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Public Cleanliness Satisfaction Survey [2019]

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Public Cleanliness Satisfaction Survey [2019]: Executive Summary

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Public Cleanliness Satisfaction Survey Executive Summary

The Singapore Management University undertook the third wave of the Public Cleanliness Satisfaction Survey (PCSS) with 1716 Singapore resident respondents providing responses before the start of the Circuit Breaker.

The 2019 wave of the PCSS continued to reflect the overall satisfaction with public cleanliness in Singapore. Satisfaction with cleanliness and cleaning services has improved substantially across all domains.

Ninety three percent of survey respondents were satisfied with the cleanliness of public spaces that they had recently visited, a 9% increase from the findings in 2018.

There was a substantial increase in satisfaction with the cleanliness of food and beverage (F&B) outlets with a 25% increase in respondents' satisfaction with hawker centres compared to a year ago (62% in 2018 vs 87% in 2019). Some of the increase might be attributed to the heightened cleaning efforts as a result of the Covid-19 pandemic. Despite the overall satisfaction, 23% of respondents noted that the thoroughness of the cleaning in hawker centres and coffee shops was still insufficient.

The study also examined public opinion about personal responsibility for public cleanliness. Questions were asked regarding tray returns at F&B outlets, confronting individuals who litter and the maintenance of cleanliness in neighbourhoods.

On the returning of trays in F&B establishments, 36% of respondents reported that they were unsure whether trays should be returned. About the same proportion expected cleaners to return the trays instead.

Over 90% of respondents were likely to confront family or friends who littered. However, only 22% would confront a stranger on this matter.

Just under half of respondents would dispose of an empty plastic bottle lying on the floor into a close by bin. Even fewer would pick up the bottle to dispose it if there was no nearby bin.

Majority of survey respondents also expected residents in the neighbourhood to be responsible for the cleanliness of their environment. They believed that residents should help move excess trash to the central bin centre rather than wait for the cleaners to clear it the next morning (81%). Respondents were of the unanimous view that residents who see overflowing trash bins should contact the town council so that cleaners can clear the bins promptly.

The results of the survey indicated that there was substantial reliance on cleaning services to ensure the cleanliness of surroundings. In fact, 87% of respondents acknowledged that Singapore is clean only because of the efficiency of its cleaning services. Nonetheless, 99% of respondents also agreed that residents should be encouraged to be involved in the upkeep of their environment. This may be an uphill task given that less than half (46%) of survey respondents indicated that they would volunteer in a neighbourhood group that championed cleanliness matters.

Most respondents (96%) agreed that residents must work together with cleaners to keep the neighbourhood clean.

In addition to understanding views about public cleanliness, the 2019 wave of the survey also asked about public *hygiene*. More than 95% of respondents were agreeable to legislation and the enforcement of public hygiene in shared spaces such as childcare centres, eldercare facilities, schools, food establishments and shopping centres. Respondents also expected that building operators be made responsible for the public hygiene of their buildings.

Given the results of this wave of the survey, we suggest some interventions be adopted by the general public, at the neighbourhood level and by building operators.

FINDINGS FROM THE PUBLIC CLEANLINESS SATISFACTION SURVEY (2019)

Introduction

The Singapore Management University (SMU) undertook the third wave of the Public Cleanliness Satisfaction Survey¹. The study was led by Professor Paulin Tay Straughan, Professor of Sociology (Practice) at SMU and Dr Mathew Mathews, Senior Research Fellow at the Institute of Policy Studies, National University of Singapore. The survey was conducted from December 2019 to April 2020 and sought the views of over 2000 Singapore Citizens and Permanent Residents² aged 21 years and above. Due to the difficulty of completing fieldwork during DORSCON Orange, the data from 1716 respondents collected before the start of the Circuit Breaker is included in this report. The first wave of this study was conducted between October 2016 to March 2017 and the second wave from August 2018 to December 2018.

The 2019 wave of the PCSS continued to reflect the overall satisfaction with public cleanliness in Singapore. It showed that satisfaction with cleanliness and cleaning services has improved substantially across all domains. The 2019 wave focused on understanding the extent to which the public believed that personal responsibility in public cleanliness is important. The survey also included an examination of public hygiene, a very important topic in a post-Covid19 society.

Satisfaction with the Cleanliness of Public Spaces

We found that there was a high level of satisfaction with the cleanliness of public spaces in Singapore. Based on our Public Cleanliness Satisfaction Index (“Index”), 93% of the

¹ This study was made possible through funds from the Ministry of Sustainability and the Environment.

² We refer to Singapore citizens and permanent residents in this report as Singaporeans.

respondents were satisfied³ with the cleanliness of public spaces that they had recently visited, a 9% increase from what was found in 2018⁴ (see [Table 1](#) for details). While the greatest satisfaction continued to be in the domains of transport and leisure spaces, in this wave there was a dramatic rise in satisfaction for spaces which in the last two waves were areas with substantially lower levels of satisfaction.

