propagate uncontrollably, overwhelm public health resources, create global economic disasters, and kill millions of people. Media reports suggest that stigma and discrimination related to SARS were common in many domains of everyday life, such as the workplace, schools, health services, restaurants, and shopping malls. The perceived linkage between SARS and ethnicity led to the irrational avoidance of Asians (especially Chinese) in many parts of the world. Many countries likewise imposed excessively stringent restrictions on travelers from Asia (Moy, 2004; Singer et al., 2003; Stocking, 2003).

Among the cities affected with SARS, Hong Kong was the second hardest hit worldwide, with 1755 confirmed cases of infection and 299 deaths (World Health Organization (WHO), 2004). Amoy Gardens (AG), in particular, held the world record of a residential complex with the greatest rise of infected cases in a single day. Being the first officially recognized site of the community outbreak in Hong Kong, this high-rise housing estate exhibited a disturbing toll of 329 confirmed cases of infection and 42 deaths (Hong Kong Government, 2003). Specifically, although AG consists of 19 separate blocks, 41% of its confirmed cases of infection and 52% of deaths occurred in Block E alone. Given the unique opportunity to study residents of AG in Hong Kong, the present study aimed to address several issues relevant to stigma connected with SARS and stigma in general.

First, the degree of stigma associated with a disease is dependent on how much is known about it and how curable it is (Crandall, 1991). SARS has been portrayed as highly contagious, controversial in transmission, "incurable", and conducive to serious sequelae of treatment (Meltzer, 2004). Unsurprisingly, scattered media reports suggested that residents of AG, in particular those of Block E, experienced different kinds of stigma and discrimination (Moy, 2004). We therefore attempted to document the nature of stigma experienced by the residents. Second, stigma may extend from an individual to those bearing different kinds of relationships to him/her (Goffman, 1968). Such "courtesy" stigma may be based on genetic, contagion, moral, ethnic, and/or geographical reasons. Because of where

they lived in the housing complex, subgroups of residents differed in their perceived risk for SARS. This allowed us to examine the phenomenon of associative stigma.

Third, although stigma is usually conceptualized in psychosocial terms, it may also have an impact on somatic symptoms. Somatic illness and stigma can aggravate each other through psychophysiological arousal (Markowitz, 1998). We therefore sought to examine the relationship between stigma and psychosomatic symptoms among residents of AG.

Fourth, Link and Phelan (2001) suggest that stigmatization will not occur unless one social group has sufficient resources to exert influence on public attitudes toward a social group. In the case of SARS, the media had resources to raise alarm about and increase stigma toward those at high risk for SARS. Thus, the power of the media may become influential in the case of an epidemic and its consequent stigma. Finally, even in the presence of a major power differential between stigmatizers and the stigmatized, the latter are not necessarily passive recipients of stigma (Robin & Satterfield, 2002). Instead, they may resist or cope with stigma by utilizing tangible or symbolic resources available to them. The present study seeks to clarify how sociodemographic and proximity factors may shape stigma management strategies among residents of AG.

## Method

The study was approved by the research ethics committee of the Chinese University of Hong Kong.

### *The site*

The 19 blocks (A–S) of AG are located in four clusters. Blocks A–G constitute the first cluster and include most of the SARS cases (Block E). The blocks of the other 3 clusters bear different degrees of proximity to Block E. Blocks L and M are situated close to Block E.

### *Survey*

To devise items that capture actual or anticipated stigma experience related to SARS, the research team (SL, LC, KK) conducted two focus groups lasting over 1 h each in June 2003. The 15 residents who participated were recruited with the help of the AG Residents' Association. They included 6 individuals who were themselves executive committee members of the Association. Because of their active role in helping to manage the SARS crisis at the housing complex, they were able to describe a variety of SARS-related experiences of the residents there. The other 9 participants were recruited because they revealed to the Association that they were

willing to discuss their own and others' stigma experiences. All participants gave written informed consent.

An unstructured format was employed to elicit personal or observed experience of stigma among AG residents, including ex-SARS patients and their family members as well as non-infected residents. In the Chinese language, there is no uniformly agreed translation of the word "stigma". Instead, several expressions exist, referring variously to bias, prejudice, injustice, a "mark", or discrimination. The lack of a specific equivalent term facilitated a general exploration of stigma experience during the focus groups. The discussion was tape-recorded.

