

## Surveys of the behavioral determinants that may influence people's hand-hygiene and environment disinfecting in different countries

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### 1. Abstract

An anonymous online survey measure parents and teachers' barriers and facilitators to influencing children's hand-hygiene and their own surface cleaning. A pilot survey was conducted with participants from the United Kingdom and India, and its results informed what survey items are used in the final survey. The final survey will be conducted with participants from Australia, China, India, Indonesia, Saudi Arabia, South Africa, and the United Kingdom. The data collected will be completely anonymous and there are no sensitive questions. Participants can withdraw simply by closing their browser windows. The primary and secondary analyses focus on the hand-hygiene items, and aim to examine their internal validity. Secondary analyses will look at the surveys external validity. Exploratory analysis will compare participants' responses across countries/regions, and individual differences. The survey results will inform a future school-based intervention and be written up for publication in an academic press acknowledging all collaborating organizations.

## 2. Introduction/Background

As urbanization increases so do socially-acquired infections and antibiotic use.<sup>(1,2)</sup> This is a problem, because as antibiotic use become more prevalent so does antimicrobial resistance.<sup>(3,4)</sup> The slow pace at which new antibiotics emerge on market necessitates preserving the effectiveness of existing antibiotics.<sup>(5)</sup> The following attempts to do so are already in place: optimizing prescribing, educating the public, and increasing hygiene.<sup>(6)</sup> The present study focuses on the last effort: increasing hygiene.

The World Health Organization describes hygiene as “practices that help to maintain health and prevent the spread of diseases.”<sup>(7)</sup> These practices include behaviors to disinfect one’s body and surrounding environment.<sup>(8)</sup> Improving community health may require a multifaceted intervention that targets hand-hygiene and environment-disinfecting to stop reinfection cycles.<sup>(9)</sup> Interestingly, the cleanliness of the environment itself may play a role in people’s hygiene behaviors. For example clean scents encouraged people to clean their table scraps <sup>(10)</sup> and settings with no litter decrease people’s tendency to litter.<sup>(11)</sup> School have proven an effective delivery platform to increase community health.<sup>(12,13)</sup> Within these interventions children are often believed to be “agents of change” who carry lessons from school to the broader community.<sup>(14,15,16)</sup>

To inform the development of future school-based interventions, the current study seeks to develop a survey to identify the most common reasons adults are not already positively influencing school children’s hand-hygiene. Identifying the most common reasons is important, because interventions that target uncommon or misinformed reasons are unlikely to yield practically significant improvements. The list of possible reasons includes the behavioral determinates described by the Theoretical Domains Framework (TDF;<sup>17</sup>). Specifically, the present study aims to assess adults’ tendencies to positively influence children’s hand-hygiene with regards to their: Knowledge, Skills, Memory, attention and decision processes, Behavioral regulation, Social/professional role and identity, Beliefs about capabilities, Beliefs about consequences (inclusive of Optimism and Reinforcement), Intentions (inclusive of Goals), Emotion, Environmental context and resources, and Social influences.

In the current study, a survey will be designed to measure each TDF domain. In addition, because the cleanliness of the surrounding environment also influence cleaning behaviors, a sub-component of the survey will assess adults’ tendencies to disinfect surface areas where children play and learn. The survey will be rolled-out across several countries/regions. The primary and secondary analyses will to validate the internal and external features of the hand-hygiene survey component. Secondary analyses will look at the surveys external validity and internal validity across each country/region. Exploratory analysis will be used to compare participants’ responses across countries/regions, and individual differences. The results of this survey will be used to inform a future school-based intervention.

### 3. Aims of Study

The current study aims to conduct and examine the validity of a survey that survey aims to assess the behavioral determinates that affect adults' tendency to positively influence children's hand-hygiene. We also look at determinants that affect surface cleaning.

### 4. Objectives

Objective 1. Roll-out a final draft surveys in the different countries/regions.