There was an overall 17% increase in satisfaction for food outlets with a 25% rise in satisfaction for the cleanliness of hawker centres and 21% rise in the satisfaction for coffee shops.

Of the 18 venues where respondents were satisfied, wet markets had the lowest proportion. However, even then, 85% were satisfied with the cleanliness of wet markets up from 73% in 2018 and 65% in 2017.

Overall, respondents were more satisfied with all public spaces in 2019 compared to previous years.

The results of the survey show that efforts made by all stakeholders, be it the Government, the private sector or the community and individuals, to keep public spaces clean and liveable for everyone, were successful. Details of the results can be found in [Annex A](#).

Table 1: Public Cleanliness Satisfaction Index

Domains / Spaces	Proportion Satisfied %	Overall Satisfaction % [Public Cleanliness Satisfaction Index]
Transport (roads, bus stops, bus interchanges, MRT/LRT stations)	<p>Significant increase</p> <ul style="list-style-type: none"> • 2019: 98.4% ↑ • 2018: 94.9% • 2017: 93.4% <p>Significant improvement from bus stops (+6% to 97.5%)</p>	<p>2019: 93% 2018: 84% 2017: 82%</p>
Leisure (parks/park connectors, shopping malls in housing estates, playgrounds)	<p>Significant increase</p> <ul style="list-style-type: none"> • 2019: 97.1% ↑ • 2018: 89.4% • 2017: 88.9% <p>Playgrounds improved by 12% to 95.3%; parks/park connectors by 9% to 96.8%</p>	

³ This includes respondents who indicated that they are “satisfied” or “very satisfied”.

⁴ We use only responses of those who had visited a place recently (i.e. not more than two weeks before responding to the survey). This is to counter recall biases and ensure that responses accurately reflected the opinions of only those who had used particular spaces. Those who had visited a place a long time ago may not be able to accurately rate the level of cleanliness in that space. This was our practice in the 2018 version of PCSS.

<p>Food Outlets (coffeeshops, air-conditioned food courts, hawker centres, wet markets)</p>	<p>Greatest increase</p> <ul style="list-style-type: none"> • 2019: 88.5% ↑ • 2018: 71.4% • 2017: 68.9% <p>Hawker centres and coffeeshops saw a 25% and 21% improvement respectively; Wet markets continued to improve, 84.8% (in 2019) from 73.2% (in 2018) and 64.6% (in 2017).</p>	
<p>Neighbourhood (HDB town centres, void decks, corridors, lifts and lift lobbies)</p>	<p>Significant increase</p> <ul style="list-style-type: none"> • 2019: 89.5% ↑ • 2018: 79.3% • 2017: 78.8% <p>Void decks, corridors and lift lobbies improved by 12% to 86.1%; Lifts by 11% to 90.1%.</p>	
<p>Commuter Paths (pavements, walkways, overhead bridges, foot bridges, underpasses, roadside drains, grass patches next to pavements)</p>	<p>Significant increase</p> <ul style="list-style-type: none"> • 2019: 92.8% ↑ • 2018: 84.8% • 2017: 82.6% <p>Roadside drains improved by 11% to 88.9%; grass patches by 9% to 91.2%.</p>	
<p>After Public Events (public spaces after events such as National Day Parade (NDP), concerts, marathons etc)</p>	<p>Significant increase</p> <ul style="list-style-type: none"> • 2019: 87.9% ↑ • 2018: 74.3% • 2017: 62.6% 	

Respondents were asked to rate their satisfaction with the cleanliness of 20 public spaces they frequented in their everyday lives, on a scale of “1” (not satisfied at all) to “4” (very satisfied). To construct the Index, we used a weighted average⁵ of our respondents’ responses regarding the satisfaction with cleanliness in the 20 public spaces.

Transport

Respondents were most satisfied with the level of cleanliness at transport spaces such as roads, bus stops, bus interchanges and MRT/LRT stations. An average of 98% of respondents reported that they were satisfied or very satisfied with the levels of cleanliness in transport spaces, up from 95% in 2018 and 93% in 2017. In particular, there were significantly more

⁵ A weighted average takes into account that some indicators may not have the same weight. In the case of the PCSS, a substantial portion of respondents have no experience of some public spaces. We did not include a respondent’s opinion about a public space if s(he) stated that s(he) had never been to that space.

respondents (98% compared to 92% in 2018 and 88% in 2017) who were satisfied or very satisfied with cleanliness at bus stops.

Commuter Paths

More respondents in the 2019 wave were satisfied with the cleanliness of commuter paths such as pavements/walkways, overhead bridges/foot bridges, underpasses, roadside drains and grass patches next to pavements. For example, 89% were satisfied or very satisfied with the cleanliness of roadside drains in 2019, a significant 11 percent point increase from 78% in 2018. Underpasses saw a 6% increase in satisfaction levels, from 88% to 94%.