A self-report questionnaire was constructed from a content analysis of the focus groups. The questionnaire consists of 36 binary items and 9 categorical items tapping residents' experience of stigma in different domains of life, and their ways of coping, by revealing their residential status, psychosomatic symptoms, and opinions about the SARS experience. To study change over time, the questionnaire includes items about the experience in both April and August 2003. Minor revisions were made after pilot-testing with 8 residents.

Questionnaires were placed in the mailboxes of all 4896 households of AG in August 2003. These were coded so as to identify the block of origin of a respondent. One person from each household was requested to participate anonymously. Written consent (in the form of a freely chosen signature) was obtained. Respondents were asked to leave their contact details voluntarily. A pre-stamped envelope was attached for returning the completed questionnaire to the investigators. After 5 questionnaires with obviously inconsistent responses or no responses were discarded, 903 questionnaires (response rate 18.5%) were validly analyzed.

### Interviews

Among the respondents who reported stigma experience and left their phone contacts, 7 were successfully

contacted. Despite the assurance of confidentiality, only 2 consented to be interviewed for a total of 5 h. One was seen in her flat and the other in an open area nearby. The interviews were conducted using open-ended questions, audio-taped, transcribed verbatim, and analyzed.

### Statistical analysis

Data were tabulated in percentages and analyzed with the Statistical Package for the Social Sciences version 11.0. Standard two-tailed  $\chi^2$  tests were used to determine whether subgroups of respondents (as delineated by gender, age, employment status, residential location, and SARS status) reported psychosomatic symptoms differently.

## Results

### Survey subjects

In total, 41.0% and 59.0% of respondents were male and female, respectively (see Table 1). They were aged 15–80 years (mean 39.1 years with most between 35 and 54). Most were employed (86.9%).

In total, 47 respondents (5.2%) were reportedly ex-SARS patients. 128 respondents (15.2%) reported having had SARS symptoms only. A total of 68 respondents (7.7%) reported the presence of confirmed SARS cases in their household that resulted in 10 deaths.

Of the 4 housing clusters, those from Cluster 1 (including 60 Block E residents) gave the highest response rate (38.0% cf. 20.1%, 28.5%, 13.3% for the other clusters). There was no significant difference in the sociodemographic characteristics of respondents from different clusters. However, as expected, more from Cluster 1 were ex-SARS patients (12.3% vs <1.2% among the others,  $\chi^2 = 55.33$ ,  $df = 3$ ,  $p < 0.001$ ) or had ex-SARS household members (17.5% vs. <2.3% among the others,  $\chi^2 = 73.90$ ,  $df = 3$ ,  $p < 0.001$ ).

Table 1  
Number (%) of respondents ( $n = 899$ )

	Blocks A–G ( $n = 342$ )	Distant blocks ( $n = 181$ )	Blocks adjacent to Block E ( $n = 256$ )	Distant blocks ( $n = 120$ )	Total ( $n = 899$ )
SARS symptoms only	49(16.4)	32(18.0)	37(14.8)	10(8.6)	128(15.2)
Confirmed SARS	42(12.3)	2(1.1)	2(0.8)	1(0.8)	47(5.2)
Household with ex-SARS patient(s)	59(17.5)	4(2.2)	3(1.2)	2(1.7)	68(7.7)
Death due to SARS in the household	9	0	1	0	10

### Case studies

Both were Block E residents. The first case, Miss J, was a young university graduate. She previously worked in a private tuition center but was fired after the outbreak. Having lived in AG for 20 years, she was acquainted with many Block E residents who passed away or became infected during the outbreak. She and her family members were not infected, but were quarantined in an isolation camp in April 2003.

Mrs. B, the second case, was a married woman with a 9-year-old daughter. She was one of the first batch of infected residents and experienced unpleasant treatment in hospital. She voluntarily quit her clerical job after falling ill. Because of unfair treatment in the workplace, her husband quit his job too. Her daughter was told to stop attending school owing to her status as a resident of AG.

### Social life

A total of 88.1% of respondents reported that SARS deeply affected their daily life. Social relationships (79.1%) was most affected, followed by work (70.7%) and family life (65.4%). 40.6% of respondents reported that they were rejected for dining with friends during the peak of the outbreak (see Table 2). Miss J echoed these findings:

“A friend of mine refused to dine with me after I came out from the isolation camp for about a week. Then I asked her, ‘Are you afraid that I am a Block E resident?’ She gave no reply.”

