

TOILET SURVEY STUDY 2011

EXECUTIVE SUMMARY

From 11-29 December 2011, a class of 21 graduating students from the Ngee Ann Polytechnic's School of Business and Accountancy conducted a comprehensive toilet survey (refer to annex for the results) of 500 Singaporeans and PRs ranging from age 18-65. The survey covered 5 core sections as follows:

- A) Toilet happiness
- B) Facilities, design and maintenance of toilets
- C) User experience
- D) Awareness, education and enforcement
- E) User and cleaner behaviour

Based on the survey findings consolidated by the students, the Restroom Association (Singapore) or RAS is proposing a holistic approach to enhance the standard of the restroom environment as follows:

1. Mandatory rating scheme for toilets
2. Continued government intervention and enforcement
3. Specialised training of restroom attendants
4. Higher toilet design guidelines
5. Effective public awareness and engagement

SUMMARY OF FINDINGS

Overall

1. Most of the respondents were either very unhappy or unhappy with the cleanliness of coffee shops and hawker centres followed by bus interchanges, parks and MRT stations. Most felt that the rating of toilets should be made compulsory.
2. About half were very unhappy or unhappy with users' efforts while most remained neutral about owners' efforts and government intervention. The respondents were happiest about the effort of cleaners.
3. About half felt that users are most responsible for keeping the toilets happy followed by owners and cleaners.
4. With regard to the need for improvement, respondents ranked toilet cleanliness first followed by its maintenance and design.
5. Respondents felt that the main cause of dirty toilets was irresponsible users.
6. Respondents felt that it was most important that users took responsibility for maintaining toilet cleanliness.
7. There is also a need for owners and cleaners to step up efforts in keeping toilets clean.

Facilities

1. Generally, toilets in Singapore possess basic facilities and average levels of cleanliness.
2. Monitoring of the odour problem and the sensor automatic flushing system is needed.
3. Sanitary bins, urinals and toilet bowls are the least clean facilities.
4. Male toilets are dirtier than female toilets.
5. Public parks, pools and food establishments have dirty walls and doors.
6. MRT stations, bus interchanges and food establishments have dirty toilet bowls and urinals.
7. Schools and food establishments have dirty washbasins.
8. Public parks, swimming pools and schools have dirty sanitary bins.
9. Food establishments have the worst ventilation.
10. Many locations have dirty floorings.

Design

1. About half of the respondents responded that the cubicle door space was tight.
2. Correct positioning and adequate provision of hand dryers are needed because few would use the hand dryer frequently and most who did not use the hand dryer would use it if it is within reach.
3. Design preference:
 - Slide latch/turn knob door lock
 - Sit type toilet bowl
 - Drum roll toilet paper dispenser
 - Individual wash basin
 - Automatic tap and soap dispenser
 - Automatic hand dryer (female) vs Jet (male)
 - Full length mirror
 - Urinal with modesty board

Awareness, education and enforcement

1. Though educational posters did remind users to keep the toilets clean, less than half noticed the presence of posters.
2. Though about half felt that users should be responsible in enforcing cleaner toilets, few would consider even gently reminding those who dirty the toilet.
3. Some felt that enforcement would propel everyone to react faster.

User Behaviour

1. Generally, respondents are neutral with regard to toilet cleanliness.
2. The top three user behaviours were splashing water on the floor, not flushing after use* and litter in urinals and toilet bowls*
3. Only a third of the respondents would not visit an establishment selling good food if its toilets were the dirtiest.
4. Few would inform owners or cleaners to clean up dirty toilets.
5. Few would consider even gently reminding others who dirty the toilet.

**Attributed more to ineffective/malfunctioned automatic flushing system than poor user behaviour*

RECOMMENDATIONS

1. Mandatory rating scheme for toilets

Locals were either very unhappy or unhappy with the cleanliness of coffee shops (Qn A2: 61.3%) and hawker centres (57.1%) followed by bus interchanges (43.5%), parks (40.3%) and MRT stations (32.4%). For a start, the government should consider a mandatory rating scheme for the coffee shops and hawker centres. Many (Qn D5: 82.8%) felt that a compulsory grading scheme for all public toilets is needed. The current Happy Toilet Programme (HTP) is a voluntary scheme.

2. Continued government intervention and enforcement

Though about half (Qn D4: 40.6%) felt that users should be responsible in enforcing cleaner toilets, few (Qn E6: 18.2%) would consider even gently reminding others who dirty the toilet. The government (Qn D4: *second highest* at 33.8%) should therefore continue its efforts to enforce cleaner toilets. Moreover, few (Qn E3: 15.2%) would inform errant owners or cleaners to clean up dirty toilets. Given that businesses at food establishments selling good food would not be much affected by their dirty toilets, errant owners will not see the need to clean up their toilets. (Qn E2: 34.8%).

3. Specialised training of restroom attendants

With regard to the need for improvement, respondents ranked toilet cleanliness (Qn A5: 84.6%) first followed by its maintenance (76.8%) and design (57.8%). Therefore, the cleanliness and maintenance of toilets have to be addressed. Take for instance, to resolve the odour problem (Qn C3: 47.61%) and functionality of the sensor automatic flushing system (Qn E7: *second highest*), owners should not only step up cleaning and inspection schedule but also hire cleaners who have undergone the toilet cleaning and inspection course. More attention should be focused on the regular cleaning of sanitary bins, urinals and toilet seats (Qn C2) as they are the least clean facilities.

4. Higher toilet design guidelines

Better designs will help provide a more pleasant experience for the users. Therefore, owners should look into the design preference (Qn B1- B9), cubicle door space (Qn C3: 43.6%) and positioning of the wash basins, soap dispensers, hand dryers (Qn B10: 23% vs B11: 70%) and litter bins. Provision of litter bins near urinals can resolve the problem of littering in urinals (Qn E7). More comprehensive guidelines on toilet designs and maintenance should be established for owners to adhere to. The guidelines in Japan can serve as a reference guide.

5. **Effective public awareness and engagement**

Apart from poster displays, other means of reaching out to the public are needed such as our existing education programmes for preschools, schools and the general public. If posters are to be displayed (*Qn D1: 48.6% vs D2: 76.1%*), they should be captivating and strategically displayed such as near the wash basins, urinals and cubicle areas. The public are generally not associating dirty toilets with food, safety and health (*Qn E2: 65.2%*). Therefore, the content should adopt the deterrent approach such as fatal consequences of unhygienic practices. Materials can be targeted and focussed on the following user behaviours (*Qn E7*):

- a. Splashing of water on the floor
- b. Not flushing after use*
- c. Litter in toilet bowls or urinals*
- d. Littering on toilet floors
- e. Not washing hands after use
- f. Footprints on toilet seats

**Educational messages conveyed to the public should be to ensure toilet bowls and urinals are flushed before leaving.*

Apart from awareness, means of engaging the public are also important. Since adopting the approach of users policing users (*Qn E6: 18.2%*) is not appropriate, engaging the public to take ownership should be promoted such as picking up litter in the toilet even if it is left behind by others.

CONCLUSION

RAS will work with its identified key players to enhance the standard of the restroom environment as follows:

Government

- Mandatory rating scheme for toilets
- Continued government enforcement and intervention
- Specialised training of restroom attendants
- Higher toilet design guidelines

Owners especially coffee shops and hawker centres

- Specialised training of restroom attendants
- Higher toilet design guidelines
- Effective public awareness and engagement

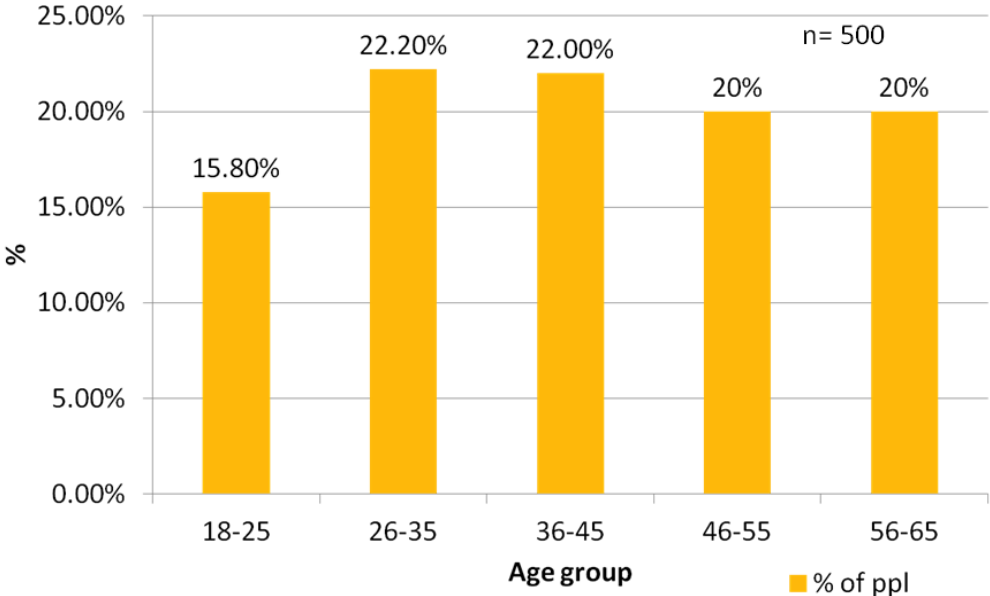
The Keep Singapore Beautiful Movement, Public Hygiene Council and Singapore Kindness Movement

- Effective public awareness and engagement

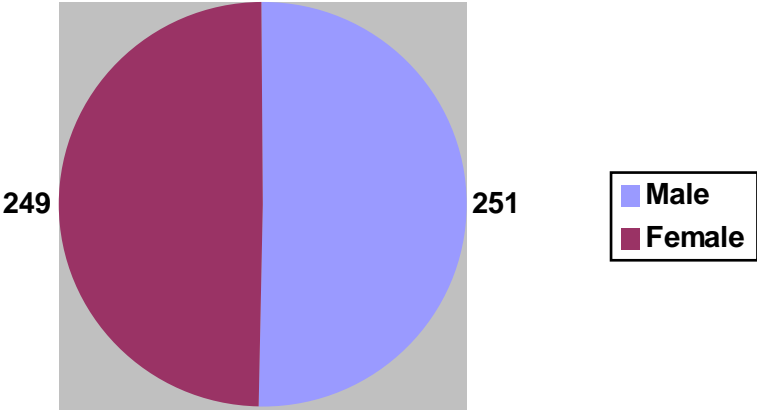
ANNEX

SURVEY RESULTS

AGE GROUP

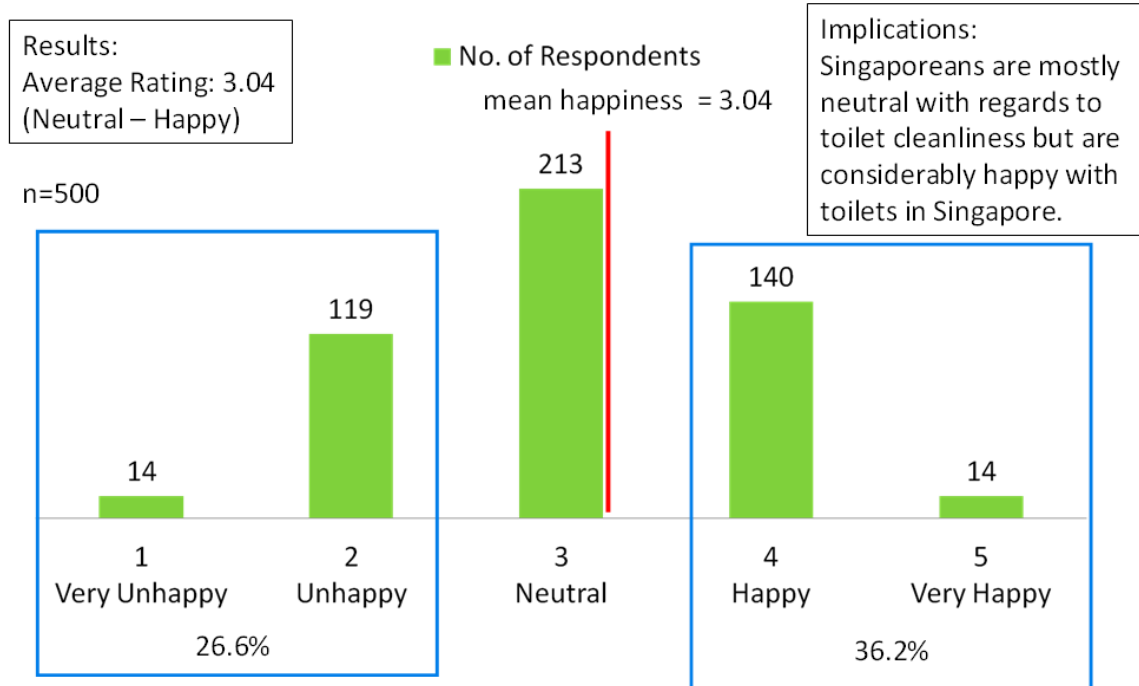


GENDER



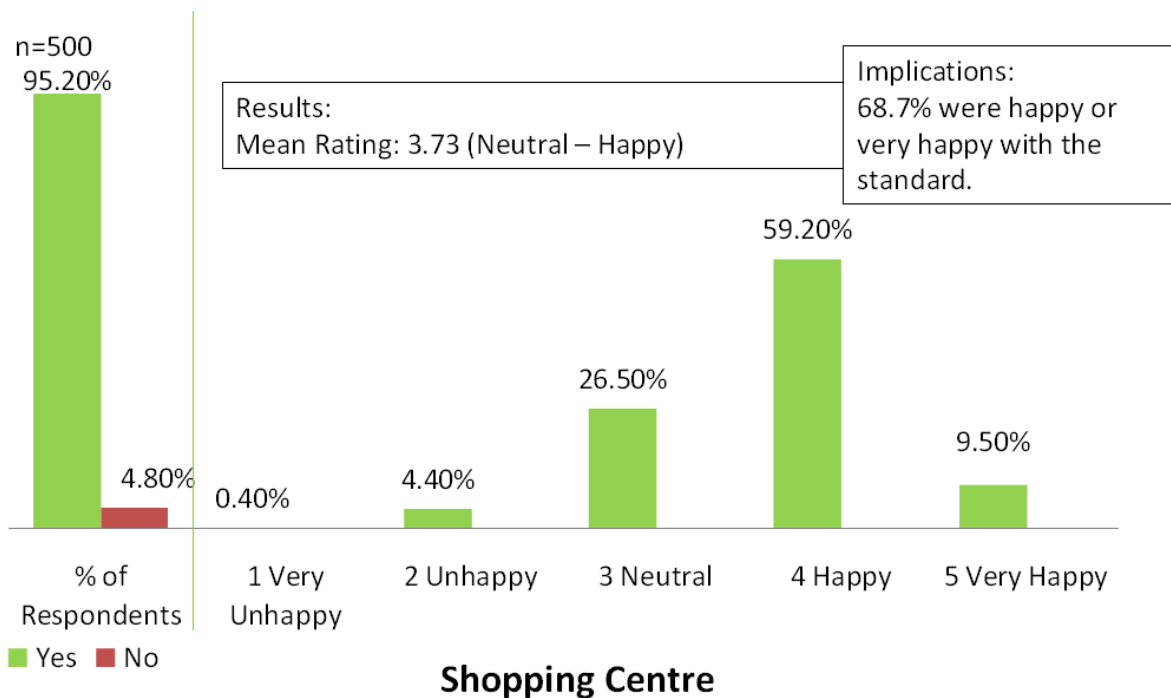
SECTION A: TOILET HAPPINESS

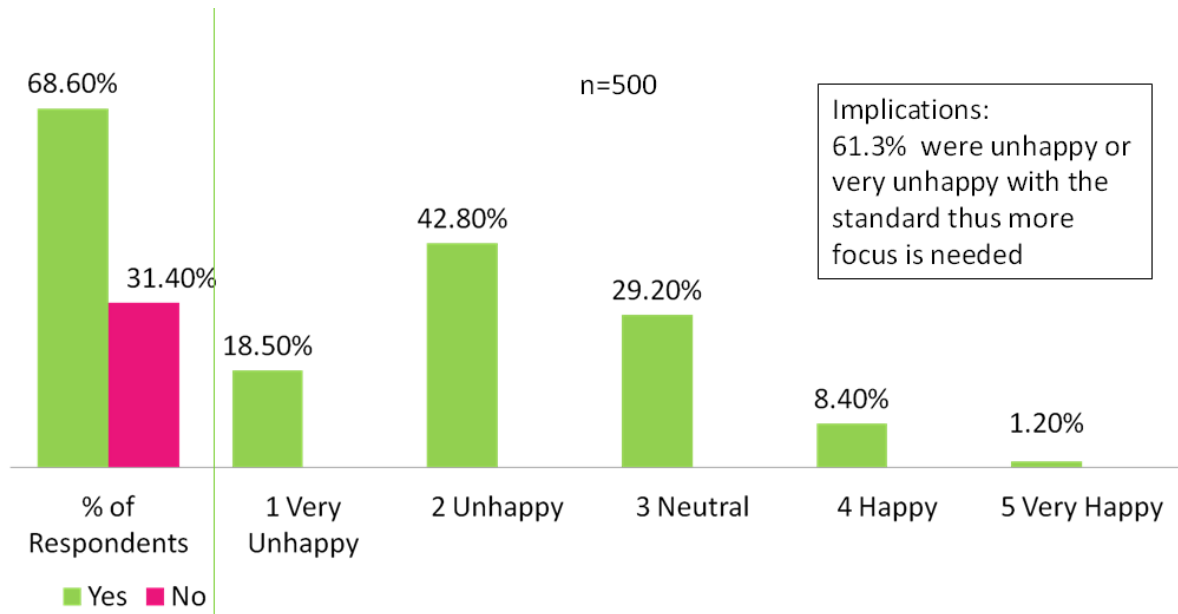
A1. How happy are you with the cleanliness of Singapore's public toilets



A2. In the last one month, which toilets have you visited?

Please rate how happy are you with cleanliness of the toilets you have selected.