Neighbourhoods

Satisfaction with cleanliness of neighbourhood spaces such as HDB Town Centres, void decks/corridors/lift lobbies and lifts to their homes reached 90% from 79% in 2018. More respondents were satisfied with cleanliness in lifts (90%) than in 2018 (79%).

Public Events and Leisure

Significantly more respondents (13% increase) reported satisfaction with the level of cleanliness after public events (e.g. National Day Parade, Concerts, Sporting events etc.). Eighty eight percent reported their satisfaction with cleanliness after public events compared to 74% in 2018 and 63% in 2017.

Levels of satisfaction with the cleanliness of leisure spaces such as parks, playgrounds and shopping malls in housing estates remained high - an average of 97% of the respondents reported that they were satisfied or very satisfied with the cleanliness of such spaces. Similar to trends in previous waves, there were more respondents who reported that they were satisfied with the cleanliness of shopping malls in housing estates (99%) compared to cleanliness at playgrounds (95%).

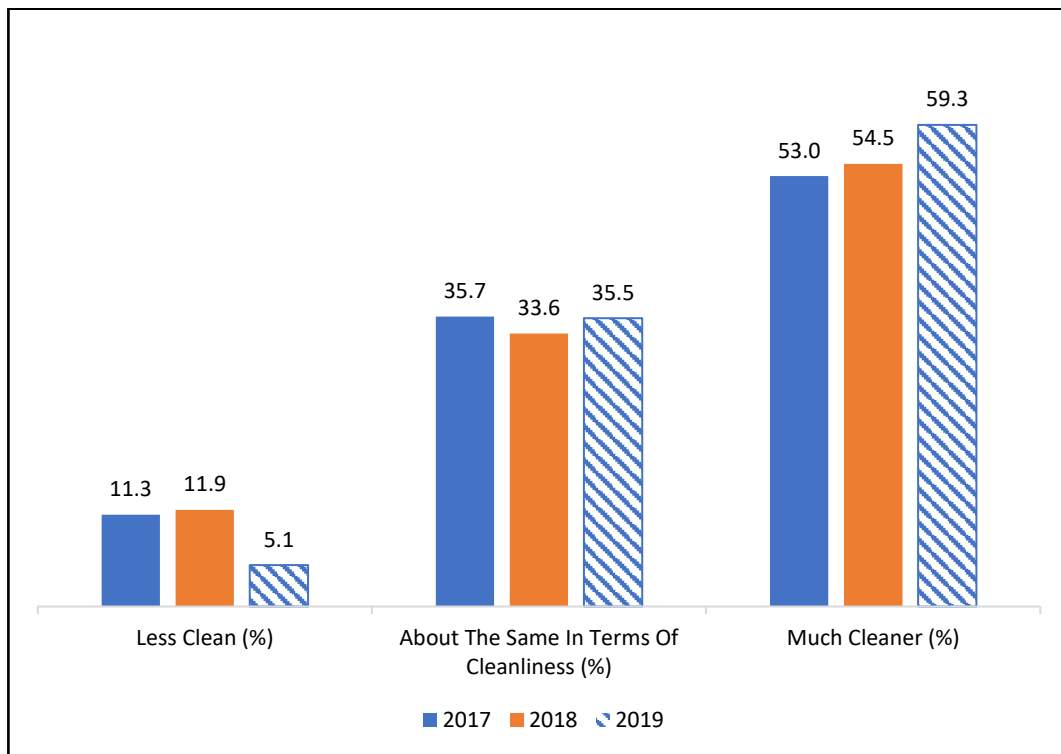
Food Outlets

Regarding the levels of satisfaction with the cleanliness of food outlets including coffee shops, hawker centres, food courts (air-conditioned) and wet markets, an average of about 89% reported that they were satisfied or very satisfied with levels of cleanliness in this domain, a 17% increase from that of 2018.

Perceptions of cleanliness now as compared to 5 years ago

When respondents were asked to compare the cleanliness levels now compared to 5 years ago, more respondents as compared to 2017 felt that Singapore was much cleaner (59% vs 55%). The proportion of those who felt that Singapore was less clean as compared to before saw a substantial reduction from 12% in 2018 to 5% in 2019 (refer to [Figure 1](#)).

Figure 1: Perceptions of cleanliness now as compared to 5 years ago



Public's Satisfaction Regarding Public Cleaning Services

In the 2019 wave we asked respondents for their feedback on the efficiency of public cleaning efforts across various public spaces such as common areas in their neighbourhood, hawker centres and coffee shops, and along public pavements/walkways (see [Figure 2](#) for details).

For each of these public spaces, respondents were allowed to indicate on the thoroughness and frequency of cleaning as well as the sufficiency of trash bins. Respondents were asked whether cleaning efforts were insufficient, adequate or excessive for each of these areas. Most reported that the thoroughness of cleaning at different spaces was adequate with the highest proportions reporting this for bus stops (93%) and the lowest for coffee shops (76%). Interestingly 12% actually found the thoroughness of cleaning at MRTs and LRTs as excessive.