Even friends who previously brought her daily necessities during her quarantine rejected visiting her again after her release from an isolation camp:

“They didn’t want to come for two reasons: first, they didn’t want to run into reporters; second, they didn’t like to make their family members unhappy.”

Table 2  
Avoided in social life and refused services

	Percentage
Rejected for dining or going out with friends	40.6
Refused home delivery services	34.2
Refused household maintenance services	32.0
Refused treatment at clinics	24.0
Refused hotel services	22.5
Domestic helpers resigned or requested to take leave	22.2
People in restaurants moved away when AG status revealed	16.1

Stigma affected Mrs. B more markedly. Her previous supervisor at work called her urgently when the number of infected residents at Block E was rising fast:

“She scolded me on the phone, ‘You live in AG, and also in Block E! If I get infected from you, I will give you a bad time.’ And I didn’t contact her any more since then.”

Mrs. B recalled in frustration that similar experiences with friends continued after she left hospital.

### Use of services (Table 2)

As seen in Table 2, over 30% of respondents reported having been refused household maintenance or home delivery services. Over 20% were refused services at clinics, were refused hotel service, or reported that their domestic helpers stopped working for them.

Miss J was rejected at a clinic in late March when the number of infected block E residents was rising:

“A nurse at the clinic asked why I wanted to have a chest X-ray examination. I replied that I was from Block E of Amoy Gardens. Immediately she said, ‘Oh No, you don’t need to! We wouldn’t offer this service to you.’ I asked the reason for her rejecting me. She explained, ‘We don’t offer this kind of service.’ Without explaining whether its chest examination service was suspended for all patients, she quickly opened the door and urged me to leave”.

When Mrs. B’s infection was confirmed, her Indonesian maid of three years wanted to resign.

“In the beginning, she must have been extremely terrified. I could hardly see her face as she always turned her back to me. This lasted nearly a month until she realised it was safe (to approach me).”

### Workplace experience (Table 3)

In total, 48.7% of those employed perceived discriminating treatment by employers in April. These include being told to work at home (38.3%) and to produce a clean health bill to resume work (26.8%).

Miss J complained that preventive measures at the tuition center were prejudicial:

“Because I live in Amoy Gardens, my head told me to have a chest check-up whereas other colleagues were not told to do so. I didn’t get any medical reimbursement for that. Our manager also announced that all staff should wear masks and gloves in the office but I was the only one who must strictly follow all the rules. The weather was hot. Wearing a mask was choking and my gloves were sticky with sweat.”

Table 3  
Discrimination in the workplace

	%
<i>By employers</i>	
Told to work at home	38.3
Told to show clean health bill	26.8
Told to take annual leave	18.7
Told to take no paid leave	13.0
Fired	3.3
To work alone in a room	2.7
Others (told to wear mask, self-quarantine or report health condition; received unpleasant verbal remarks)	34.9
<i>By colleagues</i>	
Told to wear mask in the office	65.3
Shunned	47.2
Received impersonal modes of communication	44.6
Objects they touched sterilized	18.1
Others (received unpleasant verbal and nonverbal remarks)	21.5

She was fired after her release from an isolation camp. Although her company fired many employees because of poor business, she was the first one to be dismissed.

Mrs. B's husband was not infected. After release from a camp in April, his employer told him to take unpaid leave because "his home has been heavily infected with the virus." In May, he wanted to return to work but his employer required him to move out of AG first.

Nearly, half (47.8%) of the employed respondents reported unpleasant experiences with colleagues or clients in April. These include being required to wear masks (65.3%), shunned (47.2%), and receiving more than usual impersonal communication (e.g., telephone calls, emails, and memos) that substituted for face-to-face conversation (44.6%) (see Table 3). 39.1% of respondents concealed their AG resident identity when seeking jobs during the outbreak; 17.3% indicated that they would still do so in future.

#### *Coping with stigma*

Many people coped with stigma by concealing their residential status, namely living in AG, when using services, or applying for jobs (37.5%). Some simply emphasized that they were not from Block E, the notorious one. Others moved out of the residence or thought of moving out.

