Perceptions of Air Quality Amongst Children and Young People

Community Research Report

PREPARED FOR

RCPCH
Royal College of Paediatrics and Child Health
Leading the way in Children's Health

FEBRUARY 2025

Kaizen Partnership

Contents

Background

The background to this research was written by the Royal College of Paediatrics and Child Health (RCPCH) and set out the project, its context and aims for the Clean Air Fund that paid for it:

> *According to the World Health Organisation, climate change is the biggest health threat facing humanity. In the UK, air pollution is the largest environmental risk to public health and the biggest driver of climate change. Children are especially vulnerable to air pollution, which can lead to asthma in childhood, and exposure to poor air quality has lifelong implications for an individual's potential.*
>
> *Asthma is the most common long-term condition among children, with 1.1 million children in the UK currently receiving asthma treatment. It continues to be among the top ten causes of emergency hospital admission for children and young people in the UK.*
>
> *As part of RCPCH's role in advocating for children and young people and promoting their health and wellbeing, we have a responsibility to engage in activities to address climate change.*
>
> *The nature of policymaking being increasingly results driven means that it is hard to get governments to focus on longer-term issues, such as the impact of climate change. In addition, traditionally, children and young people are not a priority in policy making, and they do not have a strong voice or a seat at the table.*
>
> *A key barrier to improving the quality of our air is getting the voices of children and young people (who will be impacted the most across their lifetime) heard and securing commitment to policy change.*
>
> *RCPCH is the membership body for paediatricians in the UK and around the world, with over 22,000 members in the UK and internationally (22% of RCPCH members are based outside the UK across 88 countries).*
>
> *In March 2021, RCPCH established a Climate Change Working Group, consisting of around 80 College members passionate about reducing the impact of climate change on child health. We recognise the importance of using our collective professional voice to support and encourage governments and policy-makers globally to take action.*

Project Overview

As some of the most trusted messengers in society, health professionals can play a crucial role in protecting people's health – especially that of some of the most vulnerable people who come through the door of the health service every day.

Vision: *Our vision is for child health (and children and young people's voices) to be a central driver for mitigation and adaptation actions to tackle climate change and air pollution, and for child health professionals in the UK and internationally to be equipped with the tools and skills they need to champion policy change for cleaner air.*

Theory of change: *This project will equip paediatricians and child health professionals in the UK and internationally with information and skills to champion policy change for cleaner air. Their advocacy will lead to climate change being recognised as a child rights issue by policy-makers. Child health will become a central driver for mitigation and adaptation actions to tackle climate change and air pollution.*

Objectives of the RCPCH Clean Air Fund Partnership Project

1. ***Advocacy:*** *To effectively use child health professionals' collective voice and expertise to influence the national and international climate change agenda, focusing on the health impacts of air pollution faced by children and young people now and in future.*

2. ***Education:*** *To develop and promote training and best practice for RCPCH members on air pollution, climate change and sustainable healthcare, including communication about the health harms with patients, families and communities.*

3. ***Research****: To advance and support the narrative that all children have a right to breathe clean air and amplify children's and young people's own voices on this topic, particularly those in most affected communities.*

About Kaizen

The research was delivered by The Kaizen Partnership (Kaizen).

Kaizen, founded in 2000, is an award-winning social business that specialises in designing, delivering and facilitating cutting edge projects. Kaizen delivers work across the community sector including the areas of regeneration, education, employment, housing and the social care field. Kaizen has wide-ranging community engagement, research and consultation expertise, including as specialists in engagement of children and young people.

Research Aims

The following research aims were developed in collaboration with RCPCH:

Overarching Questions

- How can children and young people's voices be a central driver for mitigation and adaptation actions to tackle climate change and air pollution?
- How can child health professionals in the UK and internationally be equipped with the tools and skills they need to champion policy change for cleaner air?

Primary Research Questions

- How aware are children and young people (CYP) of the health importance of clean air?
- To what extent are CYP concerned about air quality in their area?
- What do CYP know about the health consequences of poor air quality?
- What do CYP know about the causes of poor air quality?
- What do CYP know about what can be done to improve local air quality (outdoor and indoor)?
- Is there interest amongst CYP to have their voices heard to campaign for clean air (to be advocates for clean air)?
- What would motivate and enable CYP to be clean air advocates, and what are the barriers?

Secondary Research Questions

- Do CYP believe that access to clean air should be seen as a human right?
- Is air quality an issue that has been raised with CYP in schools or health care settings?
- What ideas do CYP have around how to promote clean air activities in their area?
- How would CYP like to receive information about air quality issues?