On average 11% reported that the number of trash bins was insufficient, especially at wet markets where 18% reported so. Only 5% reported that there were insufficient trash bins at bus stops.

The great majority found the frequency of cleaning in most places as adequate. Just 10% said it was insufficient, especially in the case of hawker centres and coffee shops where 17% reported this.

Figure 2: Thoroughness of cleaning at different spaces

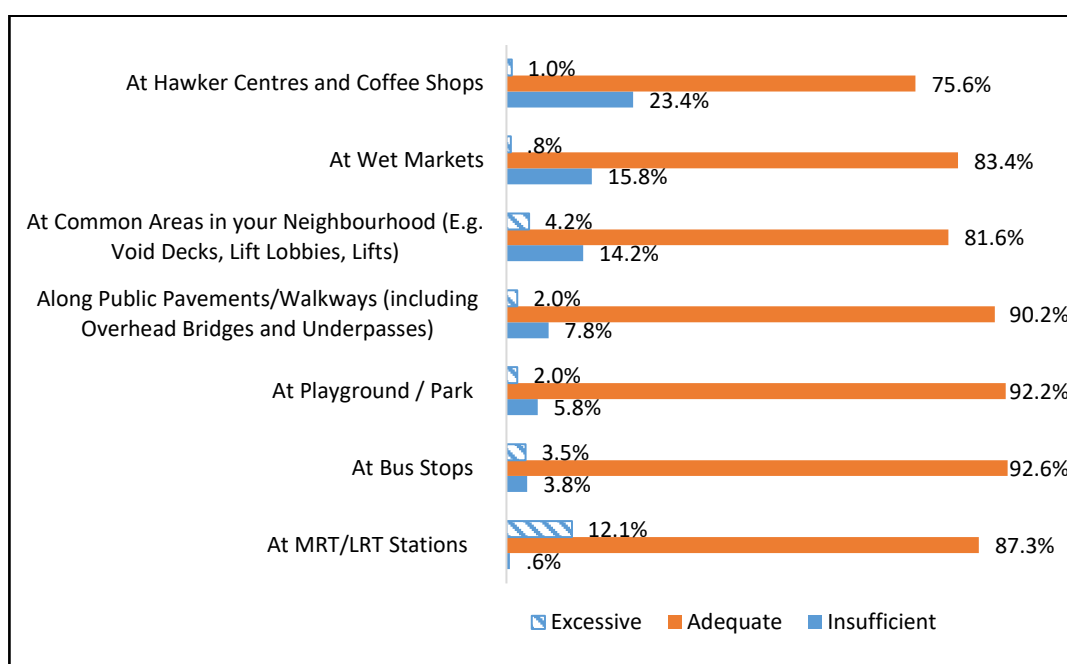


Table 2: Adequacy of cleaning services across public spaces

Domain	Average Proportion indicated Insufficient	Component deemed most insufficient	Component deemed least insufficient
Thoroughness of cleaning	10.2%	At Hawker Centres and Coffee Shops (23.4)	At MRT/LRT Stations (0.6)
Number of trash bins	10.6%	At wet markets (18.0)	At Bus Stops (5.0)
The frequency of cleaning	10.2%	At Hawker Centres and Coffee Shops (16.5)	At MRT/LRT Stations (1.1)

Opinion on the State of Cleanliness in Singapore

Similar to the results in the 2018 wave of the PCSS, most respondents held the opinion that Singapore is a clean city with 99% of them stating so up from 94% (see [Table 3](#)). In 2019, 87% of respondents reported that Singapore was a clean city because of the efficiency of its cleaning services. Sentiments remained consistent between the waves in terms of those who agreed or strongly agreed with this statement. The majority (97%) of survey respondents also felt that

visitors who came to Singapore admire how clean the city is, with 75% reporting that visitors who come to Singapore have kept Singapore clean.

To better understand the contribution of cleaning services in keeping Singapore clean, a question on whether people regularly interacted with the cleaners in the neighbourhood was added. Sixty eight percent reported that they had done so. Seventy eight percent also agreed that they knew how to provide feedback on the quality of cleaning services.

Table 3: Proportion of respondents agreeing to statements on Singapore cleanliness identity⁶

	Strongly Disagree (%)	Disagree (%)	Agree (%)	Strongly Agree (%)	Agree/ Strongly Agree (%)
I take pride in keeping Singapore clean	0.1 0.5 (0.6)	0.7 2.3 (1.1)	73.2 52.6 (58.0)	26.0 44.6 (40.2)	99.2 97.2 (98.2)
Visitors who come to Singapore admire how clean the city is	0.2 0.9 (1.3)	2.5 2.8 (4.6)	59.1 55.2 (57.8)	38.2 41.1 (36.2)	97.3 96.3 (94.0)
Singapore is a clean city	0.2 0.9 (1.0)	1.3 4.7 (5.1)	60.7 54.7 (62.4)	37.8 39.7 (31.5)	98.5 94.4 (93.9)
Singaporeans take pride in keeping Singapore clean	0.5 1.3 (1.5)	4.3 10.0 (11.0)	65.6 55.1 (59.4)	29.6 33.6 (28.1)	95.2 88.7 (87.5)
Singapore is clean only because of the efficiency of its cleaning services	0.2 1.6 (1.5)	12.9 10.9 (13.3)	69.5 54.8 (54.5)	17.5 32.6 (30.7)	87.0 87.4 (85.2)
Visitors who come to Singapore have kept Singapore clean	1.4 4.7 (4.7)	23.3 27.1 (25.2)	65.3 49.0 (53.4)	10.1 19.2 (16.7)	75.4 68.2 (70.1)
I regularly interact (e.g. greet, talk) with the cleaners in my neighbourhood	1.3	31.1	59.0	8.5	67.5
I know how to provide feedback on the quality of cleaning services	1.3	20.3	68.3	10.0	78.3