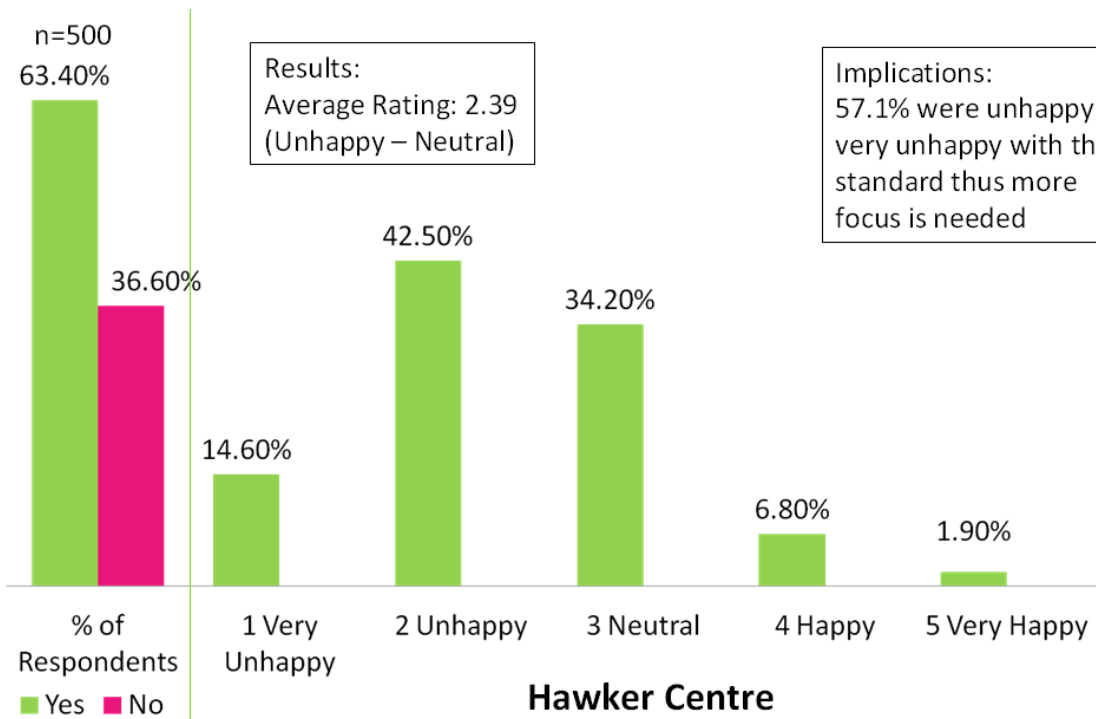




Implications:
 61.3% were unhappy or very unhappy with the standard thus more focus is needed

Results:
 Mean Rating: 2.31 (Unhappy – Neutral)

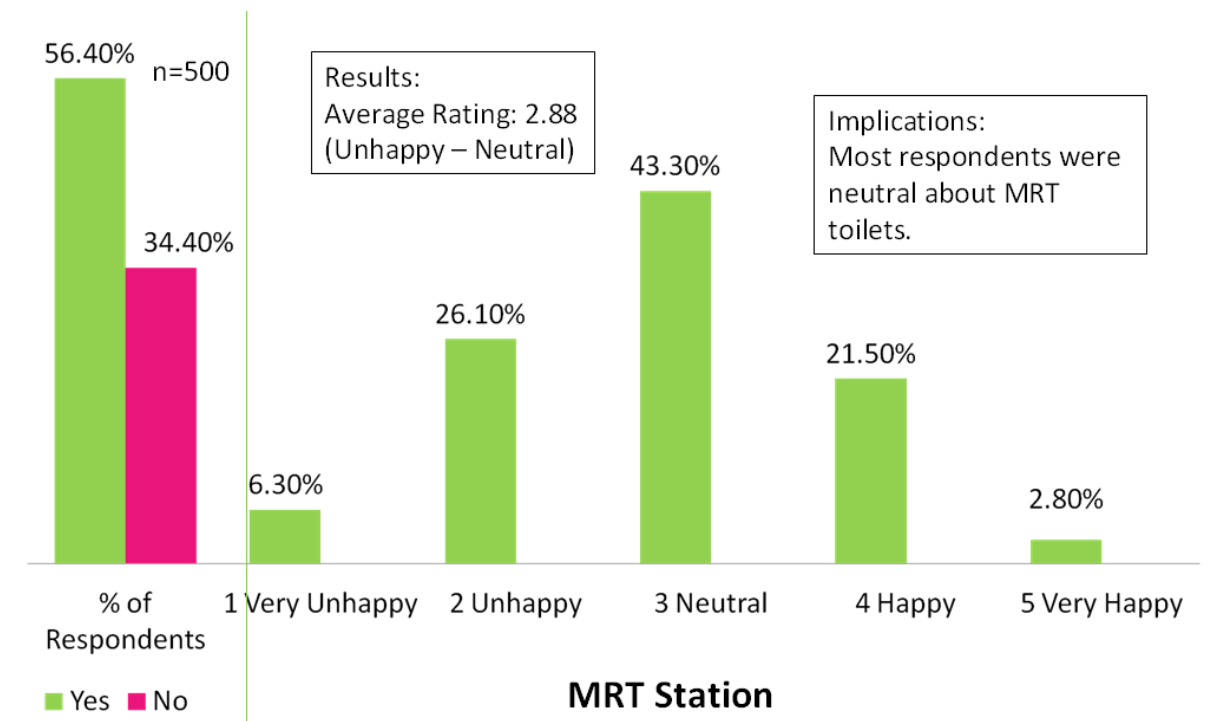
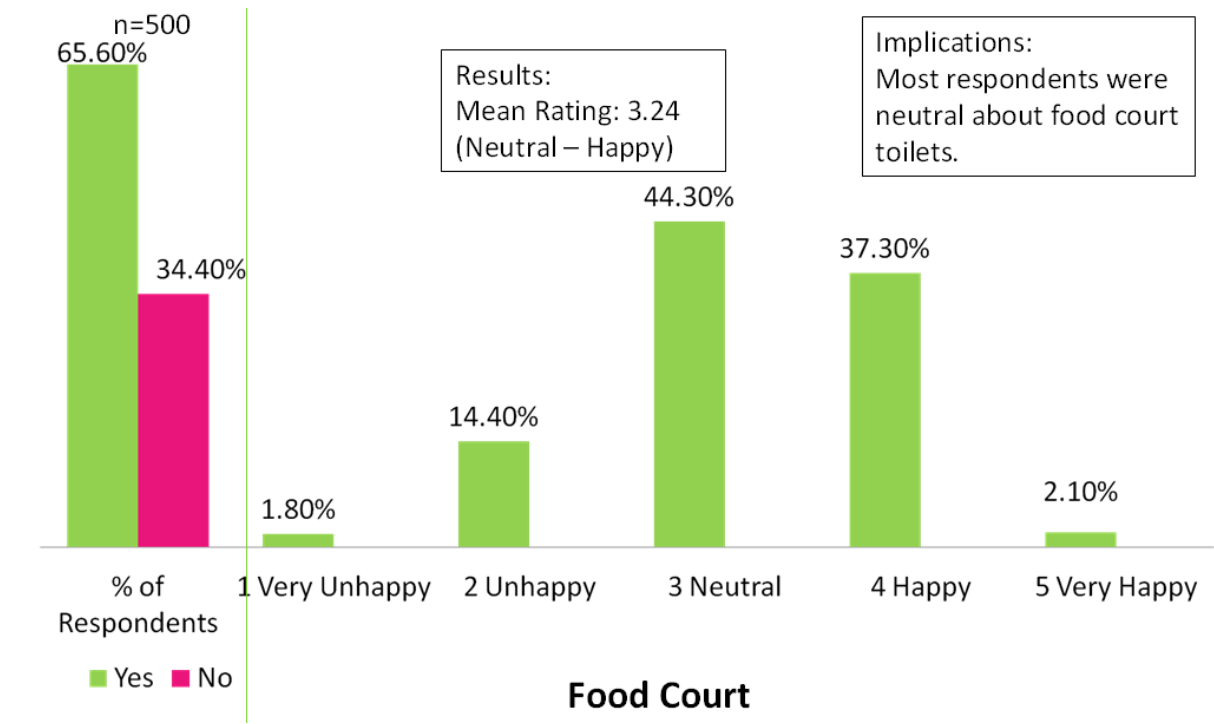
Coffee Shop

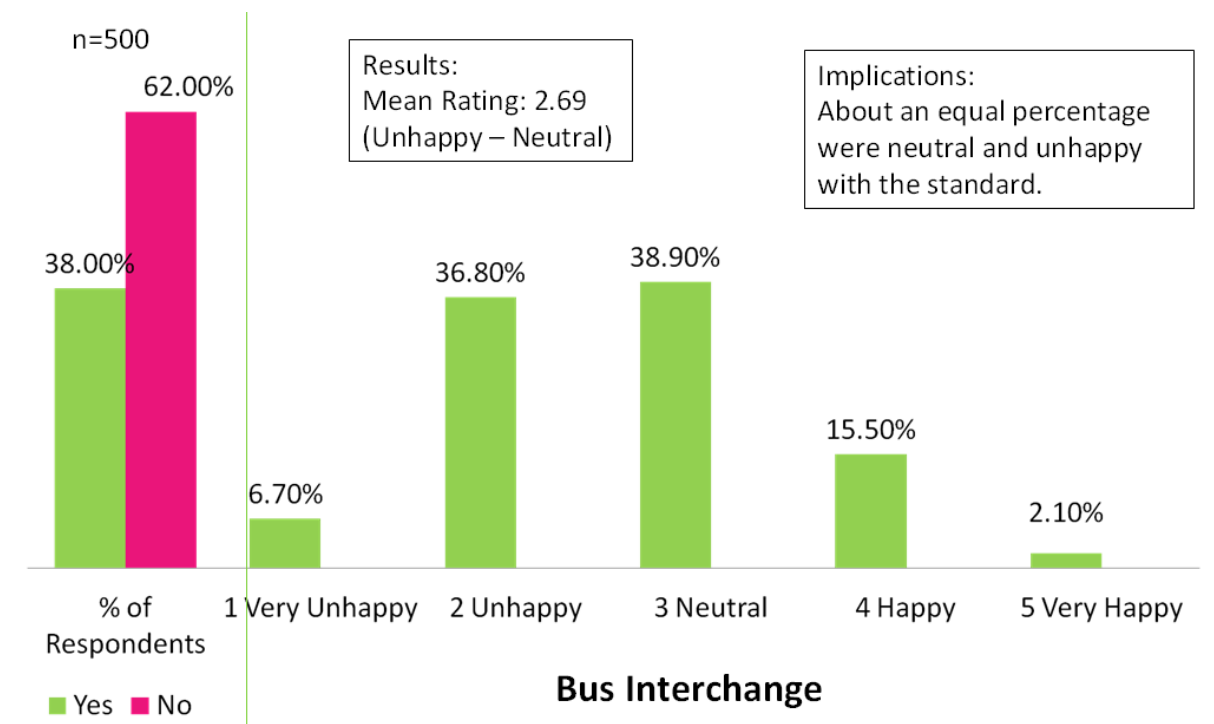
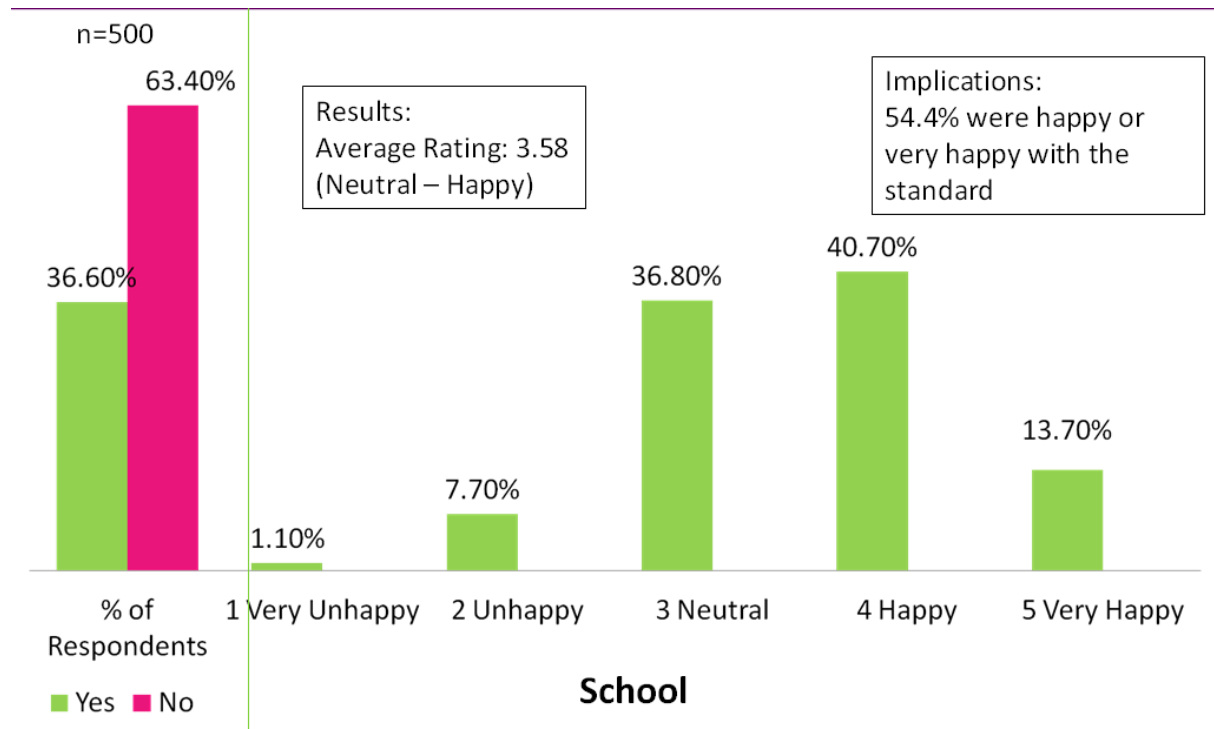


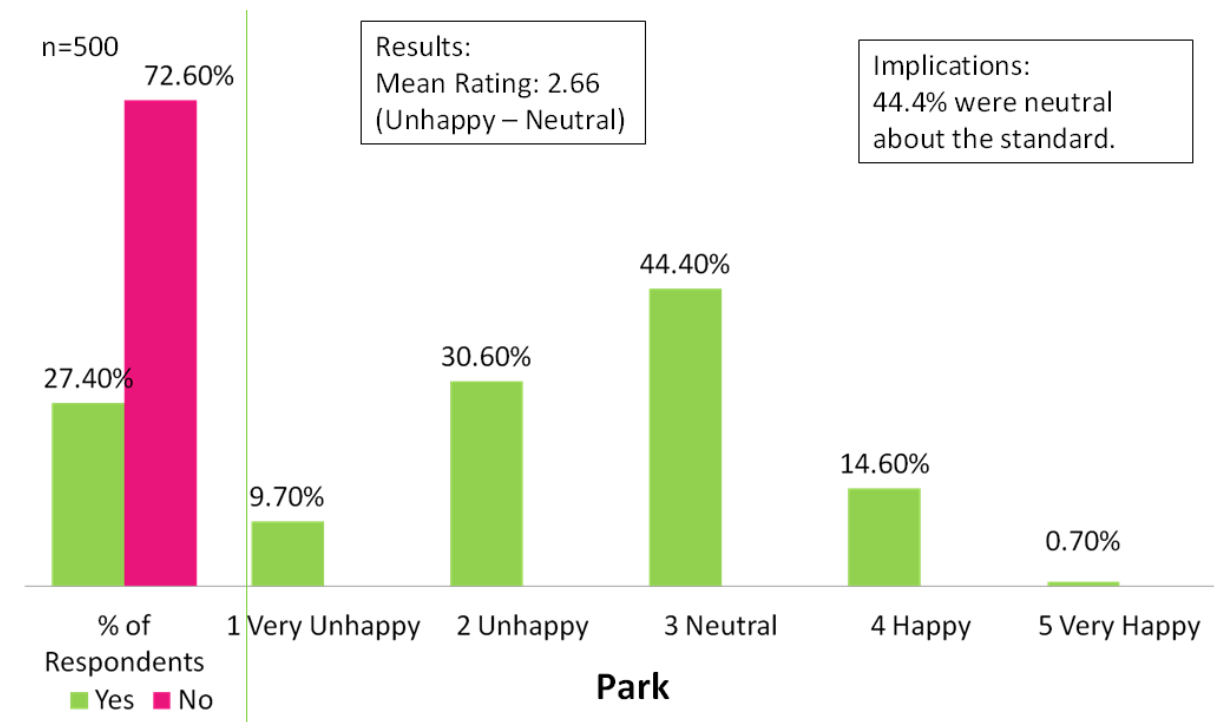
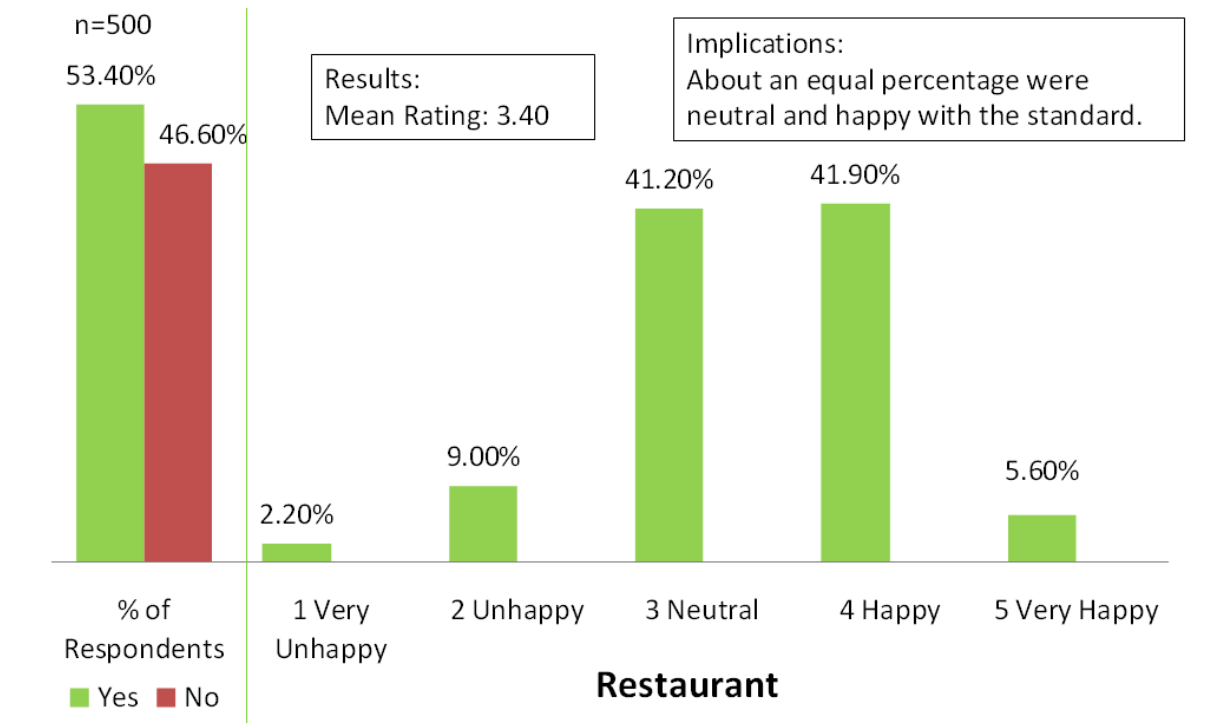
Results:
 Average Rating: 2.39 (Unhappy – Neutral)