Objective 2. Conduct a confirmatory factor analyses on the hand-hygiene component of the survey.

Objective 3. Conduct regression analyses to determine whether participants' responses on the hand-hygiene component of the survey predict their self-reported confidence.

Objective 4. Compare participants' responses across each domain, country, and individual difference.

### 5. Hypothesis

#### 5a. Primary Hypothesis

The primary hypothesis relates to Objective 2.

The TDF determinates will describe the hand-hygiene data well.

#### 5b. Secondary Analysis

The first secondary hypothesis relates to Objective 2.

The TDF determinates will also describe the hand-hygiene data well across each country/region.

The second secondary hypotheses relates to Objective 3.

The TDF determinates will predict participants' hand-hygiene related self-reported confidence in influencing children's hand hygiene well as a whole and across each country/region.

## 5c. Exploratory Analyses

The exploratory analyses relate to Objective 4.

Participants' hand-hygiene responses across individual difference will be explored using averages and confidence intervals.

Participants' surface disinfecting responses will be assessed as a whole and then compared across countries and individual differences using averages and confidence intervals.

## 6. Study Design

An anonymous online survey will be used, because it can be rolled-out quickly to collect data from a large numbers of participants in different places. No IP address or other geolocation information will be collected.

We will roll-out the final survey to a large adult participants in Australia, China, India, Indonesia, Saudi Arabia, South Africa, and the United Kingdom.

## 7. Study Setting

Participants from Australia, China, India, Indonesia, Saudi Arabia, South Africa, and the United Kingdom will complete the final survey online.

## 8. Study Population

The study population will include mums, dads, and teachers who have contact with children ages 5 to 10 years old.

## 9. Eligibility Criteria

Inclusion criteria

- be over the age of 18;
- be mums, dads or teachers likely to influence children 5-10 years old; and
- reside in either Australia, China, India, Indonesia, Saudi Arabia, South Africa, or the United Kingdom.

## 10. Study Outcomes

### 10a. Primary Outcome

Participants' responses to the survey items about their hand-hygiene influencing.

### 10b. Secondary/Exploratory Outcomes

Participants' demographics.

Participants' self-reported confidence.

Participants' responses to the survey items about their surface disinfecting.

## 11. Study Procedures

The survey were designed by consulting the literature and area experts and informed by a previous unregistered pilot survey. The items are designed to measure participants' demographics, hand-hygiene influencing, surface disinfecting, and self-reported confidence as described below.

*Design.*

- **Survey Section 1: Information/Consent Sheet. (1 item)**

Participants will be informed about the study and asked to give their informed consent before advancing. The information/consent sheet can be viewed in Appendix B.

- **Survey Section 2: Demographic items. (5 items)**

We will ask about participants' individual differences, age and gender.

Dem-Q1: How many years old are you?

Response Option

[drop down box if possible]

- 17 or fewer years old
- 18 – 30 years old
- 31 – 40 years old
- 40 – 50 years old
- 50 – 60 years old
- 61 – 70 years old
- 70 or more years old

An age-related demographic is necessary to confirm participants are of an acceptable age to take part in the survey, i.e. 18 or older.

If a person says '17 or fewer', they will not continue in the survey.

Dem-Q2: Are you employed as a full-time teacher for children from 5 to 10 years old?

Response Option

- Yes
- No

A teacher-employment item is necessary to ensure we include the planned number of teachers in the final survey (see Table 2 on p. 10).

Dem-Q3: Do you identify as a mum or dad of any children from 5 to 10 years old?

Response Option

- No
- Yes, a mum
- Yes, a dad

This parent item is necessary to ensure we include the planned number of mums and dads in the final survey. (see Table 2 on p. 10).

If a person says 'NO' and did not identify as a teacher in Q2, then they will not continue in the survey

Dem-Q4: With which gender do you identify?