Figures in parenthesis refer to proportions from the 2017 wave of PCSS. Figures in red ink refer to proportions from 2019 wave of PCSS

⁶ Figures in tables may not always add up to 100% because of rounding of numbers.

Observations of Undesirable Social Behaviour Related to Cleanliness

There was a marked reduction in the number of respondents who had noticed someone litter or spit on the ground most or all of the time. This has decreased to about 6% for both these items, down from 17% in 2018 (see [Table 4](#)). The proportion who reported sometimes noticing someone not picking up after his /her pets sometimes had gone down to 43% from 52% in 2018.

Table 4: Observations of undesirable social behaviours related to cleanliness

How often have you noticed people doing the following actions:	Never (%)	Sometimes (%)	Most Of The Time (%)	All The Time (%)
Someone littering	21.7 16.0 (9.5)	72.1 67.2 (62.9)	5.8 13.9 (22.4)	0.5 2.9 (5.2)
Someone spitting on the ground	30.3 24.0 (13.2)	64.7 58.5 (56.9)	4.3 14.2 (22.7)	0.7 3.3 (7.3)
Someone urinating and/or defecating in public	81.5 67.9 (60.8)	17.7 28.2 (32.7)	0.6 2.8 (4.0)	0.2 1.1 (2.5)
Someone not picking up his/her pets' poo	53.7 35.6 (28.8)	42.6 52.1 (56.8)	3.0 10.5 (10.9)	0.7 1.8 (3.5)

Figures in parenthesis refer to proportions from the 2017 wave of PCSS. Figures in red ink refer to proportions from 2019 wave of PCSS

Opinion on Personal Responsibility for Public Cleanliness

In this wave, we asked specific questions on personal responsibility for public cleanliness.

We wanted to ascertain if (a) the returning of trays after meals in hawker centres and food courts, (b) confronting those who litter, and (c) picking up litter were normative behaviours.

We also wanted to determine if respondents believed that cleanliness in their neighbourhood was something that they should take responsibility for and not merely leave to cleaning services.

Tray Returns

Nearly 88% reported that they always returned their trays after meals and about the same proportion (89%) reported that it was easy to do so (see [Table 5](#)). The great majority (80%) also disagreed that they would only return trays if this seemed to be necessary in the context (i.e. other people are returning it).

Nonetheless, for 36% of respondents there was insufficient clarity as to whether trays should be returned in eating establishments. About the same proportion also reported that it was the cleaners` responsibility to remove the trays from tables.

These results then indicate that while there is broad consensus on returning trays in food outlets, there might be contexts which make a third of respondents unclear as to whether they should be doing this.

Table 5: Responses to statements regarding the responsibility for public cleanliness

Statement	Strongly disagree (%)	Disagree (%)	Agree (%)	Strongly agree (%)
It is not always clear if we have to return our trays at hawker centres, canteen and food courts.	15.4	49.1	33.5	2.1
I always return my tray after my meal.	.9	11.7	71.9	15.6
It is easy to return my tray after my meal.	.5	10.5	69.7	19.3
It is the cleaners` responsibility to remove the trays from tables.	12.5	50.5	35.6	1.4
I will return my tray only if other people return their trays too.	13.9	65.8	19.0	1.3
It is the government`s responsibility to keep Singapore clean.	6.0	36.2	54.4	3.4
It is alright to leave rubbish on the ground if there is already litter there.	27.6	54.2	16.5	1.8

Confronting those who litter

On littering, respondents would generally feel upset if they saw someone throw a sweet wrapper on the floor. This unpleasant feeling increases if the person who litters is in a closer relationship with the respondent. For instance, 84% and 86% of respondents would feel upset if the person who threw the sweet wrapper on the floor was a friend or family member respectively, compared to 72% if the person who did this act was a stranger (see Table 6).

Over 90% of respondents were likely to confront family or friends who transgressed this social norm of not littering. However, only 22% would confront a stranger on this matter.