During the outbreak, 40.8% of respondents moved out of the residence while 36.4% thought of doing so. 20.1% planned to move out in future. Miss J indicated that the market value of an average AG apartment, once

rated at US\$166,700, plunged to US\$64,100 during the outbreak and returned to US\$102,500 afterwards. Likewise, Mrs. B indicated that even at the time of the interview there was almost one family leaving Block E every day. She never heard from her estate agent despite her offer to sell her apartment at a greatly reduced price.

After becoming unemployed in April, Miss J had thought of concealing her address when applying for jobs. But she did not do so for fear of being discovered. She sent out some 100 letters but received only 4 replies:

"In one interview, an employer asked me hesitantly, 'You live in Block E of AG, right?' In another interview, I actually asked whether my AG status would affect the offer. The reply was 'honestly I don't mind but I'm not sure if my colleagues would or not!'"

Likewise, Mrs. B's husband received offensive, albeit often indirect, remarks from his colleagues. His boss repeatedly criticized him for trivial matters so he resigned in July. He started to look for a job in September but the stigma remained. Being curious how people would react to residents of AG, he put down his Block E status in application letters. By November, there were replies for interviews only if Mr. B had used his mother's address. In these interviews, he was frequently asked something unrelated to the job after his resident status was revealed.

About 4% of respondents reported that in August they still had unpleasant experience in social relationship, use of services and employment. The job-hunting experience of Miss J and Mr. B confirmed that stigma toward residents of AG could persist.

#### *Psychosomatic symptoms*

In total, 87.4% of respondents reported both psychological and somatic distress following the outbreak. Among these residents, persistent (2 weeks or more) symptoms of low mood (73.1%), irritability (56.7%), and insomnia (34.2%) were common (see Table 4). They attributed such symptoms to the contagiousness of SARS (79.1%), its mysterious route of transmission (73.2%), stigma (65.1%), feared sequelae of treatment (56.6%), the sharp fall in value of AG (52.4%), and the strict quarantine required of SARS patients (51.3%).

Miss J experienced irritability over discrimination in the workplace. She recalled:

"I was highly irritable throughout the period. If you (the boss) tell me to follow the precautionary measures, you should ask all of us (the staff) to do so consistently. Otherwise, we shouldn't do it at all. He merely put a label on me."

Table 4 shows the association of SARS status of the respondents, their coping mechanisms and psychosomatic

Table 4  
Association of SARS status with coping mechanisms and psychosomatic symptoms

	SARS status			$\chi^2$ df = 2
	% respondents but not their household members with confirmed SARS	% respondents with ex-SARS household members	% other Amoy Garden residents	
<i>Coping mechanisms of respondents</i>				
Concealing identity when using services	37.5	52.6	39.5	1.38
Concealing identity when applying for jobs	37.5	50	38.9	0.31
Emphasizing non-Block E status <sup>a</sup>	42.1	30.8	62.4	8.33*
Avoiding walking near Block E <sup>a</sup>	58.8	55.0	76.9	7.92*
Avoiding Block E residents <sup>a</sup>	0	9.1	12.7	1.84
Avoiding Amoy garden residents and their relatives	20.0	30.0	25.4	0.45
<i>Psychosomatic symptoms</i>				
Insomnia	50.0	56.3	32.5	11.23*
Chest discomfort	33.3	28.1	16.0	8.88*
Being easily irritated	63.3	84.4	55.3	11.10*
Low mood	83.3	81.3	72.3	2.92
Headache	20.0	28.1	16.9	2.85

\* $p < 0.05$ .

<sup>a</sup>Block E residents were excluded.

symptoms. Respondents who contracted SARS before or had ex-SARS household members were more likely to emphasize non-Block E status and less likely to avoid walking near Block E than other Amoy Garden residents. They were also more likely to develop psychosomatic symptoms such as insomnia, irritability, and chest discomfort.

## Discussion

### *The stigma*

The widespread stigma experience we documented among residents supports the link between stigma and the amount of threat that a new disease may generate (Crandall, 1991; Meltzer, 2004). That associative stigma affects the entire AG is partly due to the media-driven labeling of a high-risk geographical community (Satterfield, 2000; Takahashi, 1997). Because of this community-based stigma, all AG residents may be stigmatized irrespective of their SARS status. Under the powerful influence of the media and the relative powerlessness of those stigmatized, associative stigma can broaden to a city, a country, a region, or an entire ethnic group perceived to be at high risk of SARS (Goffman, 1968; Singer et al., 2003; Stocking, 2003).