Response Option

- Female
- Male
- Other/Prefer not to say

This is a regularly collected demographic, that we collect here because we cannot and will not use Q3 to infer participants genders. Further gender options, e.g. 'binary', are not included because these options do not translate well to all surveyed countries.

[If not teacher] Dem-Q5: Which one of the following best describes you?

Response Option

- Work full-time
- Work part-time
- Retired
- Full-time Home-maker / parent
- Student
- Unemployed
- Other

The work-related item is desirable attribute to better understand the participants in the survey participants in the survey.

- **Survey Section 3: Hand-hygiene influencing.**

Appendix A presents a list of the domains, their definitions, and survey items about hand-hygiene influencing.

The hand hygiene items will appear in a random order.

In the final survey, we aim to assess each of 11 behavioral determinates using at least 3 items that can be responded to with a 5-point Likert scales, where 1=strongly disagree and 5=strongly agree. Some items will be reverse scored to mitigate acquiescence bias.

- **Survey Section 4: Surface disinfecting.**

Appendix A presents a list of the domains, their definitions and survey items about hand-hygiene influencing.

The surface cleaning items will appear in a random order.

In the final survey, we aim to assess each of 11 behavioral determinates using at least 1 item that can be responded to with a 5-point Likert scales, where 1=strongly disagree and 5=strongly agree. Some items will be reverse scored to mitigate acquiescence bias.

- **Survey Section 5: Self-reported confidence (3 items).**

Appendix A also includes three self-confidence items.

The first item regards participants' confidence about how often their children clean their hands when they are present, 0% to 100% of the time. The second item regards participants' confidence about how often their children clean their hands when they are not present, 0% to 100% of the time. The third item regards participants' confidence about how often they clean their own hands, 0% to 100% of the time.

*Translation.*

After creating the initial items in the English language, the research team will ask OpinionHealth to translate them.<sup>1</sup> The same process will occur for the information/consent sheet. The translation process will proceed as describe in Table 1.

Table 1. Translation process

Step	Action
1	The research team will provide OpinionHealth with the initial items.
2	OpinionHealth will translate the items into the non-English language(s)
3	OpinionHealth will back-translate the items to English.
4	OpinionHealth will provide the research team with copies of the translated and back-translated items.
5	The research team will check to be sure that the items' intended meanings have not been lost in translation. If items' meaning are lost, the translation process will be repeated with those items.

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<sup>1</sup>Opinion is a reputable survey company located in the United Kingdom experienced in conducting online surveys in line with all UK and EU regulations and Market Research Society's Code of Conduct, e.g., GDPR. For more information, a link to Opinion Health's website is provided here:  
[http://opinionhealth.com/about\\_us](http://opinionhealth.com/about_us)



*Active survey.*

OpinionHealth will to recruit participants according to a stratified fashion across countries and demographic characteristics, see Table 2.

Table 2. Participants stratified characteristic

<b>Country</b>	<b>Participants</b>
India	375 mums 375 dads 75 teachers
UK	225 mums 225 dads 75 teachers
China	225 mums 225 dads 75 teachers
Australia	225 mums 225 dads 75 teachers
South Africa	225 mums 225 dads 75 teachers
Indonesia	225 mums 225 dads 75 teachers
Saudi Arabia	225 mums 225 dads 75 teachers

The first screen of the online survey will inform participants of the study and request their informed consent to take part (see Appendix B). Those who give their informed consent will continue. Participants who complete the survey will be issued with payment to compensate them for their time in an amount equal to approximately 1 GBP in their home countries currency (varies depending on exchange rates), which they can redeem in the form of amazon gift vouchers or via their personal PayPal accounts.

We will stop collecting survey responses in each country after the planned-sample sizes are achieved or 30 days have passed since that country's survey was activated, whichever comes first.

### **11a. Measurement tools used**

The survey will be designed in stage 1.  
Initial items are described above and in the Appendix A.

### **11b. Data monitoring**

No identifiable information will be collected.