Table 6: Responses to public littering scenarios (Part 1)

Scenario	Feel upset (%)	Feel nothing (%)	Confront them (%)	Ignore them (%)
You are walking along the street and you see a stranger throw a sweet wrapper on the floor. You would usually...	72.2	27.8	22.0	78.0
You are walking with your friend along the street and your friend throws a sweet wrapper on the floor. You would usually...	83.5	16.5	90.3	9.7
You are walking with your family along the street and your family member throws a sweet wrapper on the floor. You would usually...	86.2	13.8	95.4	4.6

Picking up litter

On picking up litter in public, responses to scenarios of public sighting of littering were rather evenly split with 48% reporting that they would dispose of an empty plastic bottle lying on the floor into a close by bin (see Table 7). Only 27% of respondents would pick up the bottle to dispose it if there was no nearby bin.

Table 7: Responses to public littering scenarios (Part 2)

Scenario	Leave the litter on the floor (%)	Pick up the litter and throw it in the rubbish bin (%)
You are walking along the street and you see an empty plastic bottle lying on the floor. There is a rubbish bin nearby. You would usually...	52.4	47.6
You are walking along the street and you see an empty plastic bottle lying on the floor. There is no rubbish bin nearby. You would usually...	72.8	27.2

Personal Responsibility for Cleanliness in the Neighbourhood

We further examined personal responsibility for the cleanliness of the neighbourhood by presenting respondents with a scenario. Respondents were shown a picture of trash bins which were overflowing and given the following statement:

It is 6.30pm. You see overflowing trash bins in your neighbourhood as you return from work. It was clean in the morning when you left for work. There is a central bin centre 50 metres away.

Respondents were then asked about their views on a number of statements.

Most respondents believed that residents in this scenario should have been responsible for the upkeep of their surroundings, with 94% agreeing that residents should bring their litter to another disposal area rather than add to the full bins (see [Table 8](#)). The great majority also expected residents to help move the excess trash to the central bin centre rather than wait for the cleaners to clear it the next morning (81%). It was also unanimous that residents who saw overflowing trash bins should contact the town council so cleaners could clear the bins promptly.

But the results also seemed to indicate that there was substantial reliance on cleaning services to ensure the cleanliness of the surroundings. Nearly all respondents (94%) expected that the authorities should demand higher standards of cleaning contractors to make sure the trash bins were always cleared promptly. Most (86%) expected that cleaners should clear trash throughout the day so that bins would not overflow. A great majority (84%) agreed that the government should invest in technology such as real-time sensors to detect when bins were full, so that cleaners could clear the rubbish promptly.

While most disagreed, just over a third of respondents (35%) agreed that the cleaners in this situation were not efficient in their work. Many more respondents (77%) agreed that the situation reflected that a number of inconsiderate people lived in this neighbourhood.

Table 8: Responses to scenario with overflowing trash bins

Statement	Strongly Disagree (%)	Disagree (%)	Agree (%)	Strongly Agree (%)
Residents should help move the excess trash to the central bin centre rather than wait for the cleaners to clear it the next morning.	1.2	17.8	67.4	13.6
The cleaners should clear trash throughout the day so that bins do not overflow.	.6	13.8	72.1	13.6
A number of inconsiderate people live in this neighbourhood.	4.1	19.2	41.3	35.5
The cleaners are not efficient in their work.	12.3	52.8	32.6	2.3
Residents should bring their litter to another disposal area rather than add to the full bins.	.1	5.9	78.3	15.7
The authorities should demand higher standards of cleaning contractors to make sure the trash bins are always cleared promptly.	.3	5.3	64.1	30.2
Residents who see overflowing trash bins should contact the town council so cleaners can clear the bins promptly.	.2	3.2	84.4	12.3
More money should be spent on cleaning services.	1.5	27.3	57.2	13.9

The government should invest in technology such as real-time sensors to detect when bins are full, so that cleaners can clear the rubbish promptly.	1.6	14.2	55.6	28.6
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We probed further through a series of questions whether respondents believed that they could be personally involved in the maintenance of cleanliness in their neighbourhood. This scenario was presented as a follow up to the one provided above about the overflowing trash bins:

Following this incident, some residents decide to form a group to ensure the cleanliness of the neighbourhood. They regularly encourage residents to pick up the trash they see, explain to litterbugs why littering is bad for the environment, and work with the cleaning crew to ensure that the neighbourhood is kept clean.

There was near unanimous support (99%) that residents should be encouraged to help maintain the cleanliness of the neighbourhood (see [Table 9](#)). However less than half (46%) indicated that they would volunteer with such a group.

Nevertheless 96% agreed that residents must work together with cleaners to keep the neighbourhood clean.

About 30% of respondents did not think that it was the role of residents to take charge of ensuring the cleanliness of the estate; 32% felt that since residents already pay for cleaning services, they should not have to work to keep their neighbourhood clean.