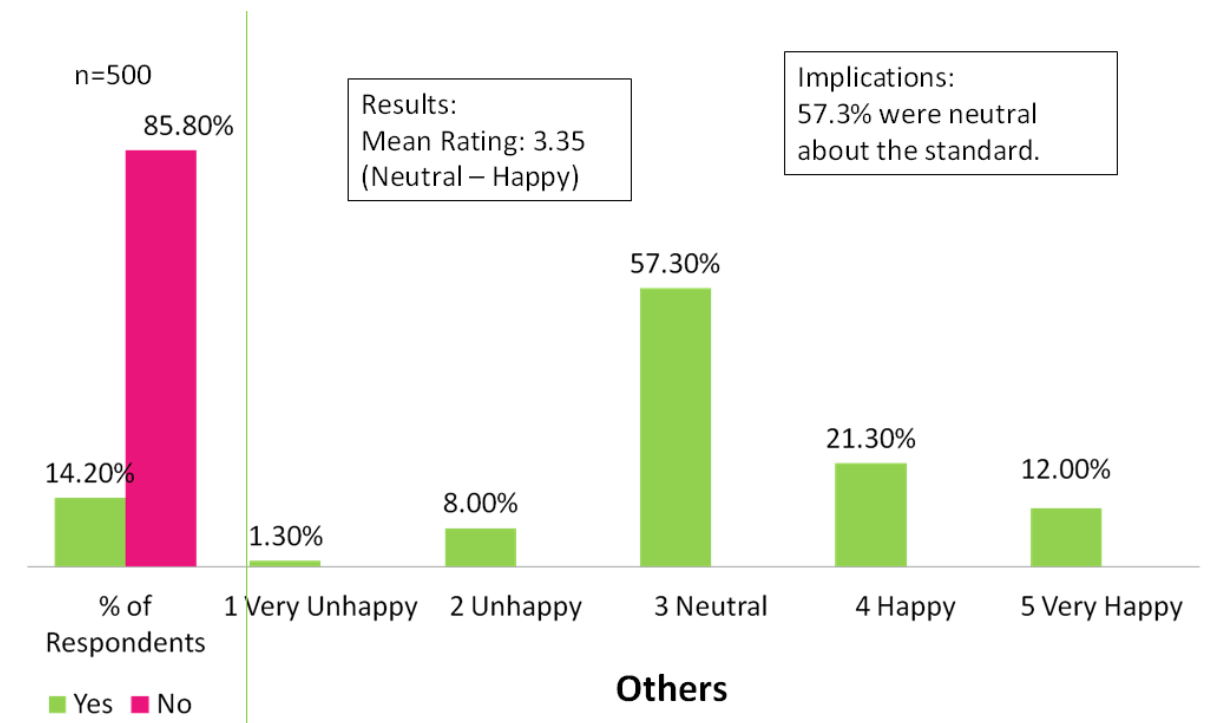
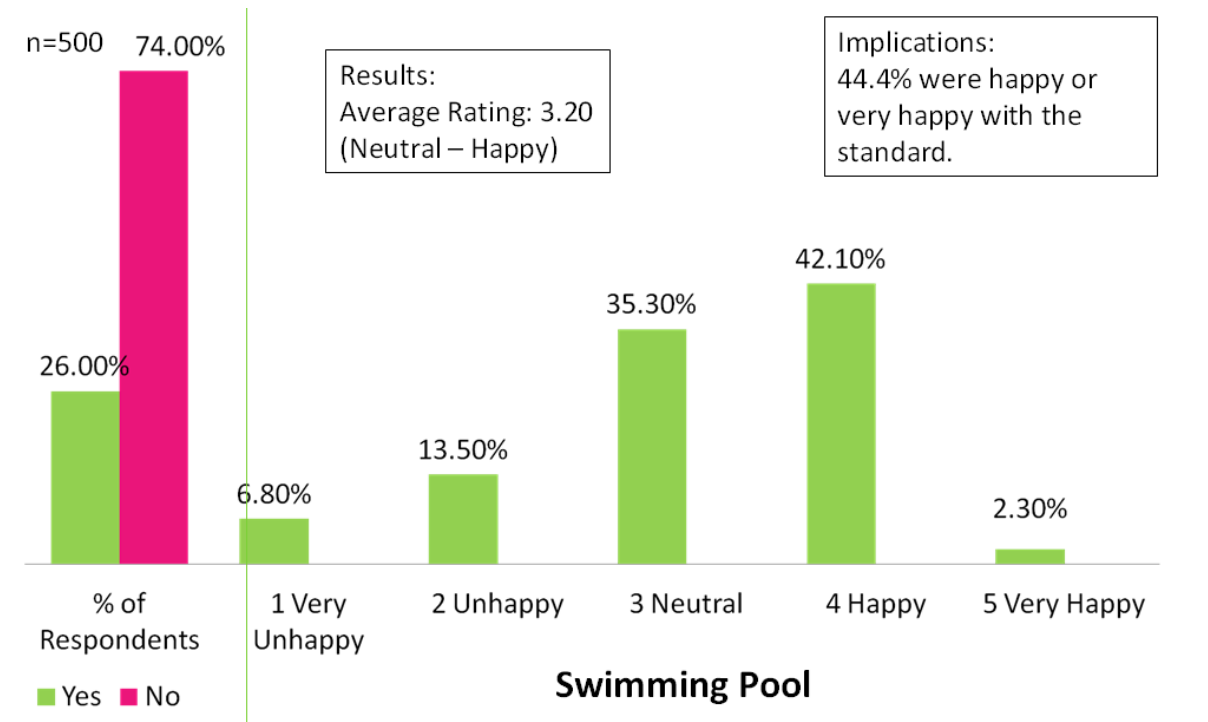
Implications:
 57.1% were unhappy or very unhappy with the standard thus more focus is needed

Hawker Centre

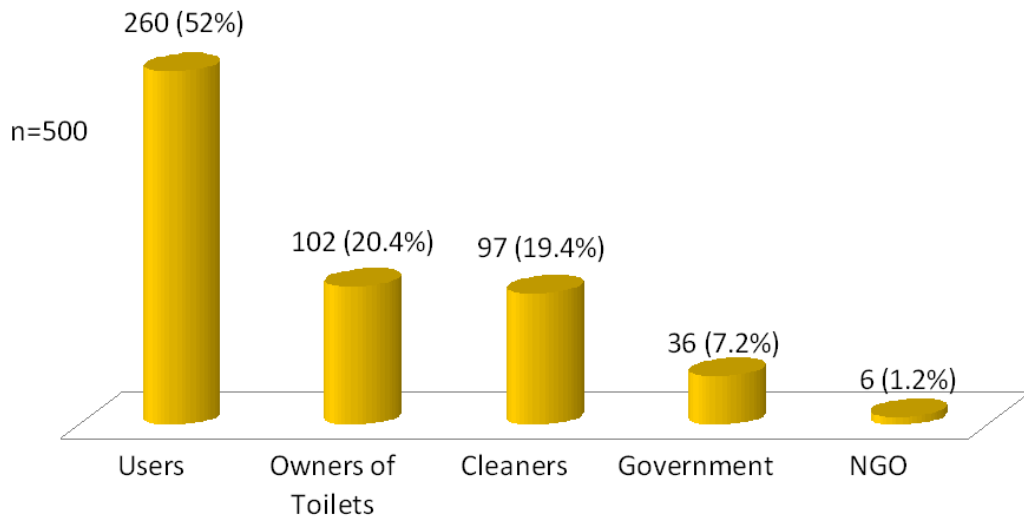




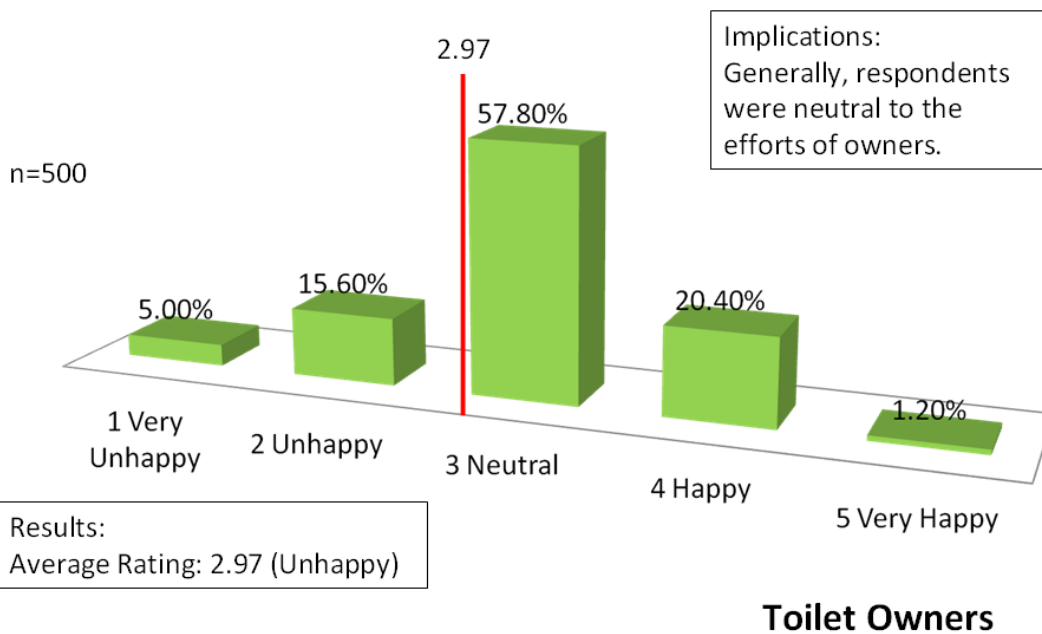


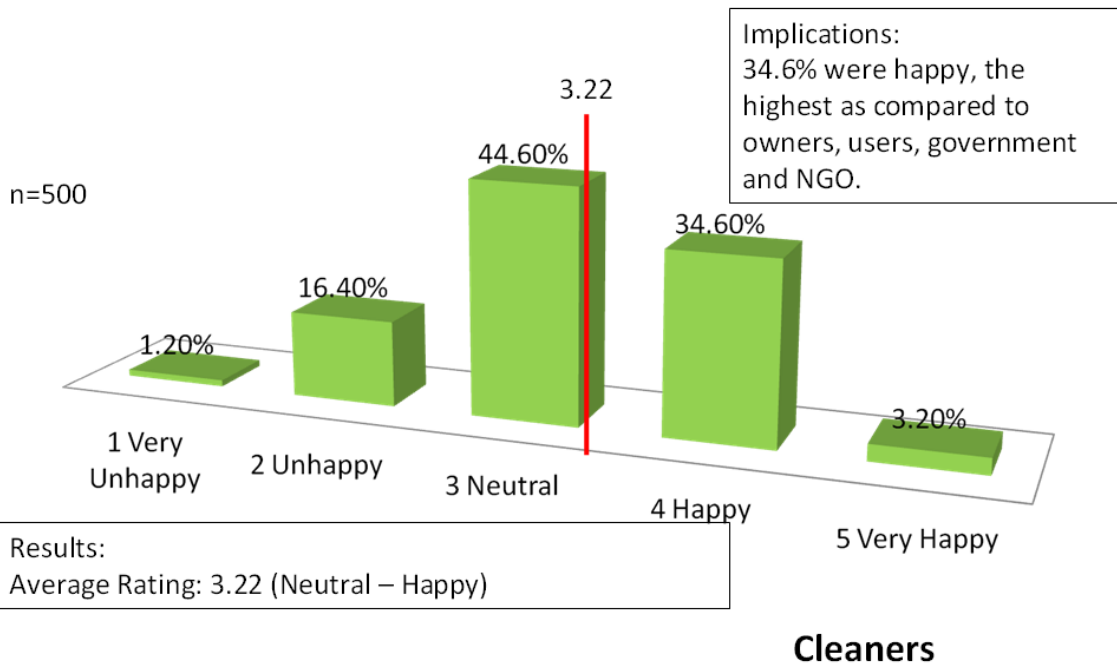
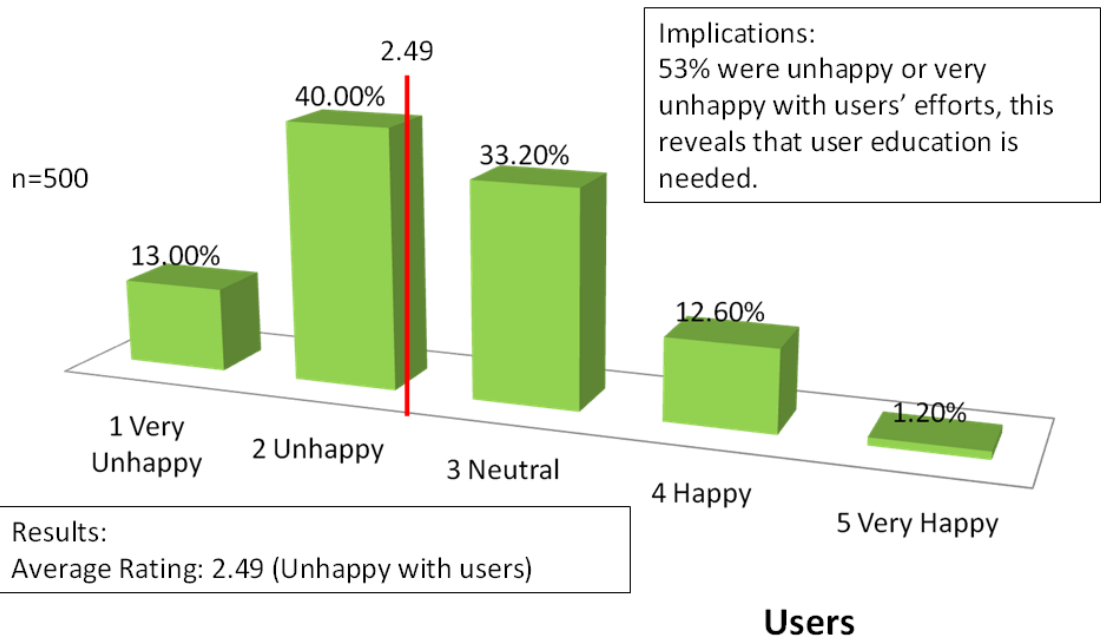


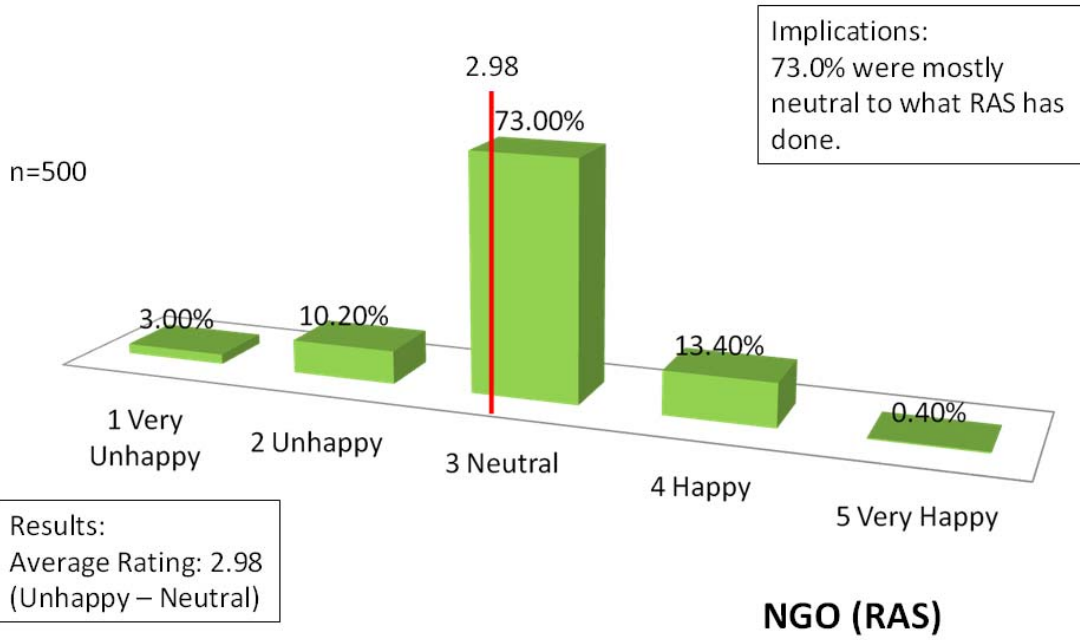
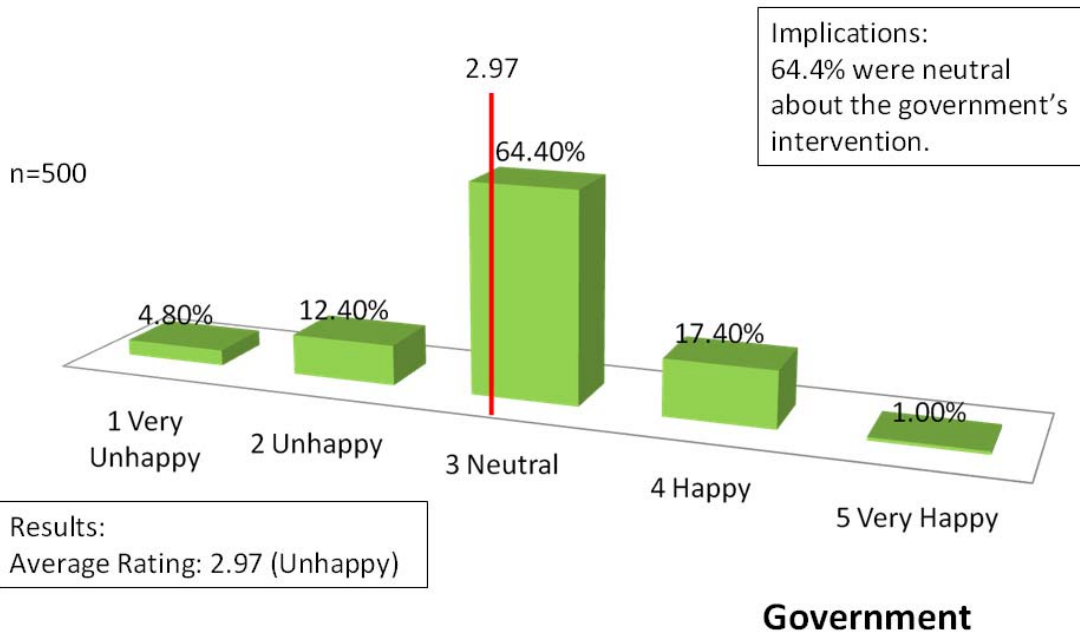
A3. Who do you think is responsible for keeping the toilets happy for you? Please rank in order of responsibility.



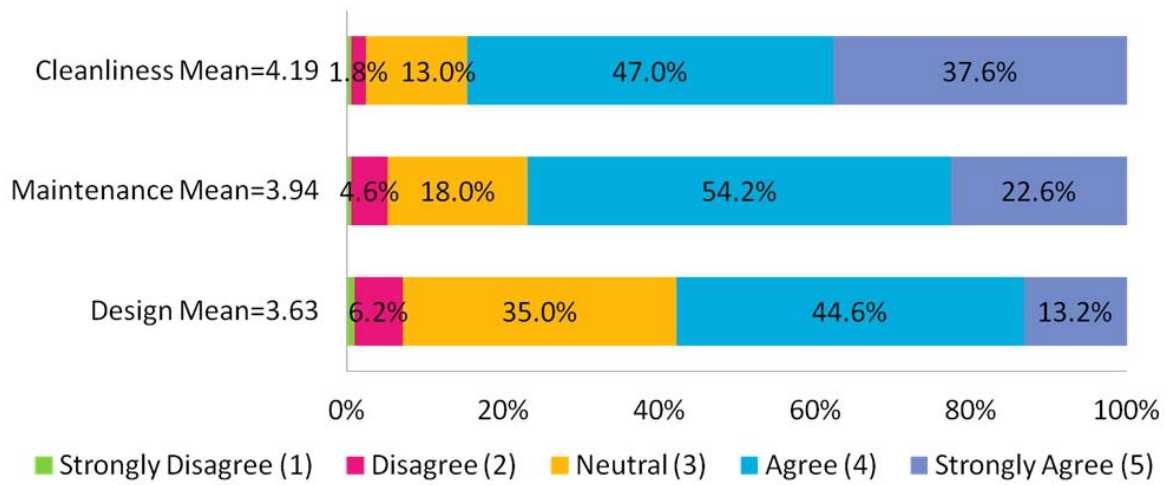
A4. How **happy** are you with their **efforts** in keeping the toilets happy for you?







A5. "Singapore's toilets have a need for improvement."
 To what extent do you agree with this statement in the follow areas?