The anonymous data will be transferred in password protected files between collaborators. All collaborating organizations are based in the United Kingdom

The survey will be set up to ensure complete data collection, by reminding participants who forget to answer an item to do so before they advance in the survey. If participants do not wish to answer an item, they can withdraw by simply closing their browser window. Incomplete surveys will not be analyzed.

## **12. Statistical Considerations and Data Analysis**

### **12a. Sample size and statistical power**

The sample-size is designed to support a factor analysis and regression analysis for the hand-hygiene component of the project. The surface cleaning component of the project will be analyzed using descriptive and exploratory methods.

The planned sample size is given in Table 2.

As per standard practice, each domain in the final survey will be captured by at least three items. In addition, a general rule of thumb recommends that collecting responses from 10 to 20 participants for each parameter in the hypothesized model<sup>(18)</sup> with at least 100 participants in each sub-group.<sup>(19,20)</sup> Our planned samples size meets these criteria, with the exception of teachers and this limitation will be noted in any published reports.

The exploratory analyses do not have pre-specified hypotheses and so it is not possible to say how many participants would be required. Cohen (1998) recommends having at least 30 participants in each subgroup.<sup>(21)</sup> Our large sample size should entail having a sufficient number of participants for these exploratory analyses, and the precise number of participants in each will be specified in any publication.

## 12b. Statistical methods

As a reminder, the sample-size is designed to support a factor analysis for the hand-hygiene component of the project. The surface cleaning component of the project will only be analyzed using descriptive and exploratory methods.

Software: The data will be analysed using the most recently available copies of SPSS and SPSS: AMOS.

Descriptive: Frequencies, percentages, averages and confidence intervals will be used to describe the participants' responses and demographics.

Internal Consistency: Cronbach's alphas will be calculated. Items will be removed as necessary to achieve an alpha coefficient of 0.70 or above within each domain; those coefficients as low as 0.65 will be tolerated if necessary to retain the planned model.

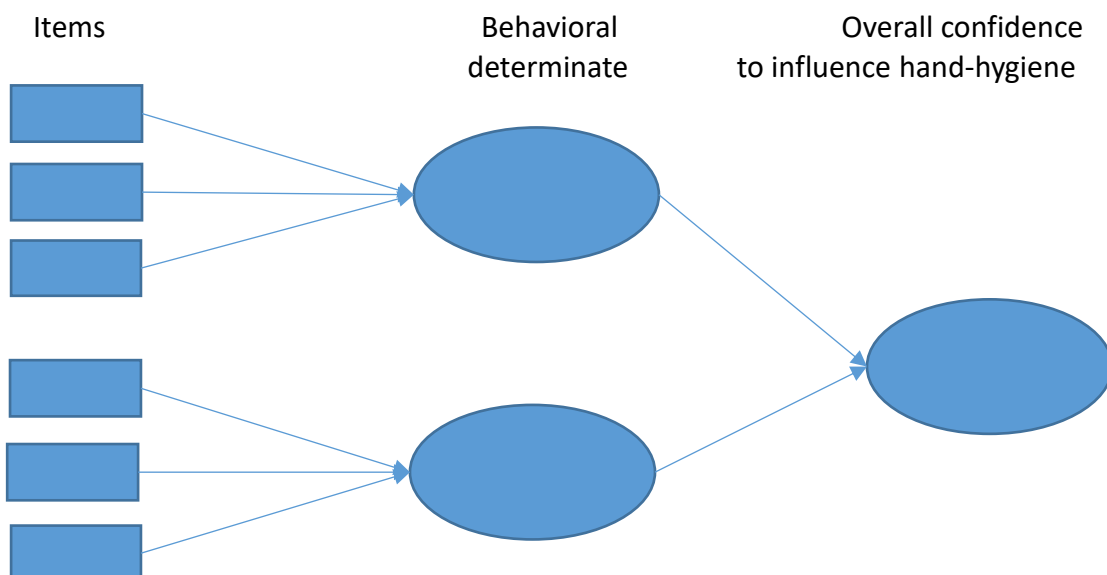
Confirmatory Factor Analyses (CFA) - Objective 4: CFA will be performed to test whether the data from the items fit within the pre-determined components.