The stigma experience of AG residents is reminiscent of other stigmatized groups (Lee, 2002; Robin & Satterfield, 2002). Its impacts are multiple and cumulative, involving the domains of work, schooling, health care, and social life. They can lead to the breakdown of social connections of moral favor (*renqing*) and relationship (*guanxi*) that are so much emphasized in Chinese society (Kleinman & Kleinman, 1997). Consequently, people here responded with concealment, withdrawal, anger, and psychosomatic symptoms.

### *Differential impacts and stigma management strategies*

Although 88.1% of AG residents felt that SARS and related stigma affected their lives, they exhibited agency by harnessing various destigmatizing resources available to them (Robin & Satterfield, 2002). Specifically, stigma and its management strategies varied with gender, age, education, occupation, proximity to block E and other perceived risk factors for SARS.

Male AG residents, presumably more work-oriented, were more likely to conceal their identity if they were to seek jobs in April. With more resources, AG residents of a younger age and higher education/occupational levels were more likely to move out of AG. They also tended to use active disclosure to distance themselves from Block E residents. In contrast, older AG residents were

more likely to use physical distancing to de-stigmatize themselves. Female AG residents demonstrated more anxiety than male AG residents. This is understandable because SARS had a direct impact on household routines such as maintenance of cleanliness over which women assume most responsibility. Finally, an exodus of all AG residents has not occurred. Because of limited economic resources, those who are unemployed or retired are more likely to stay in AG and report more psychosomatic symptoms due to falling property value instead.

Proximity shapes stigma experience. Block E residents report more stigma and psychosomatic symptoms than other AG residents. Non-Phase I residents react differently to stigma attached to Block E. Phase IV residents, the farthest from Phase I, tend to avoid walking near Block E and its residents. This is structurally facilitated by the fact that they do not need to pass by Block E when going in and out of AG. Residents of Phase III, located near Block E, tend to avoid stigma by declaring their non-Block E status.

The stigma management strategies of AG residents concur with studies showing that “less stigmatized” people attempt to re-establish social boundaries with “more stigmatized” individuals during a social crisis. Besides physical distancing, this is achieved via symbolic interaction in which individuals re-create social boundaries by defining the sense of “us” and demarcating those who are “them” (Kowalewski, 1988). This ingroup–outgroup perception may be motivated by psychological and economic self-interest (Haghighat, 2001). It is shown by the attempt of AG residents to actively declare their non-Block E status in both interpersonal and work domains. Stigmatized individuals also use “downward social comparison” to distinguish themselves from those who are in a worse situation than themselves (Gibbons, 1986). Thus, non-Block E residents may disown part of the severe stigma toward AG by declaring that not the whole of AG is as dangerous as Block E. This destigmatization strategy can bring them psychological dividends and become powerfully self-reinforcing (Miller & Major, 2000; Haghighat, 2001).

A different situation occurs with ex-SARS residents and their household members. They are less inclined to resort to physical avoidance or setting symbolic boundaries with Block E residents. Thus, residents who experience more stigma may see one another as members of an “in-group” even though the sources of stigma are different (Gaertner, Rust, Dovidio, Bachman, & Anastasio, 1994; Gibbons, 1986). Such a social identity, in the presence of empowering resources, may facilitate advocacy for SARS sufferers. However, as is the case with other stigmatized groups in Hong Kong, we have witnessed little organized advocacy for SARS victims (Lee, 2002).

### *Risk communication and the media*

Perhaps what distinguishes stigma toward SARS from other stigmatized illnesses is the rapidity with which it propagates to make unprecedented local and global impacts. In this regard, the media and health officials may have synergistically created a needed social context in which the threat of SARS is sanctioned and readily transformed into stigma (Stangor & Crandall, 2000).

Several factors render SARS an immensely sought-after topic for journalists (Lee, 2004). It is novel, potentially fatal, mysterious, omnipresent, economically disastrous, and raises issues of political accountability. In Hong Kong, after an initial phase of denial of community outbreaks and a tight hold on information, health officials yielded to media pressure to become more transparent. During daily briefings commencing on April 19, 2003, they highlighted a rising number of infected people/buildings, mortality, and quarantine. They often responded equivocally to sensitive questions raised by journalists (Moy & Lee, 2004). Intended or not, they conveyed to the general public readily felt messages of uncontrollable spread, lethality despite medical treatment, and defenselessness.