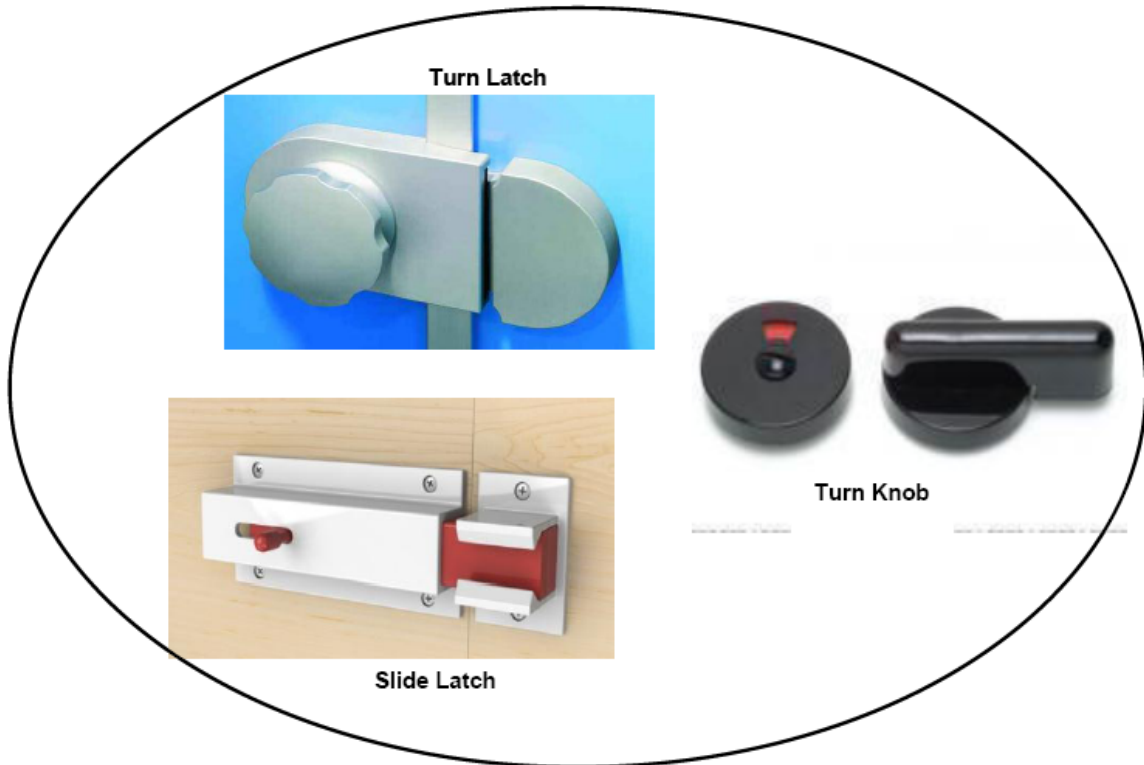


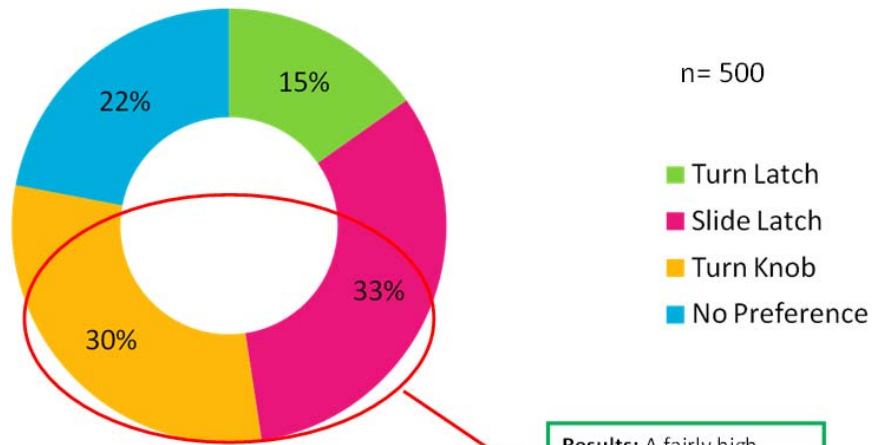
n=500

Implications:
 Cleanliness ranked first, the maintenance of facilities was second and finally design. Smart design can be a key success factor, but most respondents think design in it's aesthetic domain. More public awareness in terms of smart designs should be generated.

SECTION B: IMPORTANCE OF FACILITIES, DESIGN & MAINTENANCE OF TOILETS

B1. Which door knob design do you prefer?

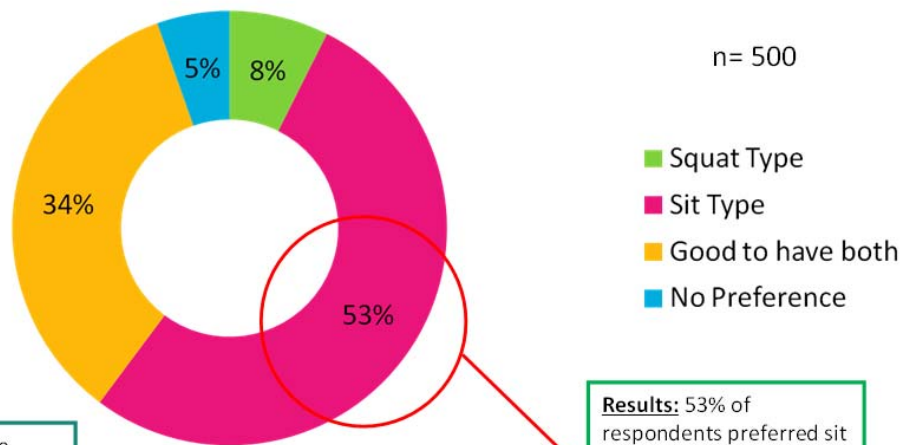




Implications: Future door knob designs can be modeled with slide latch or turn knob

Results: A fairly high number of respondents preferred slide latch or turn knob

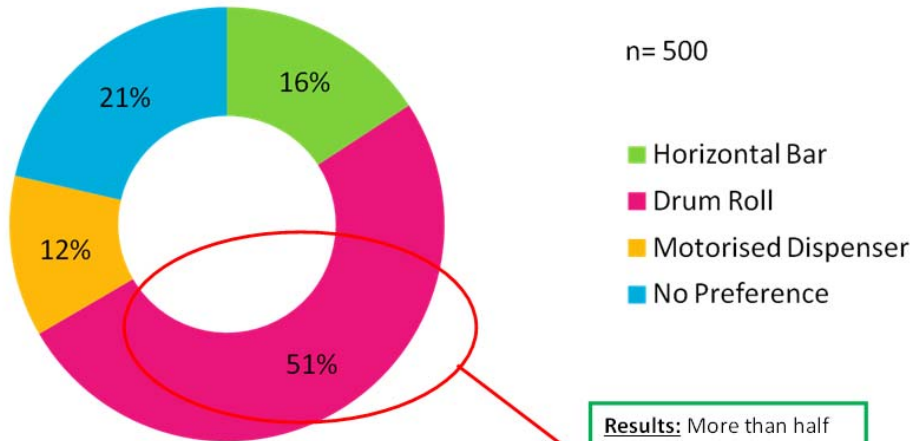
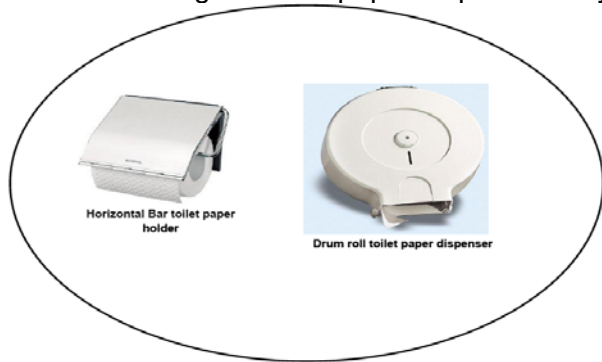
B2. Which design of toilet bowl do you prefer?



Implications: Future toilet bowl designs can be modeled with sitting type.

Results: 53% of respondents preferred sit type toilet bowl. A huge percentage when individually compared to the others.

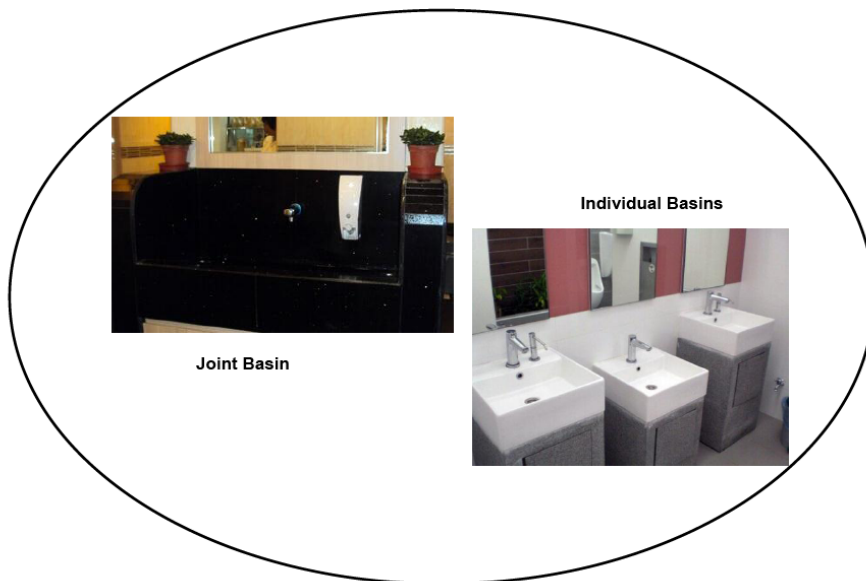
B3. Which design of toilet paper dispenser do you prefer?

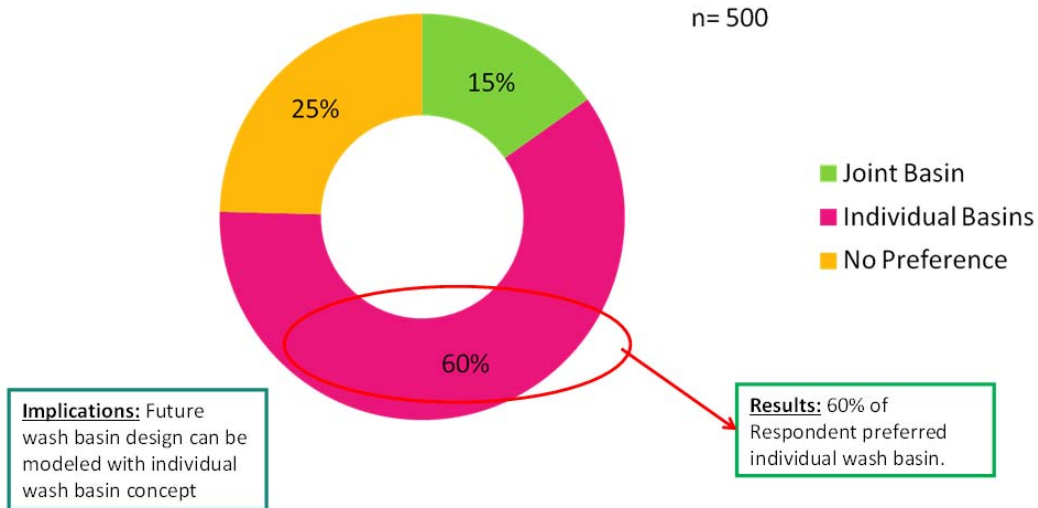


Implications: Future toilet paper dispenser can be modeled with drum roll model.

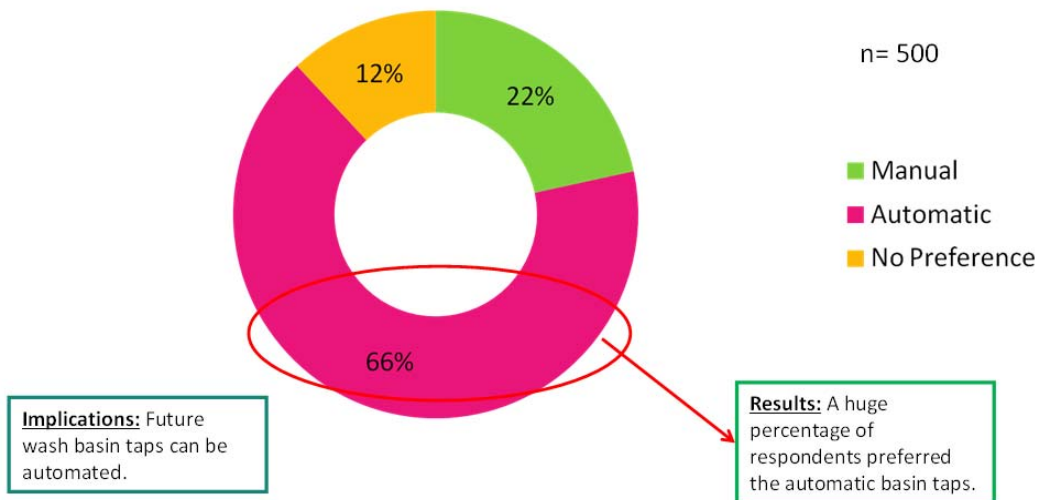
Results: More than half of respondents preferred Drum roll toilet paper dispenser

B4. Which design of wash basin do you prefer?

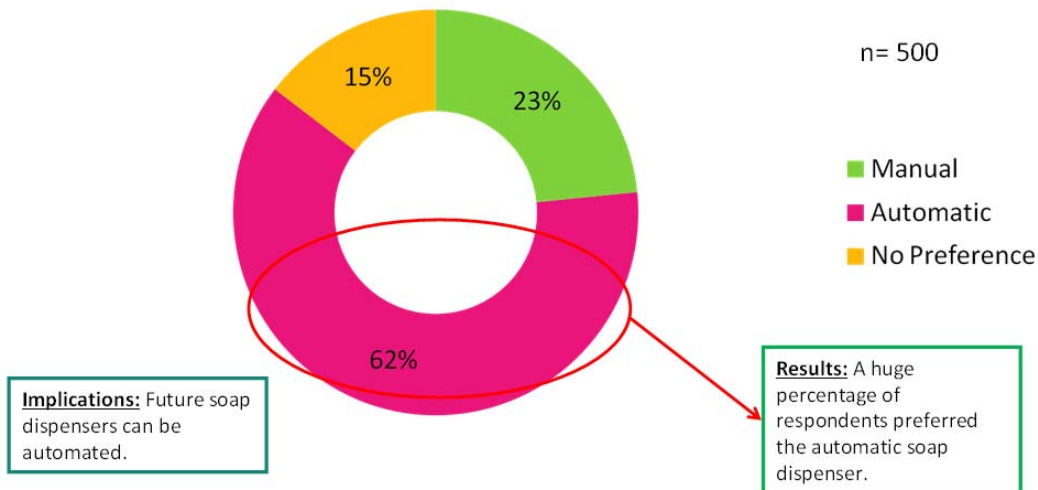




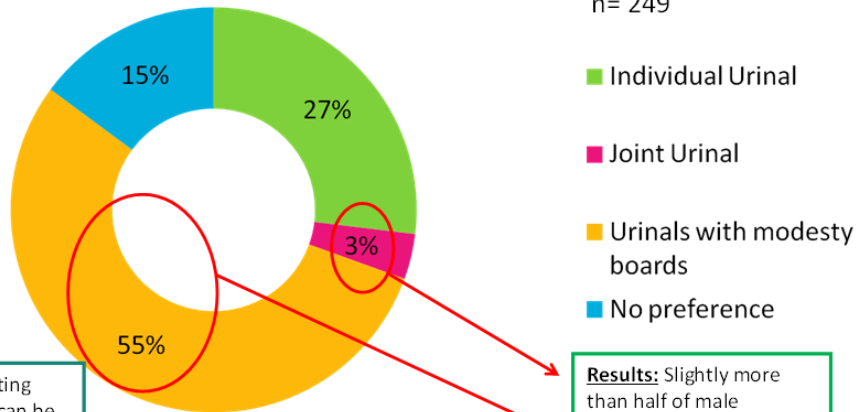
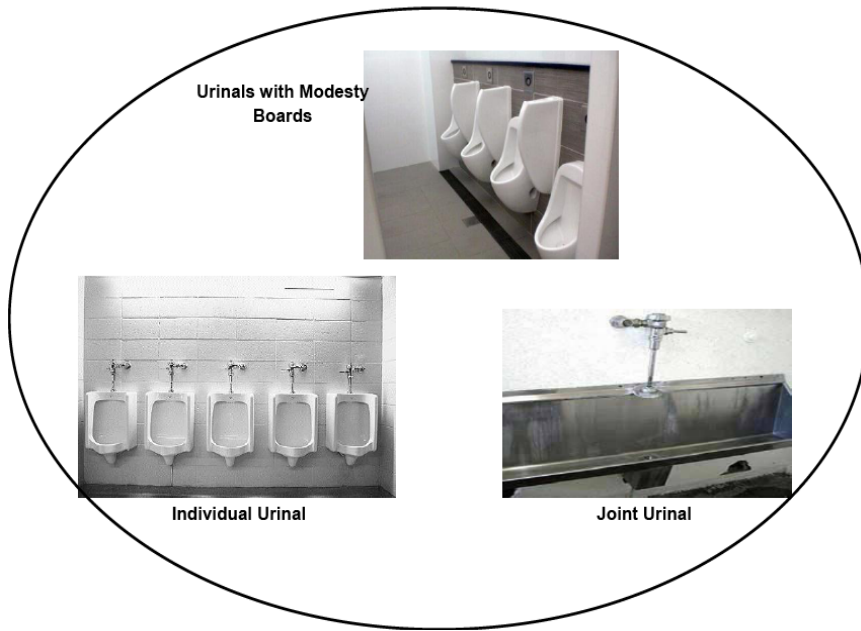
B5. Which design of wash basin taps do you prefer?



B6. Which design of soap dispenser do you prefer?



B7. Which design of urinals do you prefer? (Males only)



n= 249

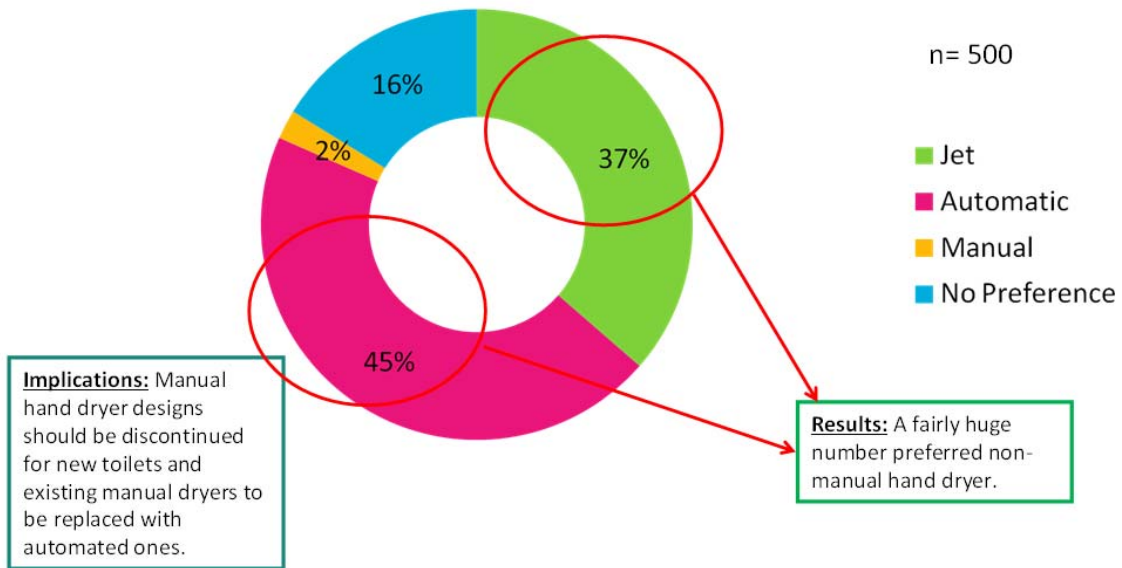
- Individual Urinal
- Joint Urinal
- Urinals with modesty boards
- No preference

Implications: Existing individual urinals can be fitted with modesty boards. Joint urinal design should be discontinued.

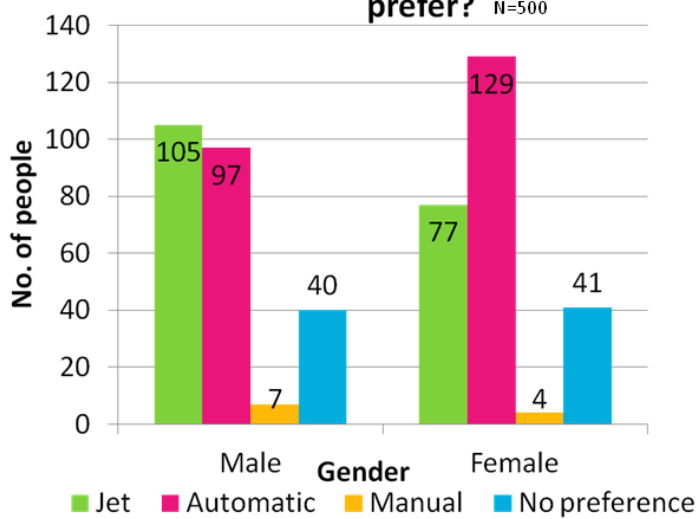
Results: Slightly more than half of male respondents preferred urinals with modesty boards. Only 4% preferred joint urinal

B8. Which design of hand dryer do you prefer?