The first models (the primary analyses) will be conducted with the data from all the countries and then additional models (the secondary analyses) will be conducted with each country.

The models will be specified in AMOS and tested for goodness of fit using three indices: (a) absolute fit (based on a Chi-squared to degrees of freedom ratio, less than 2; <sup>22</sup>), (b) parsimony (based on Root Mean Square Error of Approximation (RMSEA) of close to or less than 0.06), and comparative fit (based on an index 'close to' 0.95; <sup>23</sup>). The models may be revised until the desired measures of fit are obtained.

Figure will be created to describe the final models' structure. An example of a figure like this with only 2 determinates appears below (Figure 2):

Figure 2. Example of a CFA model



Regression analyses - Objective 5: Multiple regression analysis will be conducted, overall and for each country. The predictors will be participants' average responses to each behavioural determinate, and the outcome will be participants' average responses to the confidence items. An alpha value of 0.05 will be used to assess each predictors' contribution to the overall model.

Exploratory Analyses - Objective 6: The participants' individual differences will be compared using graphical analyses (bar charts with error bars) and statistical tests (e.g., ANOVAs). Their content is not further specified within this protocol.

### **13. Collaborators**

This study is designed and will be conducted in collaboration with academic researchers, Reckitt Benckiser and Spink Health. Reckitt Benckiser (RB) is a British multinational consumer goods company that makes products like Dettol. Spink Health is a healthcare agency that creates and executes inspirational campaigns. All collaborators contributed to the protocol. Spink Health is charged with writing the corporate report back to RB, with the academic team acting as consultants. The academic team are charged with writing an academic report for publication in an academic press.

### **14. Acknowledgment statement**

The funder and collaborators support will be acknowledged in reports/presentations with the following message: *This research was funded by the Global Hygiene Council and designed in collaboration with Reckitt Benckiser Group plc and Spink Health. The analyses were conducted solely by academic team, and the views expressed in the article are those of the authors and do not necessarily represent the views of the funder.*

### **15. Ethical Considerations**

This study will be approved by the University's ethical review board before data collection begins.

Note that the study should be considered low risk to participants, as the survey data will be completely anonymously, the content is not sensitive and participants' can easily withdraw by closing their browser window.

Appendix A. Survey items (finalized 09-Apr-2020)