Table 9: Responses to resident activism regarding public cleanliness

Statement	Strongly Disagree (%)	Disagree (%)	Agree (%)	Strongly Agree (%)
I would volunteer with such a group.	.8	52.8	44.4	1.9
Residents should not be doing this - it is the job of the cleaners to keep neighbourhoods clean.	17.3	54.1	28.2	.5
Residents should be encouraged to help maintain the cleanliness of the neighbourhood.	.1	1.0	81.9	16.9
Residents already pay for cleaning services and should not have to work to keep their neighbourhood clean.	16.9	51.0	29.1	3.0
Residents must work together with the cleaners to keep the neighbourhood clean.	.4	3.8	76.9	18.9

Public Hygiene

In addition to understanding views about public cleanliness, the 2019 wave of the survey also asked about public *hygiene*. Respondents were informed that while maintaining *public cleanliness* involves removing dirt/litter from public spaces, maintaining *public hygiene* is stricter; it also involves disinfecting public spaces to kill germs so as to minimize the spread of infectious diseases.

Respondents were asked to indicate their level of concern with the current level of public hygiene in five places; childcare centres, public schools, eldercare facilities, shopping centres, and food establishments.

Despite the fact that most respondents had indicated that spaces across Singapore were clean, about 80% were still concerned about the level of hygiene in most places with 83% indicating this for food establishments and eldercare facilities and 82% indicating this for childcare centres (see [Table 10](#)).

Perhaps due to this interest in public hygiene, more than 95% of respondents were agreeable to legislation and the enforcement of public hygiene in these places, with operators of these buildings made responsible for this (see [Table 11](#)). Ninety-seven percent of respondents agreed that there should be laws to require stricter hygiene standards for these shared spaces such as childcare centres, public schools, eldercare facilities, shopping centres, and food establishments. Ninety-nine percent of respondents agreed that building operators should be accountable for hygiene standards in their building and that the government should conduct regular hygiene checks of these shared spaces. There was near unanimous support (96%) for disclosure to the public on the frequency that buildings were disinfected.

Table 10: Concern about level of hygiene across public spaces

Domains / Spaces	Not concerned at all (%)	Slightly Concerned (%)	Concerned (%)	Very Concerned (%)
Childcare centres	12.5	5.9	54.7	26.9
Public schools (e.g. Primary and Secondary Schools)	13.3	5.6	59.6	21.5
Eldercare facilities (e.g. nursing homes, hospices)	11.9	5.4	57.3	25.4
Shopping centres	14.4	6.6	63.9	15.1
Food establishments	12.0	5.1	55.4	27.5

Table 11: Opinion regarding the governance of public hygiene

Statement	Strongly Disagree (%)	Disagree (%)	Agree (%)	Strongly Agree (%)
There should be laws to require stricter hygiene standards for public buildings.	.1	3.4	67.4	29.2
The Government should conduct regular hygiene checks of public buildings.	0.0	1.4	69.3	29.3
Operators of public buildings should be accountable for hygiene standards in their building.	0.0	.8	67.3	31.9
The public should be informed about how frequently public buildings are disinfected.	.5	3.9	72.5	23.1

Conclusion

The survey findings reveal that there is widespread satisfaction in public cleanliness in Singapore. While satisfaction levels in this wave were notably higher than in previous waves, this may be partly due to increased cleaning efforts associated with measures to tackle the Covid-19 pandemic. A portion of the fieldwork for this survey was conducted in the early months of the disease outbreak when the frequency of cleaning had already been increased.

The great majority of Singaporeans regard that Singapore is clean because of the efficiency of cleaning services. However the findings of the survey make it evident that most Singaporeans accept that public cleanliness should be a joint effort between themselves, the cleaning industry and the government.

On their part, most respondents indicated that they were mindful of pro-social public cleanliness behaviour though there were areas that perceptions still needed change if greater public cleanliness is envisioned. Many returned trays after their meals although there was a substantial portion who needed clarity as to whether they should perform this task or leave it to the cleaners to handle. Many respondents would confront their family and friends if they littered, though they were generally hesitant about confronting strangers who littered.

When presented with a scenario of overflowing trash bins, respondents were unanimous that residents should play their part to ensure a clean environment. For instance, the great majority of respondents agreed that residents should move excess trash to a central bin rather than piling up already overflowing trash bins. They viewed overflowing trash bins as an indication of inconsiderate behaviour and expected residents to work together with cleaning contractors to ensure clean environments. However, there was still substantial reliance on cleaning services to ensure the cleanliness of the surroundings, such as expecting higher standards of cleaning contractors or that cleaners should clear trash throughout the day to ensure bins would not overflow. In addition, respondents still expect the government to hold cleaning contractors and building operators accountable for keeping premises clean

With concerns of public hygiene especially in the wake of the Covid-19 pandemic, it is not a surprise that most of the respondents of the survey expected the government to enact legislation

to require stricter hygiene standards for shared spaces such as childcare centres, eldercare facilities, schools, food establishments and shopping centres. Respondents also expected the government to enforce standards through regular public hygiene checks.

There was also an interest in public accountability of building operators and an expectation of transparency regarding their measures to disinfect buildings.

Given the results of this wave of the survey, some interventions could be adopted by the general public, at the neighbourhood level and by building operators.