B8. Which design of hand dryer do you prefer? N=500

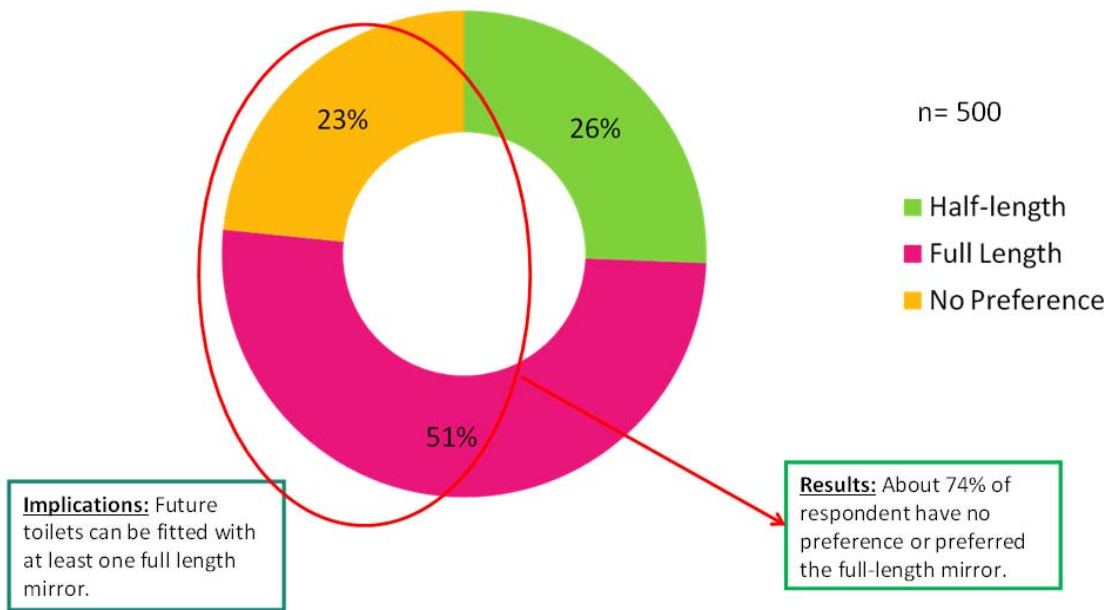


Results: Females prefer the automatic hand dryer whereas males prefer the jet hand dryer

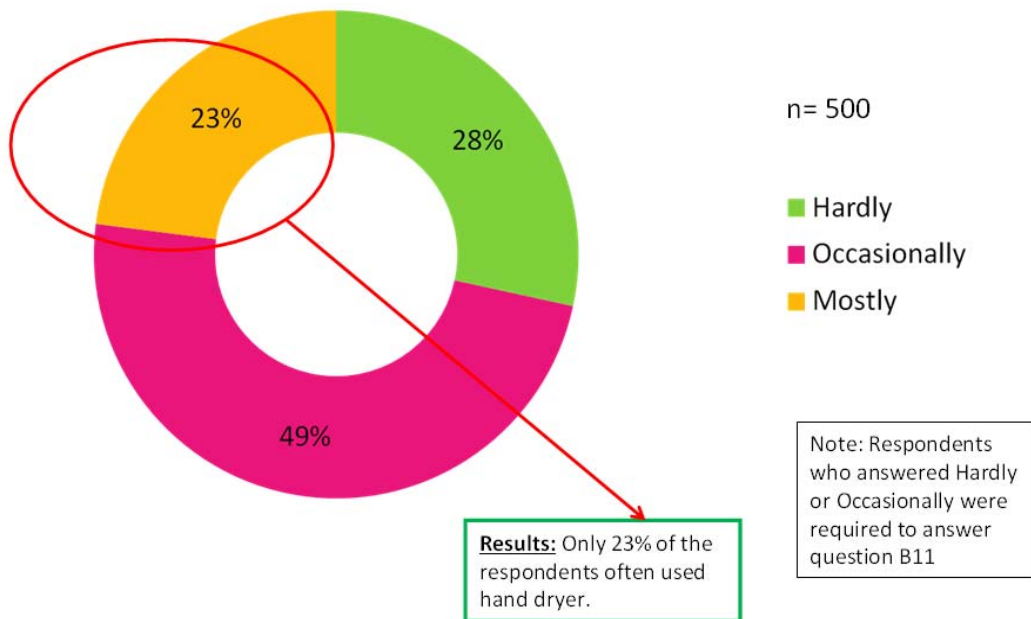
Implications: Install automatic hand dryers in female toilets and install jet hand dryer in male toilets

n= 500

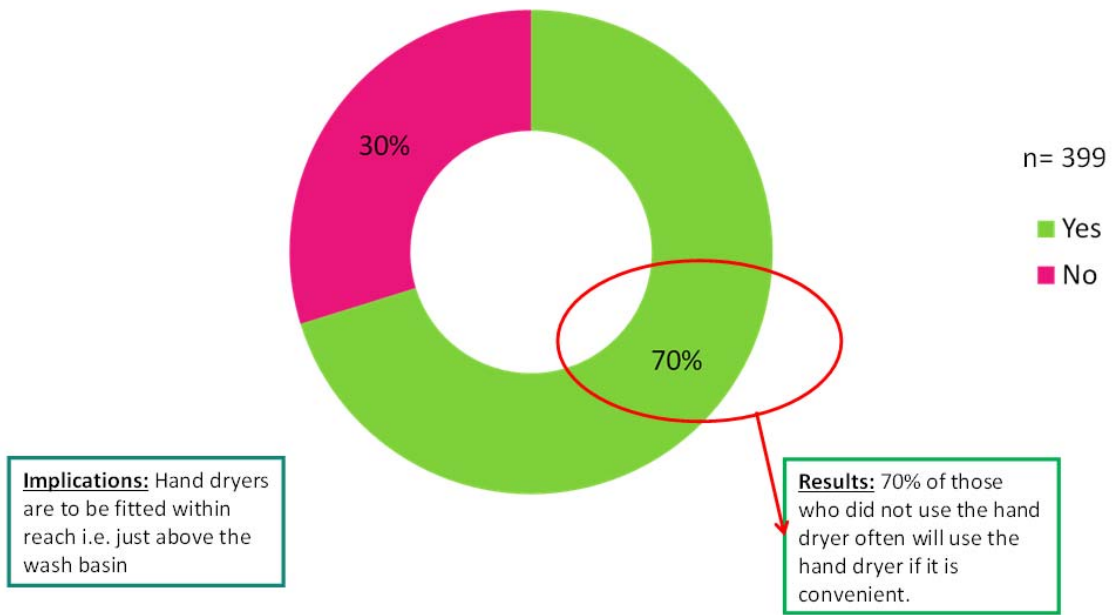
B9. Which design of mirror do you prefer?



B10. How often do you use the hand dryer?

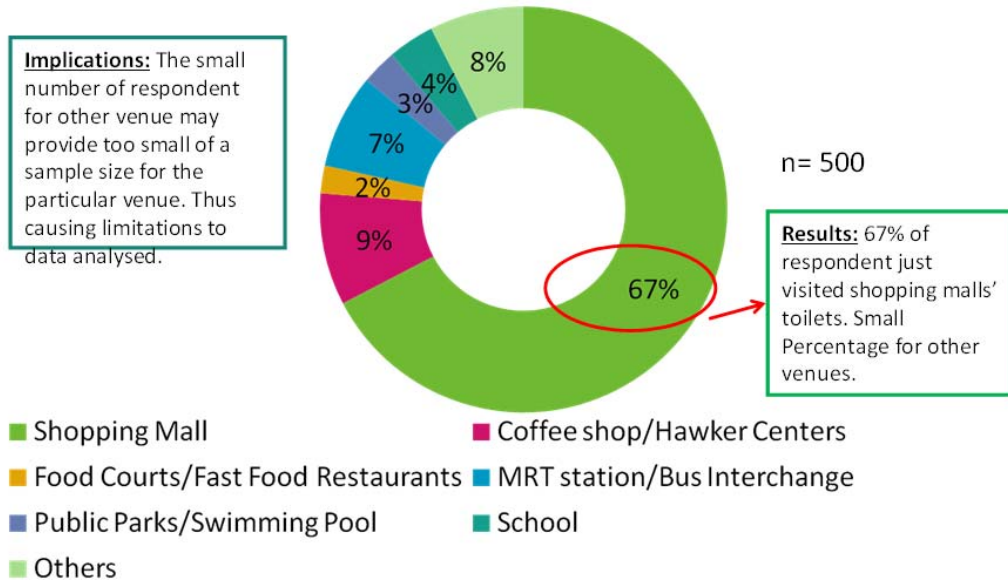


B11. Would you use the hand dryer if it is within your reach? i.e. just above the wash basin

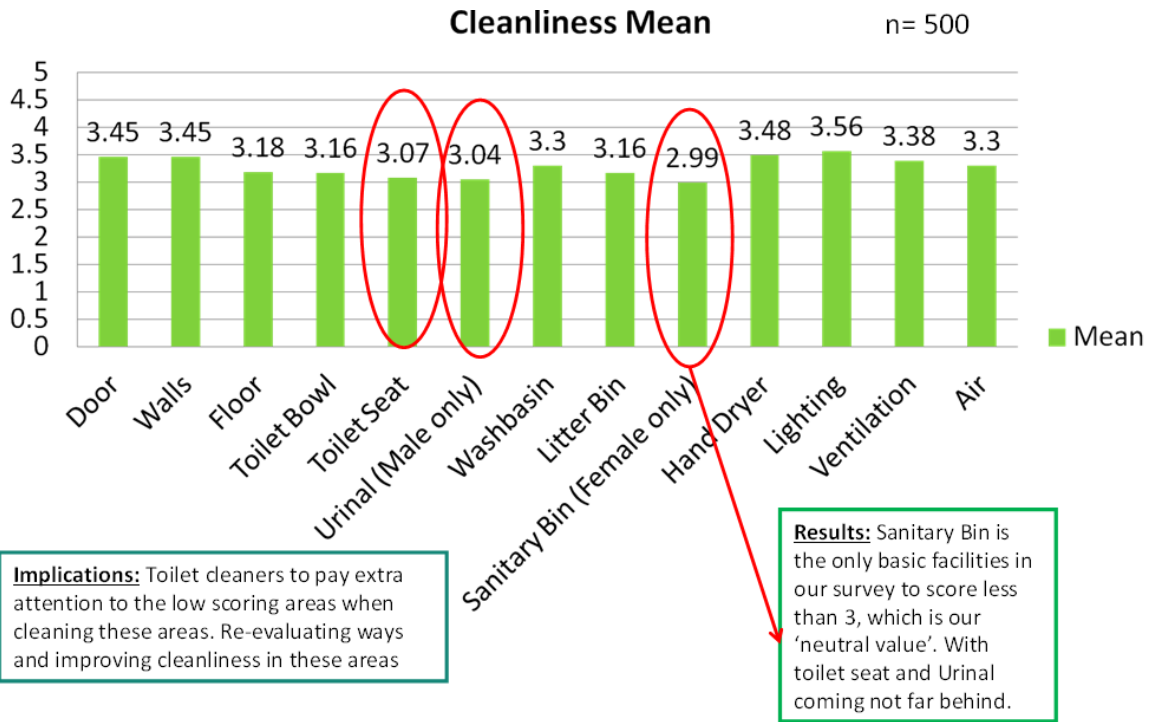


SECTION C: USER EXPERIENCE OF PUBLIC TOILETS

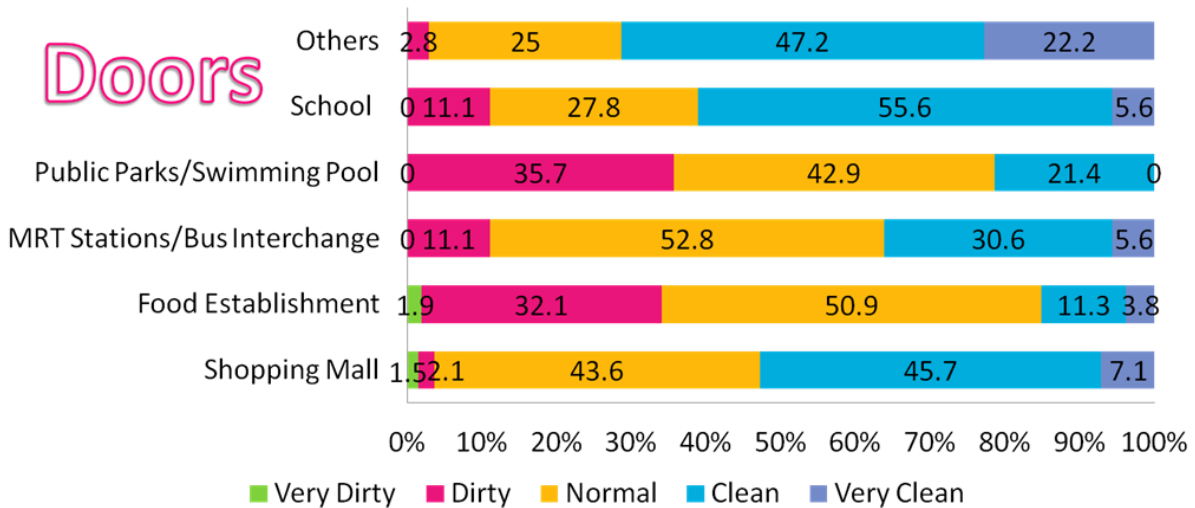
C1. Location of public toilet you just visited



C2. With reference to the toilet that you have just visited, how would you rate its cleanliness? On a scale of 1 to 5, with 1 being very dirty and 5 being very clean.



n=483



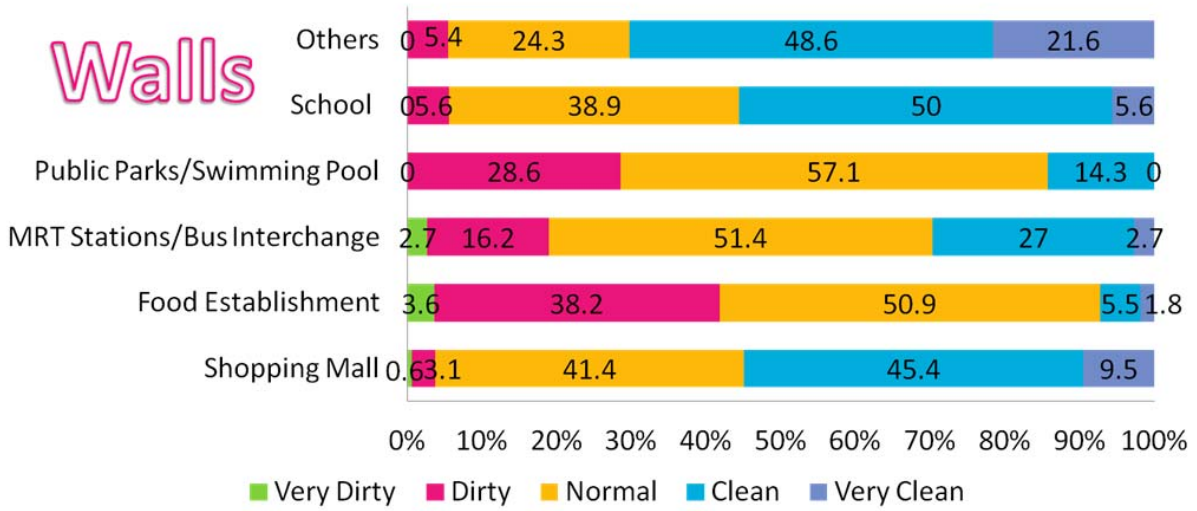
Results: Public parks, pools and food establishments have dirty doors.



Implications: More focus in keeping doors clean should be done.

n=487

Walls



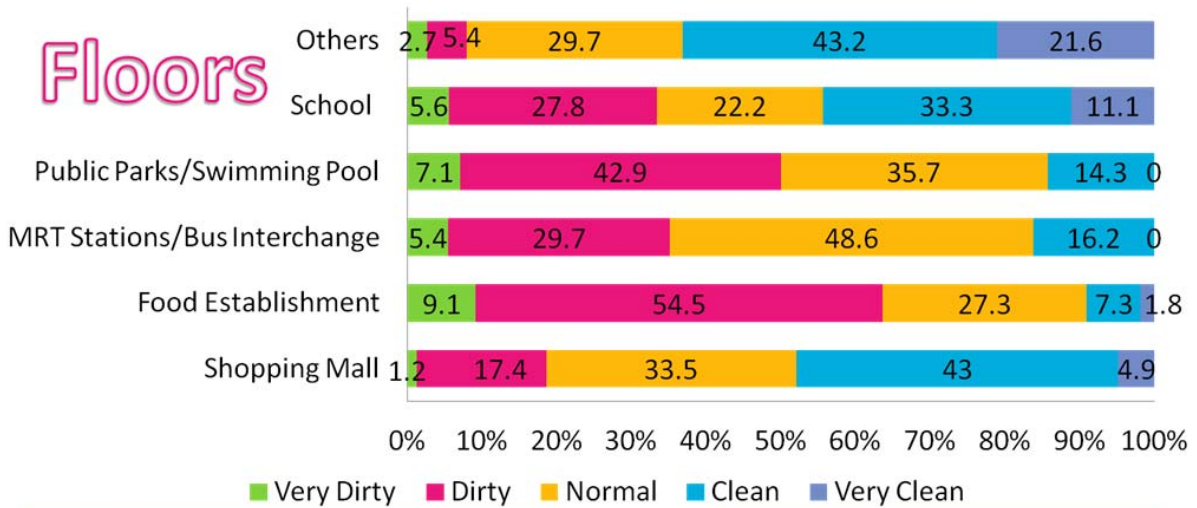
Results: Public parks, pools and food establishments have dirty walls.



Implications: More focus in keeping walls clean should be done.

n=489

Floors



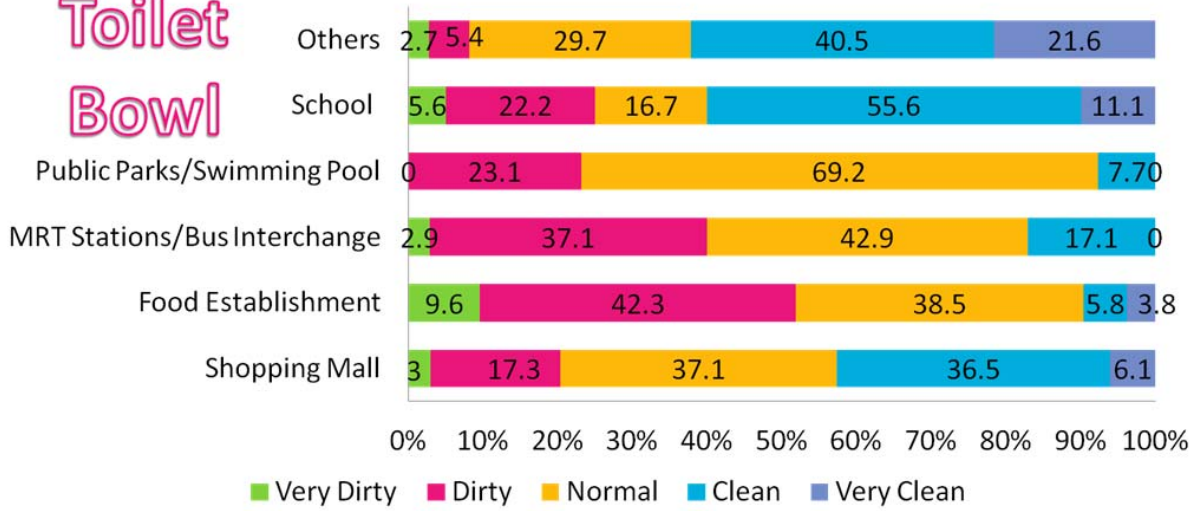
Results: Many locations face dirty floorings.