Domain	Question Number	Handwashing Surface Disinfection	Parents	Teachers
<b>Knowledge</b> An awareness of the existence of something	1	H	I know that my children should wash their hands with soap and water for at least 20 seconds.	I know that my <b>pupils</b> should wash their hands with soap and water for at least 20 seconds.
	2	H	(RS) I do not know when my children should wash their hands with soap and water.	(RS) I do not know when my <b>pupils</b> should wash their hands with soap and water.
	3	H	(RS) I know that when my children's hands look clean, they are germ free.	(RS) I know that when my <b>pupils</b> hands look clean, they are germ free.
	4	SD	(RS) I know that when surfaces look clean, there are no germs.	(RS) I know that when surfaces look clean, there are no germs.
	5	SD	I know which surfaces I should disinfect in the home.	I know which surfaces I should disinfect in the <b>classroom</b>
<b>Skills</b> An ability or proficiency acquired through practice	6	H	I am able to teach my children to wash their hands.	I am able to teach my <b>pupils</b> to wash their hands.
	7	H	I am able to help my children develop good handwashing habits.	I am able to help my <b>pupils</b> develop good handwashing habits.
	8	H	(RS) I am not able to teach my children to wash their hands.	(RS) I am not able to teach my <b>pupils</b> to wash their hands.
	9	SD	I have the ability to disinfect surfaces in the home.	I have the ability to disinfect surfaces in the <b>classroom</b>
	10	SD	(RS) I do not have the ability to disinfect some of the surfaces in the home.	(RS) I do not have the ability to disinfect some of the surfaces in the <b>classroom</b>
<b>Memory, attention and decision processes</b> The ability to retain information, focus selectively on aspects of the environment and choose between two or more alternatives	11	H	I remind my children to wash their hands before eating.	I remind my <b>pupils</b> to wash their hands before eating.
	12	H	(RS) I forget to remind my children to wash their hands.	(RS) I forget to remind my <b>pupils</b> to wash their hands.
	13	H	(RS) There are many distractions that cause me to forget to remind my children to wash their hands.	(RS) There are many distractions that cause me to forget to remind my <b>pupils</b> to wash their hands.
	14	SD	I remember to disinfect the surface areas in my home every day.	I remember to disinfect the surface areas in the <b>classroom</b> every day.
	15	SD	(RS) I forget to disinfect the surface areas in my home.	(RS) I forget to disinfect the surface areas in the <b>classroom</b> .
<b>Behavioural regulation</b> Anything aimed at managing or changing objectively observed or measured actions	16	H	I check that my children have washed their hands before they eat food to encourage their future hand hygiene.	I check that my <b>pupils</b> have washed their hands before they eat food to encourage their future hand hygiene.
	17	H	(RS) I do not always check if my children wash their hands before eating food.	(RS) I do not always check if my <b>pupils</b> wash their hands before eating food.
	18	H	(RS) I do not always check if my children wash their hand after going to the toilet.	(RS) I do not always check if my <b>pupils</b> wash their hand after going to the toilet.
	19	SD	28. I keep track of whether I have disinfected surfaces in the home.	28. I keep track of whether I have disinfected surfaces in the <b>classroom</b> .
	20	SD	29. (RS) I don't keep track of whether I have disinfected surfaces in my home.	29. (RS) I don't keep track of whether I have disinfected surfaces in the <b>classroom</b> .
<b>Social/professional role and identity</b> A coherent set of behaviours and displayed personal qualities of an individual in a social or work setting	21	H	It is part of my role as a parent to teach my children to wash their hands.	It is part of my role as a <b>teacher</b> to teach my <b>pupils</b> to wash their hands.
	22	H	(RS) It is not my role in society to teach my children to wash their hands.	(RS) It is not my role in society to teach my <b>pupils</b> to wash their hands.
	23	H	(RS) It is not my role in society to tell my children to wash their hands.	(RS) It is not my role in society to tell my <b>pupils</b> to wash their hands.
	24	SD	It is my role as a parent in society is to disinfect surfaces in my home	It is my role as a <b>teacher</b> in society is to disinfect surfaces in my <b>classroom</b>
	25	SD	I feel a social responsibility to disinfect surfaces in my home.	I feel a social responsibility to disinfect surfaces in the <b>classroom</b>
<b>Beliefs about capabilities</b> Acceptance of the truth, reality, or validity about an ability, talent, or facility that a person can put to constructive use	26	H	I believe my children would listen to me if I taught them to wash their hands	I believe my <b>pupils</b> would listen to me if I taught them to wash their hands
	27	H	(RS) I do not believe I can control whether my children wash their hands.	(RS) I do not believe I can control whether my <b>pupils</b> wash their hands.
	28	H	I believe that I can tell my children to wash their hands with soap and water.	I believe that I can tell my <b>pupils</b> to wash their hands with soap and water.
	29	SD	I believe that I am capable of disinfecting surfaces in my home.	I believe that I am capable of disinfecting surfaces in the <b>classroom</b> .
	30	SD	(RS) I believe that there is little I can do to disinfect surfaces in my home.	(RS) I believe that there is little I can do to disinfect surfaces in the <b>classroom</b>
<b>Beliefs about consequences/ Optimism / Reinforcement</b> (Belief) Acceptance of the truth, reality, or validity about outcomes of a behaviour in a given situation (Optimism) The confidence that things will happen for the best or that desired goals will be attained (Reinforcement) Increasing the probability of a response by arranging a dependent relationship, or contingency, between the response and a given stimulus	31	H	I believe that telling my children to wash their hands with soap and water will protect them from falling ill.	I believe that telling my <b>pupils</b> to wash their hands with soap and water will protect them from falling ill.
	32	H	(RS) I believe that children's handwashing habits have little effect on whether they get ill.	(RS) I believe that <b>pupil's</b> handwashing habits have little effect on whether they get ill.
	33	H	(RS) I believe that teaching my children to wash their hands is not worthwhile.	(RS) I believe that teaching my <b>pupils</b> to wash their hands is not worthwhile.
	34	SD	I believe that if I disinfect my home, my children will all fall ill less often.	I believe that if I disinfect the <b>classroom</b> my <b>pupils</b> will all fall ill less often.
	35	SD	(RS) I believe that disinfecting my home has no effect on how often my children get ill.	(RS) I believe that disinfecting my <b>classroom</b> has no effect on how often my <b>pupils</b> get ill.
	36	H	I intend to keep reminding my children to wash their hands before eating.	I intend to keep reminding my <b>pupils</b> to wash their hands before eating.