Exposure to unbalanced information (Stangor & Crandall, 2000) and the human tendency to weigh negative information more heavily than positive information (Haghighat, 2001) can interactively foster panic and spawn stigmatization. Throughout the SARS crisis in Hong Kong, very little positive information about control of the illness or outcome of medical therapy was available to the public. Instead, people were bombarded with multi-media coverage of bad news and quickly sanctioned the perception that individuals afflicted with SARS highly to be feared.

From a global health perspective, however, the intense fear of SARS is disproportionate to its real medical risk. For example, the mortality of SARS is infinitely lower than those of malaria and tuberculosis but the latter have received considerably less attention (Fumento, 2003). In the view of Chi-pon Wen, the enormous gap between the “perceived” risk and “assessed” risk of SARS has resulted in unnecessarily “expensive lessons” for Taiwan. He emphasizes that the media focus throughout the crisis is biased by myths that propel public panic. Repeatedly making valid risk comparisons (e.g., motorcycle accidents and suicide claimed 4000 and 2200 lives a year but SARS only 71 in Taiwan) and managing misperceptions about risk, Wen proposes, will produce more efficient (and, in the authors’ view, less stigmatizing) public health responses (Wen, 2003). Accurate risk communication has not, however, been a focus of SARS management in Hong Kong. Unsurprisingly, 64.6% of AG residents report dissatisfaction with the government’s mode of handling health information

and over 50% believe that biased media coverage has led to disproportionate stigmatization of AG.

### Limitations

The present study has several limitations. First, because of the difficulty of obtaining a random sample of subjects and a high response rate in an acutely stigmatized community, convenience sampling is adopted. The response rate of 18.5% is far from ideal. Depending on whether stigmatized individuals are more or less likely to respond, we may have either over- or under-estimated stigma experience. Second, as it is ethically and administratively problematic to carry out a prospective study during the SARS outbreak, we have used a retrospective approach. As such, the findings may not accurately capture the most vivid experience of stigma among AG residents. Third, although the interview data complement the survey data, the fact that only 2 Block E residents were interviewed limits the generalizability of our qualitative findings. Finally, stigma is a contested subject that can be studied from the often different perspectives of the stigmatized and stigmatizers (Heatheron, Kleck, & Hull, 2000). This holds true especially for a novel illness that truly threatens public health. Future studies should go beyond subjective stigma to examine the perspectives of government officials, health care workers, employers, school administrators and other stakeholders. They should also examine whether and how stigma toward SARS may decrease over time.

### Conclusions

The present study confirms certain existing knowledge on stigma. It also highlights how an admittedly stigmatizable illness can rapidly generate threat and stigma in the presence of inconsistent health policy and powerful media-propelled risk miscommunication. Such stigma is particularly felt by at risk communities such as the AG.

Health measures such as quarantine are essential for preventing SARS but are inherently stigmatizing. Indeed, one may say that if there ever is an appropriate use of stigma in public health policy, this will be it. But the experience of AG residents suggests that less panic-provoking ways of implementing health system responses and dealing with their stigmatizing consequences are equally important.

Governmental responses to SARS, as in the case of Hong Kong, often switch from an initial phase of denial to the massive implementation of preventative measures that may be politically driven. Such an incoherent response can augment uncertainty toward an unknown

disease and trigger more paranoia than would otherwise occur.

Although it is unclear whether similar outbreaks will recur, our findings have practical implications. This is because stigma is painful and may impede public health interventions. It can also become entrenched through cultural beliefs, moral convictions, and the development of structural discrimination (Link & Phelan, 2001). This is shown by the fact that individuals with medical illnesses may continue to be stigmatized despite objective evidence rebutting the myths that initiate stigma (Lee, 2002).

We therefore recommend a coordinated inter-sectoral response should similar outbreaks occur again. This must consistently involve government departments, infection control experts, media, employers, schools and communities at stake. In order that stigma can be minimized without jeopardizing public health measures, transparency in the release of health information, balanced media coverage, accurate risk communication, legislative intervention, provision of psychosocial support and accessible referral paths to those at risk of mental health problems are essential. We understand that in the case of a novel illness such as SARS it is easy to step over public health protection and trigger stigmatization. The latter may well be unintended. Nonetheless, we maintain that constant vigilance of such a thin line of demarcation will humanize programs and policy and foster their effectiveness.

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