Implications: More should be done to improve the standard of cleanliness.

n= 500

Toilet Bowl



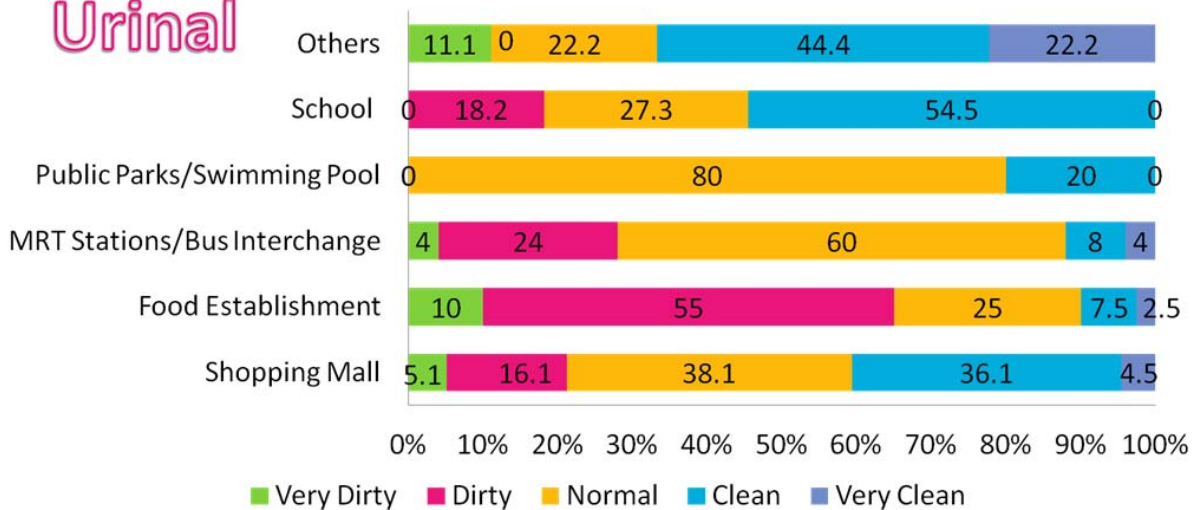
Results: MRT station, bus interchanges and food establishments have dirty toilet bowls.



Implications: More should be done to improve the standard of cleanliness.

n=245

Urinal



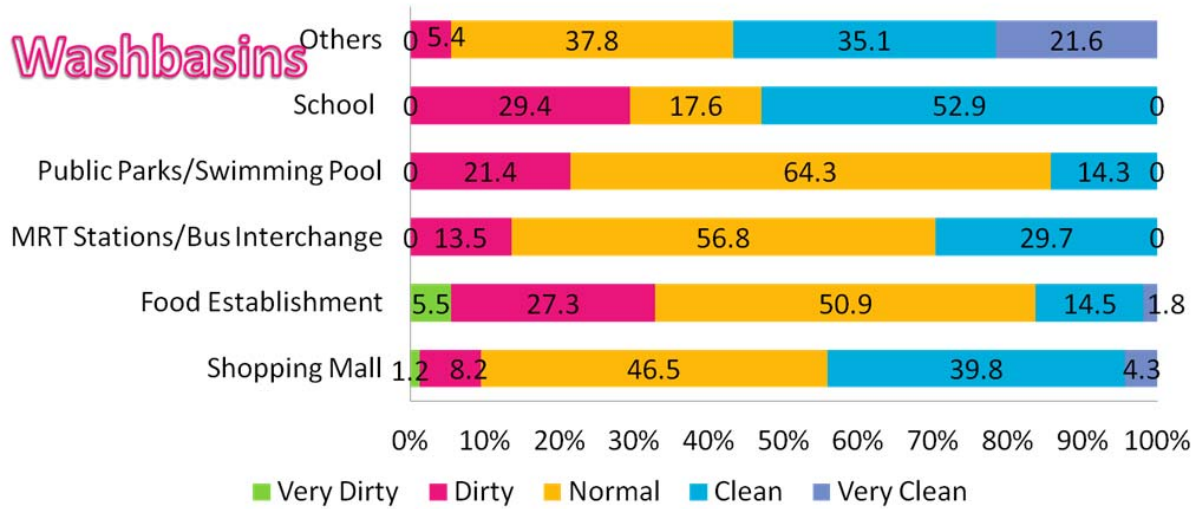
Results: MRT station, bus interchanges and food establishments have dirty urinals.



Implications: More should be done to improve the standard of cleanliness.

n=489

Washbasins



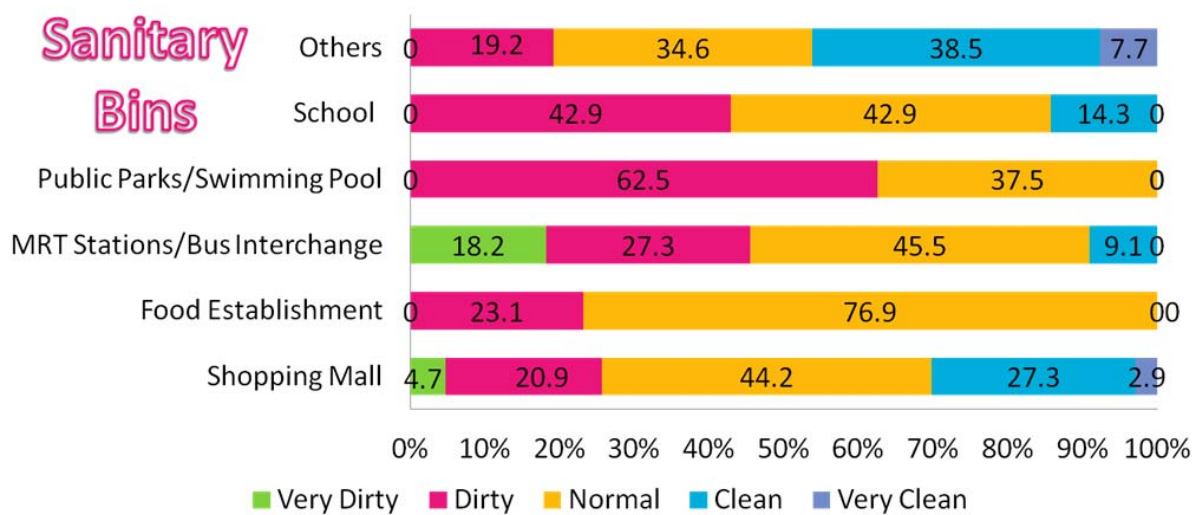
Results: Schools and food establishments have dirty washbasins.



Implications: More should be done to improve the standard of cleanliness.

n=237

Sanitary Bins



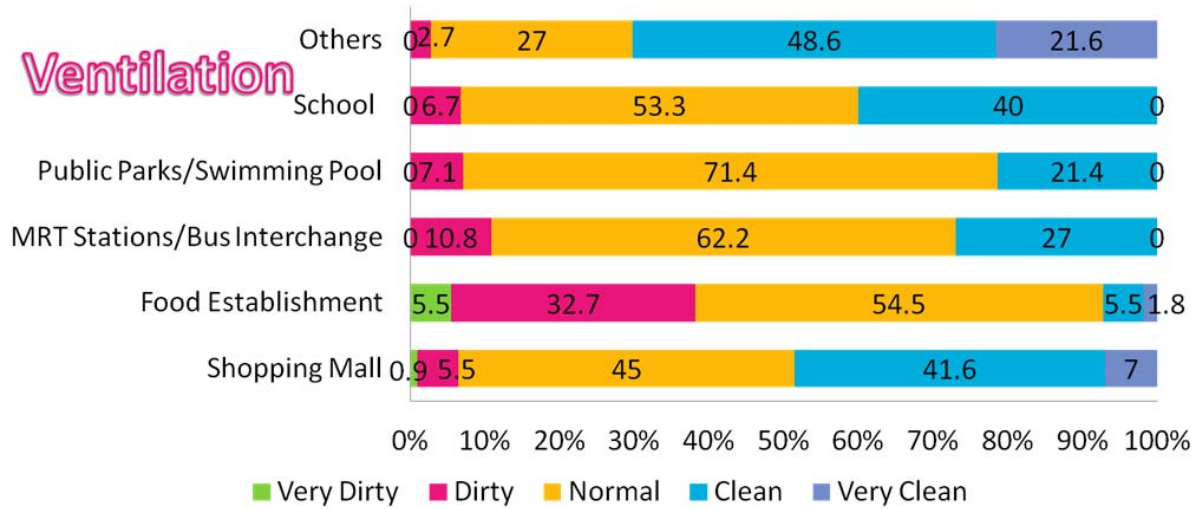
Results: Public parks and swimming pools have the dirtiest sanitary bins.



Implications: Specific efforts should be made to improve this situation.

n=485

Ventilation

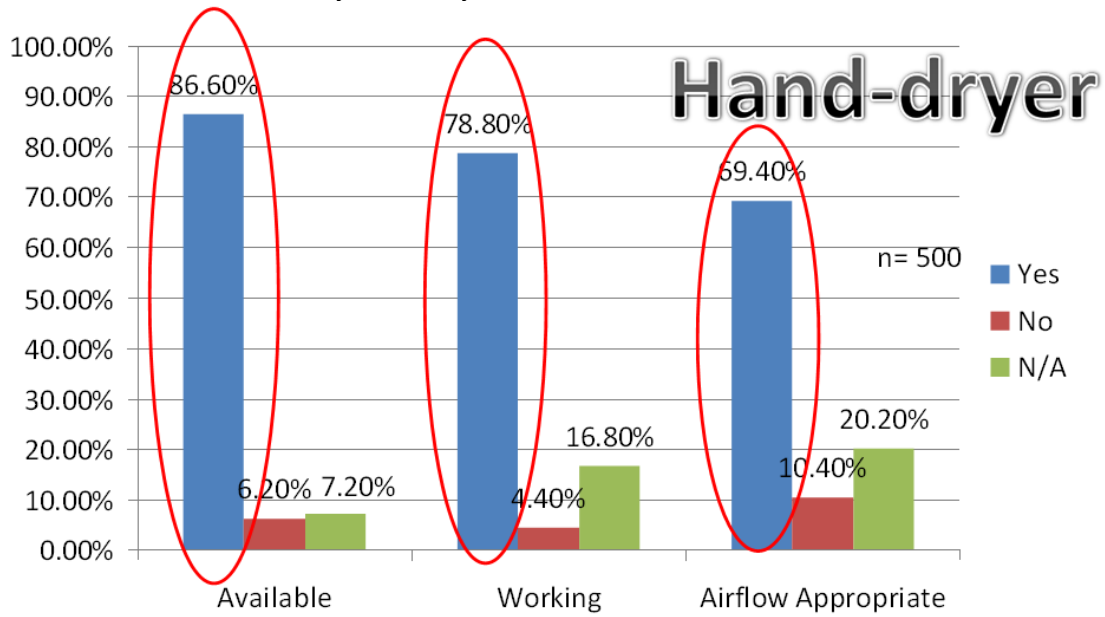


Results: Food establishments have the worst ventilation in toilets.



Implications: Specific efforts should be made to improve this situation.

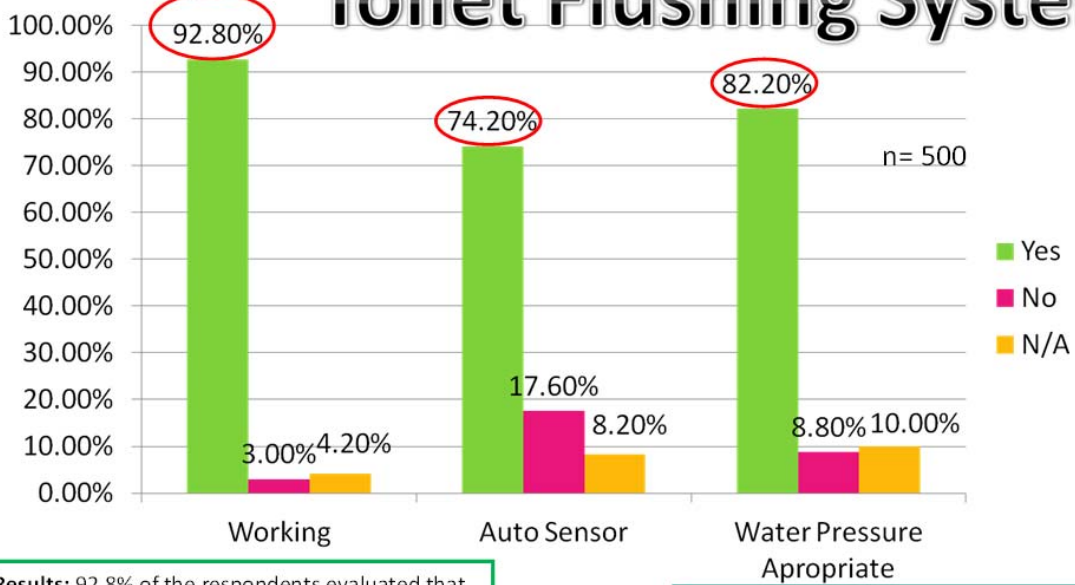
C3. With reference to the toilet you have just visited, evaluate its facilities:



Results: 86.6% of the respondents evaluated that there are hand dryers. And within these respondents, 78.8% and 69.4% indicate that the hand dryer is working and the airflow is appropriate respectively

Implications: A need to ensure that an available hand-dryer is always in good working condition

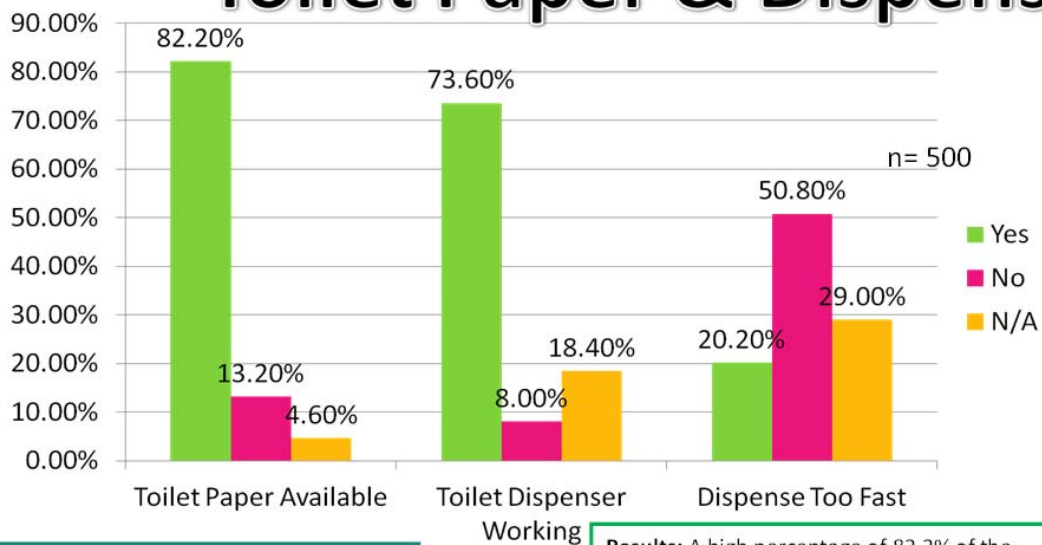
Toilet Flushing System



Results: 92.8% of the respondents evaluated that toilet flushing system is working and 74.2% stated that it is auto-sensored while 82.2% indicate that the water pressure is appropriate

Implications: Majority of respondents were satisfied with the toilet flushing system

Toilet Paper & Dispenser



Implications: High percentage of respondents are satisfied with the aspects of toilet paper and dispenser.

Results: A high percentage of 82.2% of the respondents indicated that toilet paper is available and 73.6% of these segment indicated that the toilet dispenser is working and only a small percentage of 20.2 state that the toilet paper dispensed too fast

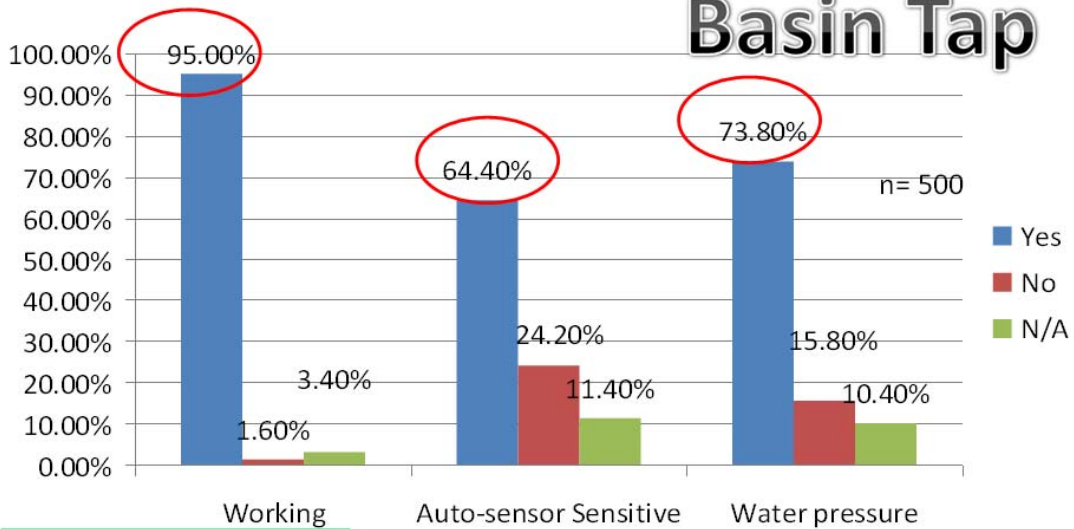
Hand-towels



Results: 53.8% of respondents indicate that no hand-towels were available

Implications: Owners are not providing hand towels possibly due to wastage

Basin Tap



Results: High percentage of respondents was satisfied with the basin taps except the sensitivity of the auto-sensor taps.

Implications: Sensitivity of auto-sensor taps should be monitored more often than the water pressure.

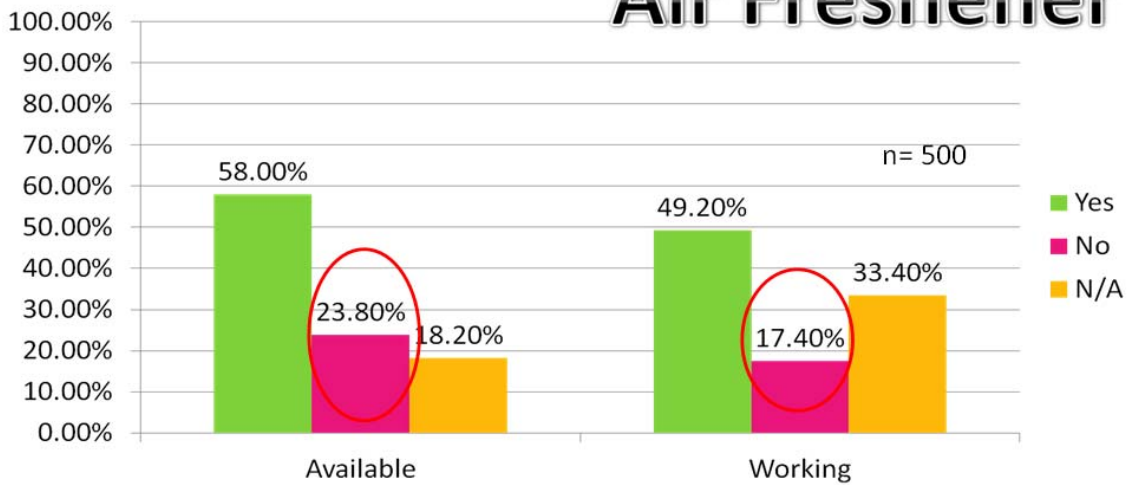
Hand Soap Dispenser



Results: A significant 35.6% of respondents responded that soap was diluted.

Implications: Monitoring the quality of soap is required.