At the personal level, a key challenge is to enhance Singaporeans' ability to appropriately confront strangers when they litter. Perhaps public education material could include clear guides as to how to amicably explain to strangers that littering is not acceptable behaviour in Singapore. Another challenge is to encourage Singaporeans to be proactive in picking up someone else's litter. Appealing to the public's altruistic disposition to do this might offer some success, though this is much harder to realise especially now with our heightened concern about hygiene in the midst of a pandemic.

On the matter of tray return, we suggest that greater efforts be made to remove the ambiguity of the role of cleaners in clearing trays. Perhaps the tasks borne by cleaners in these establishments could be redefined to primarily focus on manning tray return stations and general cleanliness of the food outlet. Less active effort on the part of cleaners to clear trays could send a strong message that tray return is the duty of patrons.

Greater effort could also be made to facilitate neighbourhood responsibility in the upkeep of public cleanliness. This could entail forming and nurturing volunteer groups in neighbourhood precincts which champion expected public cleanliness behaviour. There should also be greater efforts in educating residents about methods to provide feedback on the quality of cleaning services and good practices that they could adopt to better the cleanliness of shared spaces.

Finally, we suggest that the government consider how building operators can be accountable and transparent about public hygiene matters. A mandated reporting framework that is publicly available should encourage greater interest among building operators to strive toward higher levels of public hygiene.

Methodology

This study received clearance from the Singapore Management University Institutional Review Board (IRB). The survey sample was obtained using a Department of Statistics (DOS) listings of households. The identified households were approached by interviewers from a market research company, Nexus Link Pte. Ltd. with a survey. The survey carried a Singapore Management University Participant Information Sheet, which assured prospective participants of the confidentiality and anonymity of their responses.

Those who agreed to participate in the study completed the survey on their own except for those who were illiterate in any official language. Upon completion, interviewers would pick up the completed surveys from the respondents. In total, there were 1716 completed responses. This provided an overall response rate of approximately 58%⁷ of eligible households. The survey sample is representative of the demographics of the Singapore resident population. Details are provided in Table 1A.

Table 1A: Profile of Respondents

Sample Characteristics	2017 (%)	2018 (%)	2019 (%)
Age			
21-34 years old	27	25	26
35-49 years old	30	29	29
50-64 years old	28	28	28
65 > years old	16	17	17
Gender			
Male	49	50	48
Female	52	50	52
Ethnicity/Race			
Chinese	76	76	76
Malay	12	13	12
Indian	9	9	9
Others	3	3	3
Educational Attainment			
Secondary and below	43	41	39
Diploma/'A'-Levels/post sec	33	32	26
Degree & Prof qualification	23	25	35
Housing Type			
3 room or smaller HDB	27	23	26
4 room or bigger HDB	66	59	57
Private	7	19	17

⁷ The response rate was slightly lower as fieldwork had to be abruptly paused during the Circuit Breaker, preventing the survey team from completing the necessary visits to obtain responses. When fieldwork was finally able to resume, the remaining visitations produced an overall response rate of 68%. We only report results prior to the Circuit Breaker to minimise any effect of this period.

Details of Public Cleanliness Satisfaction index

Table 2A: Public Cleanliness Satisfaction Index

Domains / Spaces		Proportion Satisfied % in 2018 (% in 2017)	Proportion Satisfied with Domain %	Overall Proportion Satisfied across all Spaces % [Public Cleanliness Satisfaction Index]
Transport	Roads	98 95 (95)	2019: 98 2018: 95 2017: 93	2019: 93 2018: 84 2017: 82
	Bus Stop	98 92 (88)		
	Bus Interchange	99 95 (94)		
	MRT/LRT Station	99 98 (97)		
Leisure	Parks/Park Connectors	97 88 (89)	2019: 97 2018: 89 2017: 89	
	Shopping Malls in Housing Estates	99 95 (93)		
	Playgrounds	95 83 (82)		
Food Outlets	Coffeeshops	86 65 (65)	2019: 89 2018: 71 2017: 69	
	Hawker Centres	87 62 (60)		
	Food Courts (Air-Conditioned)	95 87 (86)		
	Wet Markets	85 73 (65)		
Neighbourhood	HDB Town Centre	95 90 (89)	2019: 90 2018: 79 2017: 79	
	Void decks /Corridors /Lift lobbies	86 74 (73)		
	Lift to your home	90 79 (79)		
Commuter Paths	Pavements / Walkways	94 87 (87)	2019: 93 2018: 85 2017: 83	
	Overhead Bridges /Foot Bridges	97 91 (90)		
	Underpasses	94 88 (84)		
	Roadside Drains	89 78 (71)		
	Grass Patches next to Pavements	91 82 (81)		
Public Events	After Public Events (e.g. NDP, Concerts, Sporting events, etc.)	88 74 (63)	N.A.	

Figures in parenthesis refer to proportions from the 2017 wave of PCSS. Figures in red ink refer to proportions from 2019 wave of PCSS