<b>Intentions / Goals (referred to as: action plans in Dyson et al)</b> (Intentions) A conscious decision to perform a behaviour or a resolve to act in a certain way (Goals) Mental representations of outcomes or end states that an individual wants to achieve	37	H	I intend to keep reminding my children to wash their hands after going to the toilet.	I intend to keep reminding my <b>pupils</b> to wash their hands after going to the toilet.
	38	H	(RS) I do not intend to teach my children to wash their hands.	(RS) I do not intend to teach my <b>pupils</b> to wash their hands.
	39	SD	I intend to regularly disinfect surfaces in my home.	I intend to regularly disinfect surfaces in the <b>classroom</b> .
	40	SD	(RS) I do not intend to regularly disinfect surfaces in my home.	(RS) I do not intend to regularly disinfect surfaces in the <b>classroom</b> .
<b>Emotion</b> A complex reaction pattern, involving experiential, behavioural, and physiological elements, by which the individual attempts to deal with a personally significant matter or event	41	H	(RS) Teaching my children to wash their hands is frustrating.	(RS) Teaching my <b>pupils</b> to wash their hands is frustrating.
	42	H	(RS) Reminding my children to wash their hands is tedious.	(RS) Reminding my <b>pupils</b> to wash their hands is tedious.
	43	H	I enjoy praising my children for washing their hands.	I enjoy praising my <b>pupils</b> for washing their hands.
<b>Environmental context and resources</b> (Any circumstance of a person's situation or environment that discourages or encourages the development of skills and abilities, independence, social competence, and adaptive behaviour)	44	H	(RS) There is not enough time for my children to wash their hands.	(RS) There is not enough time for my <b>pupils</b> to wash their hands.
	45	H	There are practical resources available in my home for my children to wash their hands.	There are practical resources available in my <b>school</b> for my <b>pupils</b> to wash their hands.
	46	H	There are practical resources like running water, available in my home for my children to wash their hands.	There are practical resources like running water, available in my <b>school</b> for my <b>pupils</b> to wash their hands.
	47	SD	(RS) I don't have the time to disinfect surfaces in my home.	(RS) I don't have the time to disinfect surfaces in the <b>classroom</b> .
	48	SD	I have the materials in my home to disinfect surfaces in my home.	I have the materials at my <b>school</b> to disinfect surfaces in the <b>classroom</b> .
<b>Social influences</b> (Those interpersonal processes that can cause individuals to change their thoughts, feelings, or behaviours)	49	H	People around me (such as my partner, family and friends) remind children to wash their hands.	<b>My colleagues</b> remind <b>pupils</b> to wash their hands.
	50	H	Most people in my culture practice good handwashing habits.	Most people in my culture practice good handwashing habits.
	51	H	(RS) It doesn't matter how clean my children's hands are if other people's children are not.	(RS) It doesn't matter how clean my <b>pupil's</b> hands are if other <b>children's</b> are not.
	52	SD	People around me (such as my partner, family and friends) encourage me to disinfect my home.	<b>My colleagues</b> encourage me to disinfect the <b>classroom</b> .
	53	SD	(RS) Few people around me (such as my partner, family and friends) disinfect surfaces in their homes.	(RS) Few of my <b>colleagues</b> disinfect surfaces in the <b>classroom</b> .
Self Confidence Questions		Self confidence	When your [children/pupils] can see you watching them, what percentage of the time do they wash their hands with soap and water after going to the toilet and before eating? [response options 0 - 100%]	When your [children/pupils] can see you watching them, what percentage of the time do they wash their hands with soap and water after going to the toilet and before eating? [response options 0 - 100%]
		Self confidence	When your [children/pupils] cannot see you watching them, what percentage of the time do they wash their hands with soap and water after going to the toilet and before eating? [response options 0 - 100%]	When your [children/pupils] cannot see you watching them, what percentage of the time do they wash their hands with soap and water after going to the toilet and before eating? [response options 0 - 100%]
		Self-confidence	What percentage of the time do you wash your own hands with soap and water after going to the toilet and before eating? [response options 0-100%]	