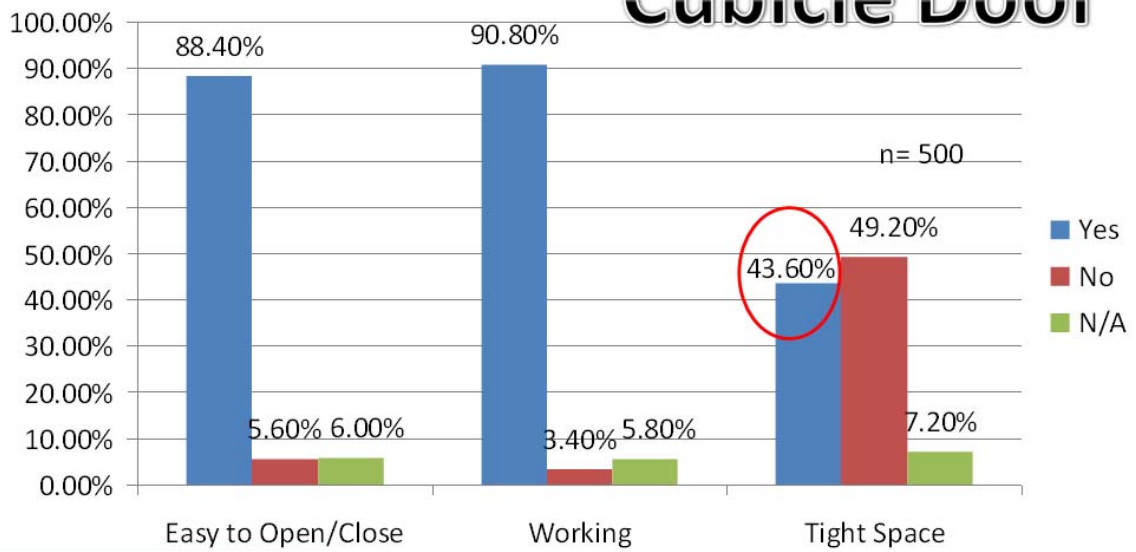
Air Freshener



Results: 23.8% of the respondents did not see any air freshener in the toilet. 17.4% also responded that the air freshener was not working.

Implications: Installation of more air fresheners and maintain its efficiency.

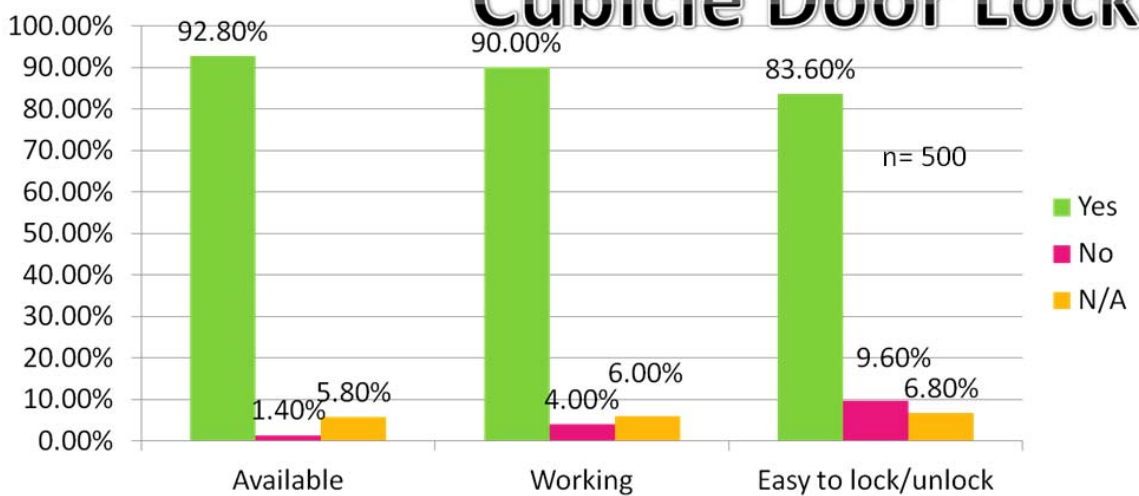
Cubicle Door



Results: 43.6% of the respondents agreed that the space for the cubicle door was tight

Implications: Enlarging tight spaces of cubicle doors.

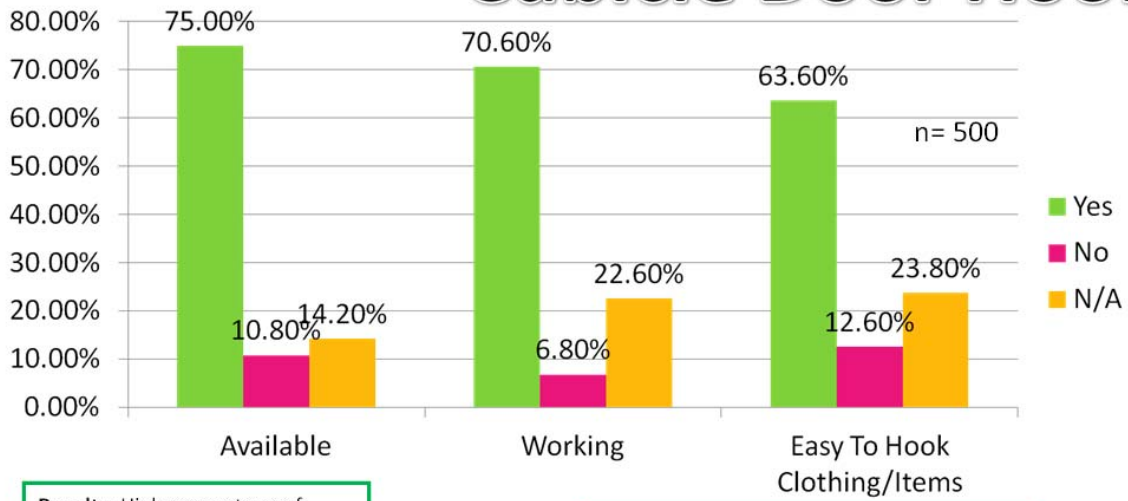
Cubicle Door Lock



Results: High percentage of respondents was satisfied with the functionality of the cubicle door lock.

Implications: Keeping up the good work in the cubicle door lock.

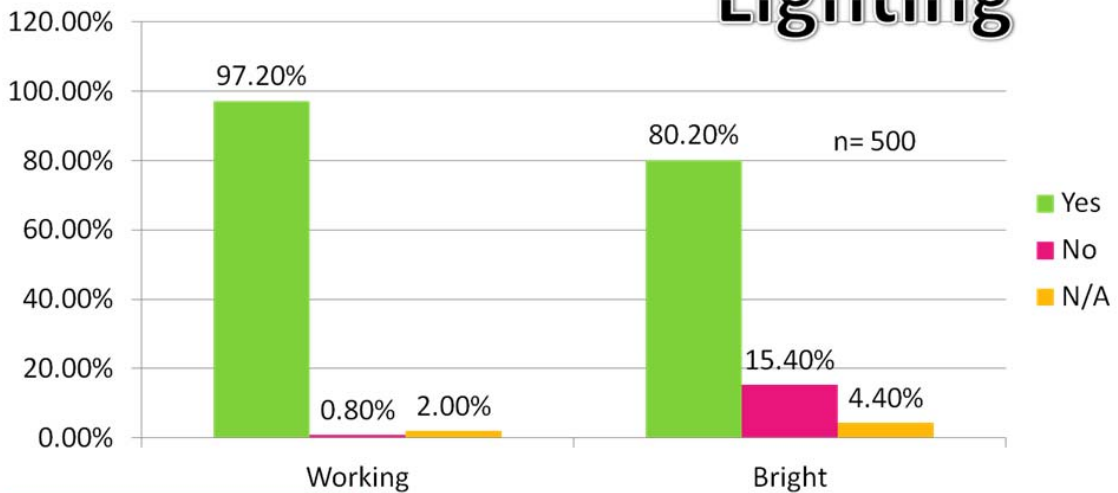
Cubicle Door Hook



Results: High percentage of respondents was satisfied with the functionality of the Cubicle Door Hook.

Implications: Keeping up the good work in the cubicle door hook

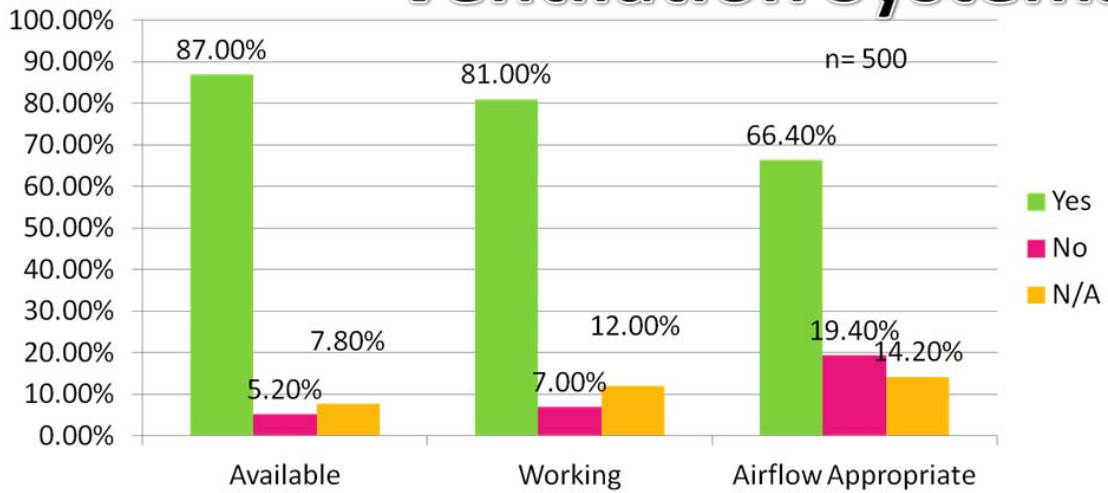
Lighting



Results: High percentage of respondents was satisfied with the functionality of the lighting.

Implications: Keeping up the good work in the lighting maintenance.

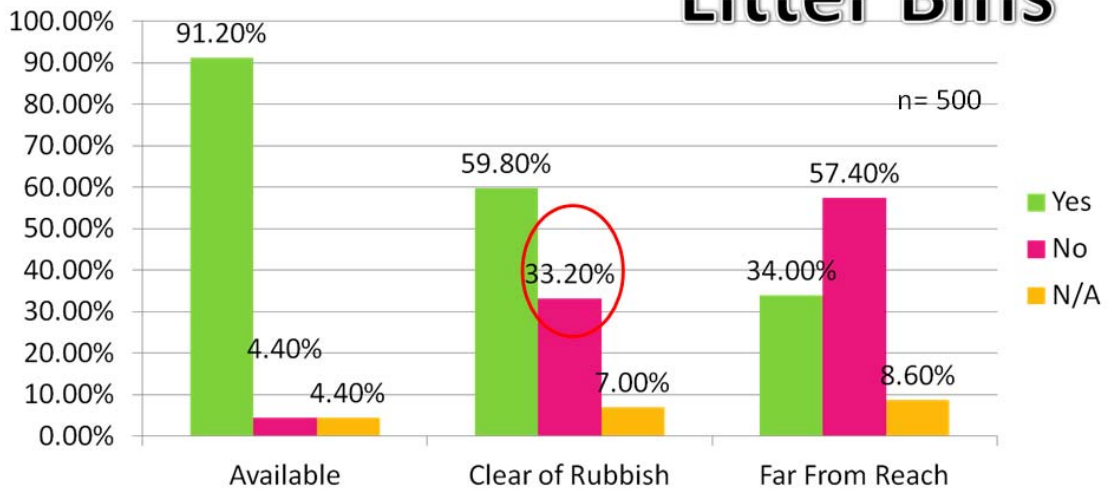
Ventilation Systems



Results: High percentage of respondents was satisfied with the functionality of the ventilation systems.

Implications: Keeping up the good work in the ventilation system maintenance.

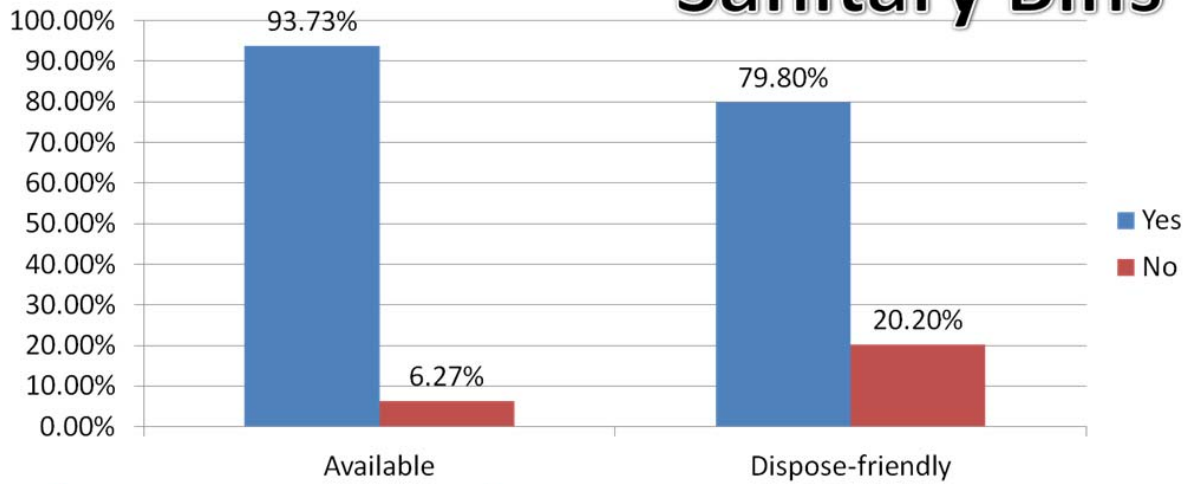
Litter Bins



Results: Low percentage of dissatisfaction with the functionality of litter bins but a noticeable 33.2% responded that the litter bin was not cleared of rubbish

Implications: Monitoring of rubbish in litter bins is needed to ensure it will not overflow.

Sanitary Bins

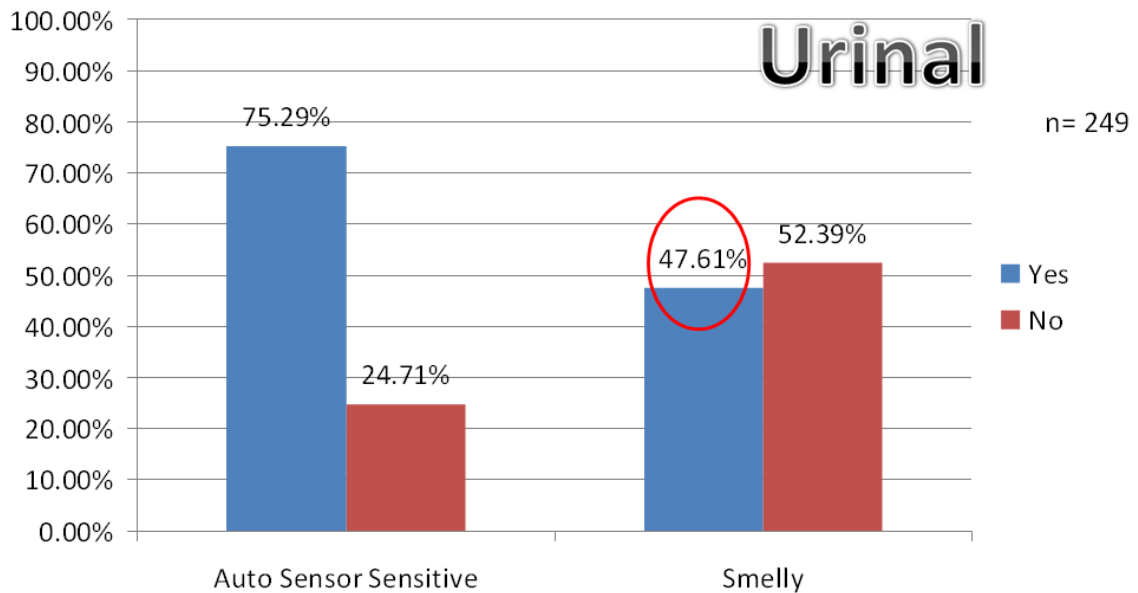


Results: 93.73% of the female respondents responded that sanitary bins were available, within this group, 79.8% responded that the bins were dispose-friendly

Implications: Dispose-friendly design of sanitary bins is needed.

n= 251

Urinal

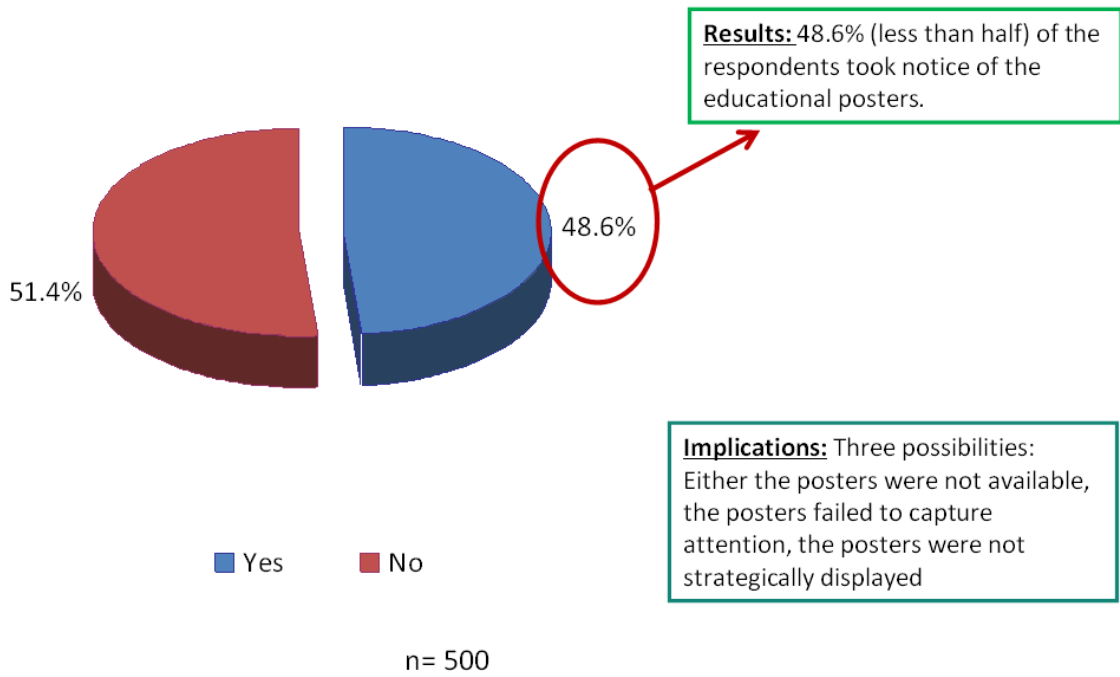


Implications: Proper cleaning of the urinals is needed to fight the smell problem

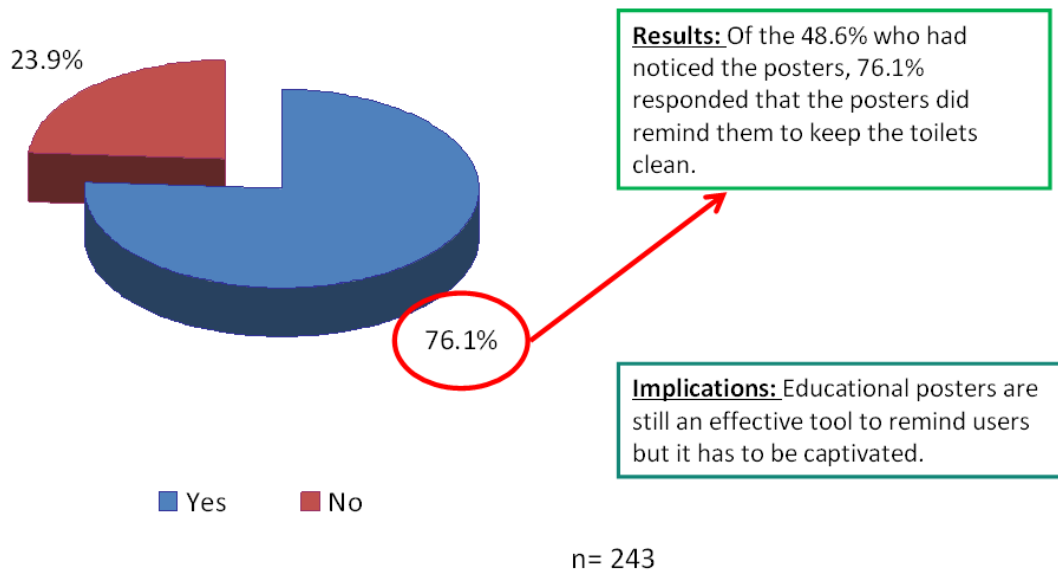
Results: 47.61% of the male respondents responded that the urinal was smelly. As compared to a high 76.29% on the sensitivity of the urinal sensors.

SECTION D: AWARENESS, EDUCATION & ENFORCEMENT

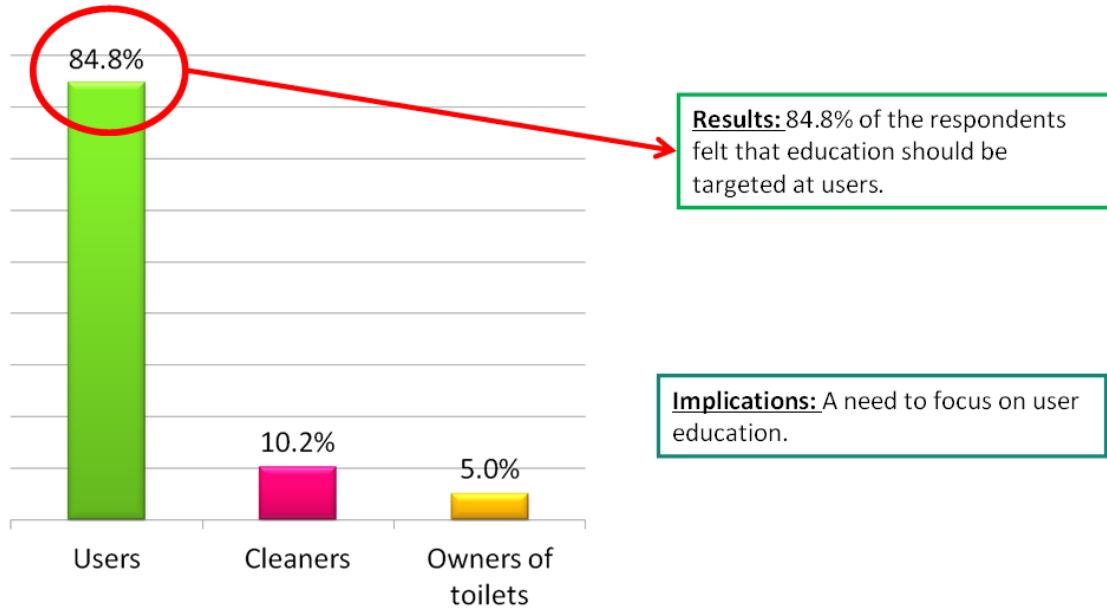
D1. Did you notice any posters asking you to keep the toilet clean inside this toilet you just visited?



D2. Did the educational posters remind you to keep the toilets clean?

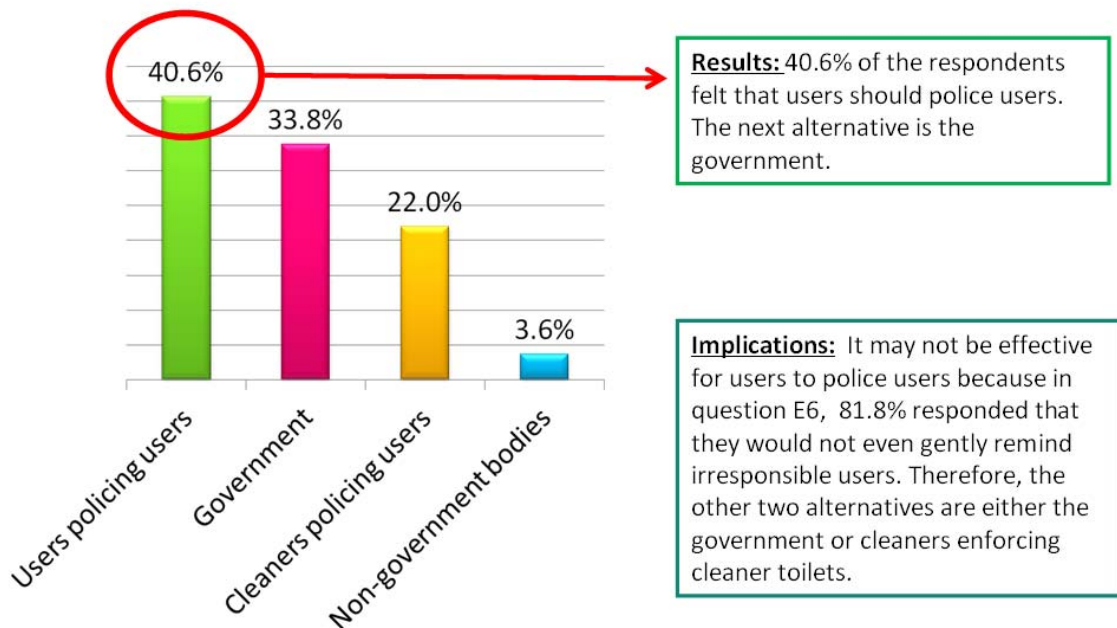


D3. To whom do you think the education of clean toilets should be targeted?



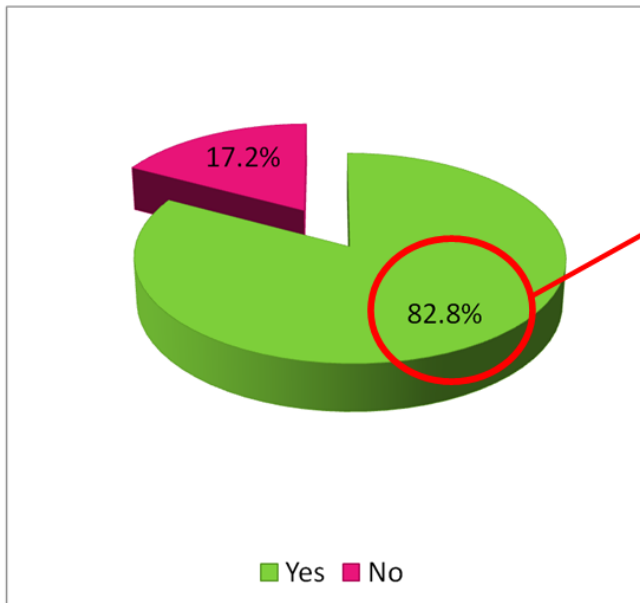
n= 500

D4. Who do you think should be responsible in enforcing cleaner toilets?



n= 500

D5. Should there be compulsory grading scheme for all public toilets? For example rating public toilets with 3, 4 or 5-Stars.

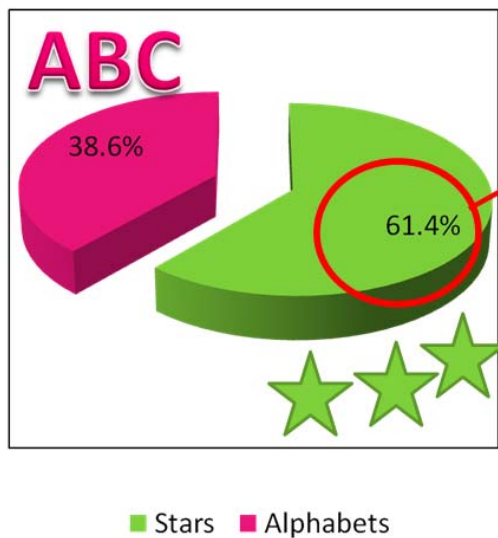


Results: 82.8% of the respondents felt that toilet grading should be made compulsory.

Implications: The government should consider making toilet grading mandatory since it is well received by the public.

n= 500

D7. In your opinion, which toilet grading schemes is the easiest to distinguish its cleanliness?



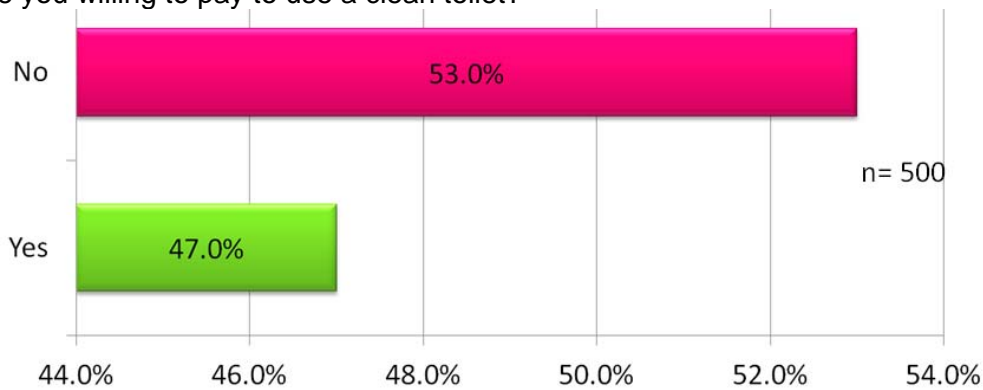
Results: The star rating is more recognised by the public

Implications: The current star-rated grading system of the Happy Toilet Programme is on the right track.

n= 500

SECTION E: USERS & CLEANER BEHAVIOUR

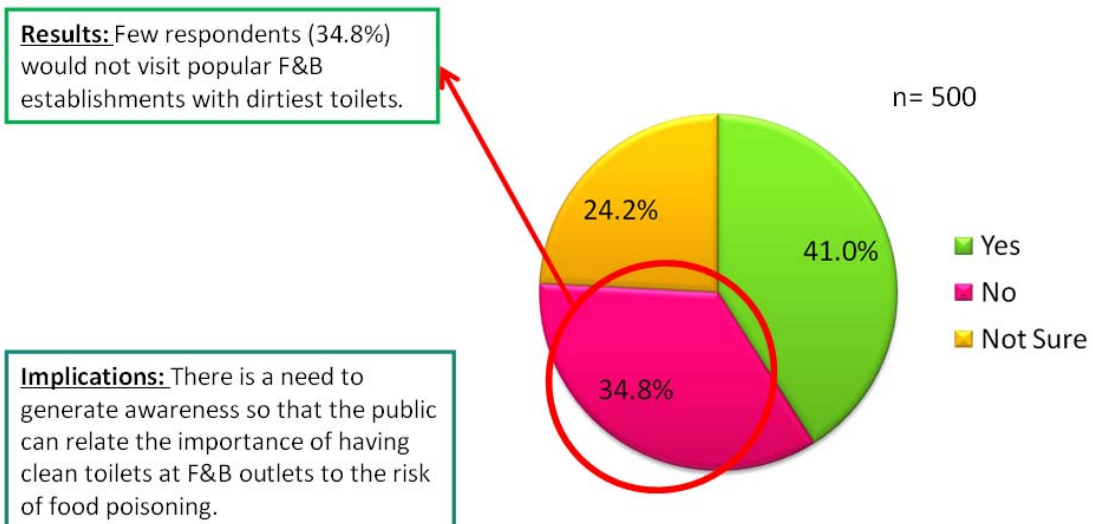
E1. Are you willing to pay to use a clean toilet?



Results: More than half (53%) of the respondents not willing to pay to use a clean toilet.

Implications: If owners would like to charge for toilet usage, the toilets should not only be clean but the owners should also clearly explain the reasons.

E2. If a food establishment (for example a coffee shop or restaurant) serves very good food, but its toilet has been rated as the dirtiest in Singapore, would you still buy food from this food establishment?

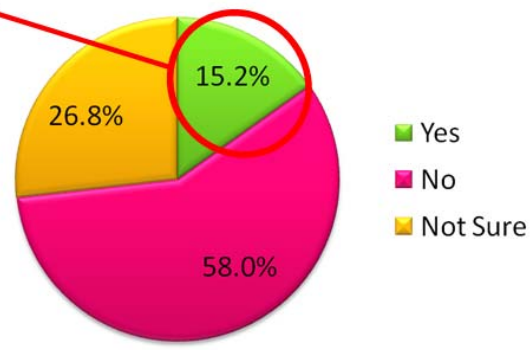


Results: Few respondents (34.8%) would not visit popular F&B establishments with dirtiest toilets.

Implications: There is a need to generate awareness so that the public can relate the importance of having clean toilets at F&B outlets to the risk of food poisoning.

E3. If you have visited a dirty toilet, would you inform the owner or the cleaner to clean up?

Results: Only 15.2% of the respondents would take the initiative to inform the owner/cleaner.

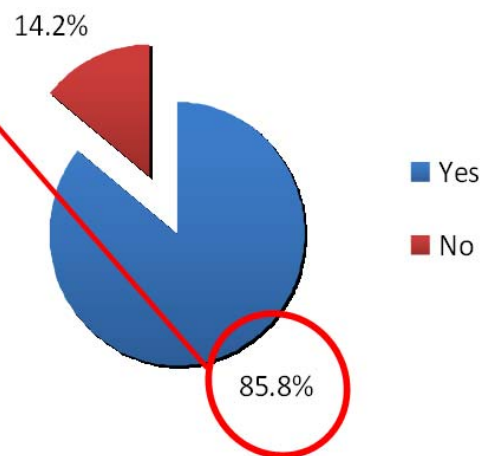


n= 500

Implications: Given the low dirty toilet feedback, there is a need for the government to conduct more regular checks when owners and cleaners fail to take the initiative to ensure toilets are kept clean.

E4. Do you see any “wet floor” sign when the floor has just been mopped?

Results: 85.8% of the respondents saw the wet-floor sign.

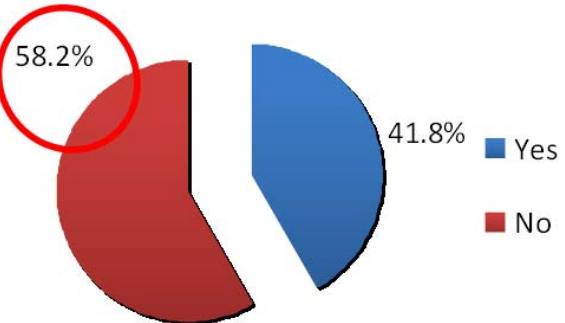


n= 500

Implications: Most cleaners adhere to the rules and standards when cleaning toilets.

E5. Do you feel pressured to keep the toilet as clean as possible when the cleaner is in the toilet?

Results: Close to half (41.8%) would be pressured to keep the toilet clean when a cleaner is present.

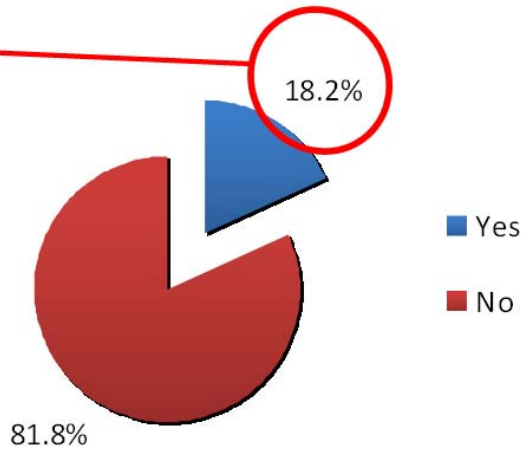


Implications: Having cleaners present during peak hours can help to keep the toilets clean

n= 500

E6. If you see someone dirtying the toilet, would you gently remind him or her?

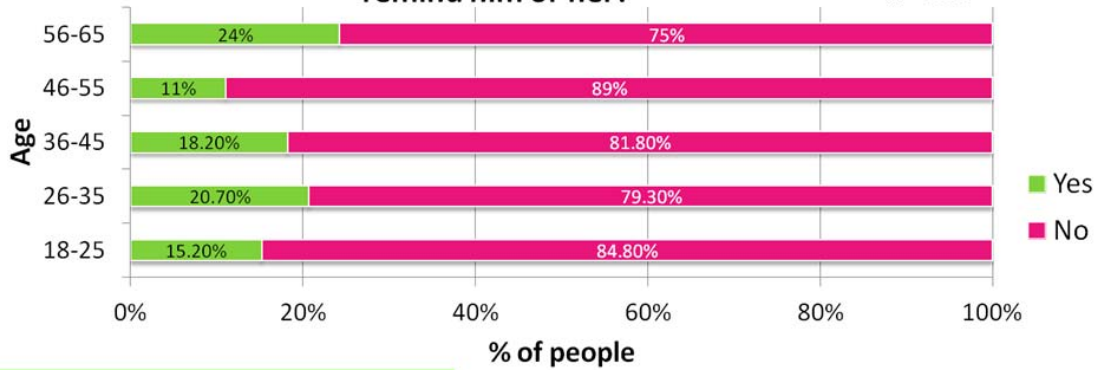
Results: Few (18.2%) would remind those who dirty the toilet.



Implications: This is contradictory to an earlier question D4 whereby respondents felt that users should be the ones policing users. Generally, public either lacks initiative or courage to police irresponsible users

n= 500

E6. If you see someone dirtying the toilet, would you gently remind him or her? N=500 n= 500

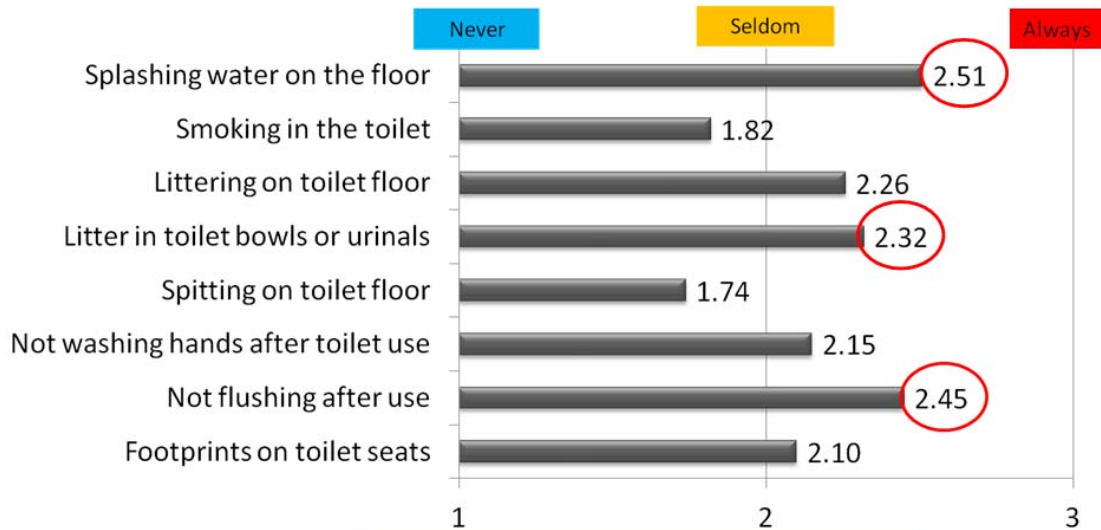


Results: Every age group is guilty for being socially irresponsible due to relatively low “yes” responses compared with “no” responses.



Implications: Cannot rely on “users policing users” hence need to find another approach to handle dirty toilets

E7. Have you ever heard of or seen people...



Results: Splashing water on the floor, not flushing after use and litter in toilet bowls or urinals were the top three behaviours.

Implications: Public education to target on high scoring (more than the score of 2.0) behaviours. Good to mention, not flushing after use & litter in toilet bowls should be attributed more to faulty or ineffective sensor flushing system than user behaviour.

■ Mean

n= 500

E7. Have you ever heard of or seen people... n=500

	Splashing Water on the Floor	Not Flushing After Use	Littering on Toilet Bowls	Littering on Toilet Floors	Not Washing Hands after Toilet Use	Footprints on Toilet Seats	Smoking in the Toilet	Spitting on Toilet Floor
Male	2.55	2.43	2.35	2.24	2.22	2.08	1.95	1.8
Female	2.46	2.48	2.3	2.29	2.09	2.12	1.69	1.69

1 = Never
 2 = Seldom
 3 = Always

Results: Overall, the male toilet is dirtier than the female toilet with the male toilet topping 5/8 of the common causes of dirty toilet.



Implications: More control should be placed on problems that is more evident in the respective gender toilets.

F. Any other feedback or improvements on Public Toilets in Singapore?

Maintenance



Keep it clean



Keep it dry



Keep it odorless

n = 77

Design



Taps sensitivity/pressure



Air ventilation



Provide adequate toilet paper & soap



Consistent quality

n = 77

Business Owners



Provide channels for feedback to proprietor



Proprietor/in-charge should be more responsible



Reward system for proprietor/in-charge

n = 77

Cleaners



Cleaners always on standby



Financial incentive to cleaners/Tips



Cleaners checking on a higher frequency

n = 77

Enforcement



Law to penalize users and proprietors



Shaming dirty toilets on websites

n = 77