## Appendix B. Information sheet



Information/Consent Form  
Ethics Approval Date: 17-Feb-2020  
Version Number: 2.2, 23-Jan-2020

### **A survey to understand what influence handwashing and surface disinfecting**

We invite you to take part in an anonymous survey to understand what influences adults disinfecting behaviours around the world. My name is Dr Ken Drinkwater, and I am a senior lecturer in the psychology department at Manchester Metropolitan University.

**Eligibility?** To be eligible for this survey you should:

- be 18 years or older;
- identify as a female or male; and
- be either a teacher or parent of children between 5 and 10 years old.

**Do I have to take part?** It is up to you to decide. You can withdraw at any time, for any reason, by closing your browser. However, we are only able to compensate you for your time if you complete the survey.

**What will I do?** The survey may take about 20 minutes to complete. You will answer questions about factors that influence your hand-hygiene, surface cleaning behaviours, and demographics. There are no foreseen personal risks or benefits.

**Is the survey anonymous?** Yes. Note that once your responses have been submitted, it will not be possible to withdraw your data because your individual responses cannot be identified.

**What will you do with the data?** The anonymous data you provide may inform the design of a real-world intervention to increase hygiene; be published as an academic report; and/or be presented at academic workshops.

This project has been reviewed and given favourable opinion to conduct by Manchester Metropolitan University's ethics committee. If you have any questions, comments or concerns about this research you may contact the principle investigator ([K.Drinkwater@mmu.ac.uk](mailto:K.Drinkwater@mmu.ac.uk)) or the faculty ethics contact (Prof Juliet Goldbart at [j.goldbart@mmu.ac.uk](mailto:j.goldbart@mmu.ac.uk)). If you have any concerns regarding the personal data collected from you, our Data Protection Officer can be contacted using the [legal@mmu.ac.uk](mailto:legal@mmu.ac.uk) e-mail address, by calling 0161 247 3331 or in writing to: Data Protection Officer, Legal Services, All Saints Building,

Manchester Metropolitan University, Manchester, M15 6BH. You also have a right to lodge a complaint in respect of the processing of your personal data with the Information Commissioner's Office as the supervisory authority. Please see: <https://ico.org.uk/global/contact-us/>

Thank you for considering participating in this project.

To indicate your informed consent to participate, please click 'yes' below and then click forward. Otherwise, please exit the survey now.

- Yes, I indicate my informed consent to participate
- No thank you



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