Approach and Methodology

Engagement Targets

- Engage with a minimum of 350+ children, young people (CYP) face to face
- Deliver engagement in 8 cities and towns in the UK across all four nations (2 days engagement in each country)
  - Locations would be selected based on having poor air quality, higher deprivation and to ensure diversity of CYF engaged
- In each area a range of children and young people would be engaged, including:
  - Primary and secondary age and those at university
  - Children and young people who are care experienced and/or have health conditions and/or experience specialist school provision

Engagement methods and locations

- Outreach based face to face engagement with CYP
  - Individual and small group conversations
- School and university engagement – using a workshop methodology
- Hospital engagement – using a workshop methodology

Locations (see Appendix 2 for Locations table)

- Several measurement challenges emerged when exploring the available data on air quality in the UK.
  - The data on air quality is complex, and there are different ways to measure air quality (e.g., pollutants tied to human and environmental health impacts include PM2.5, PM10, ground-level ozone, nitrogen dioxide and sulphur dioxide).
  - The supplementary World Health Organisation dataset for the UK (2022) around air quality offers data on all three above.
  - Recent research also shows that air pollution is an issue across the UK. For instance, cities are experiencing air pollution issues from farming (Maraise and Kelly, 2023).
- In selecting locations across the UK, we were conscious of the need to have locations which included:
  - Urban and rural areas.
  - Communities with a mix of ethnic backgrounds.
  - Areas of higher deprivation in towns and/or cities.
- Across the areas, a range of children and young people would be engaged:
  - Primary and secondary age (those in care up to age 25).
  - Young people at university.
  - Children and young people who are care experienced and/or have health conditions and/or experience specialist school provision.
- Considering capacity and making best use of resources, locations were selected to be within easy travelling distance from one another.

England

- The rationale for the selected locations is as follows:
  - Nottingham has some of England's highest levels of deprivation. It is also an urban area and is ethnically diverse.
  - Birmingham also has some of England's highest levels of deprivation. It is also an urban area and is ethnically diverse.
  - Manchester is also urban and ethnically diverse. It is significantly deprived and has the worst levels for asthma admissions in under 19's. It is located in the north.
  - These three cities were selected to ensure that the voices of CYP from broad groups of ethnic minorities could be captured. In the selected areas across the other nations, there will be much less ethnic diversity, so England locations prioritise ethnic diversity of the urban/rural parameters.

Scotland

- The rationale for the selected locations is as follows:
  - Glasgow has some of Scotland's highest levels of deprivation and air pollution and is an urban area.
  - Paisley is a town near Glasgow, with an airport nearby. Paisley has moderate levels of deprivation.

Wales

- The rationale for the selected locations is as follows:
  - Newport is a city in Wales with both air pollution and deprivation issues.
  - Port Talbot is a town with areas of deprivation and issues with air quality.

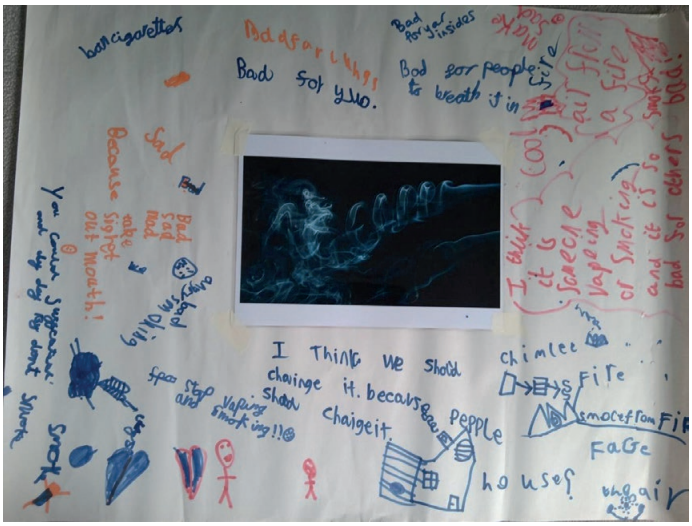
Northern Ireland

- The rationale for the selected location is as follows:
  - Derry/Londonderry has some of Northern Ireland's highest levels of deprivation and some issues with air pollution and is an urban area.

What we did

We developed an engagement strategy first by collating databases for primary and secondary schools in all 8 locations across all four nations that were in a 10-mile radius of the centre of each city and town that had been selected. We used these databases to engage schools, first by sending them an email outlining the project and then following up with a call.

Kaizen's approach is to use a mixed methodology where we use both qualitative and quantitative methods to engage children and young people. We engaged with children and young people in workshops at schools and in street consultations using surveys. Using this mix of methodologies, we spoke with a wide range of ages, the youngest of which were 5 and the oldest of which were 21. By drawing on a broad methodology we were able to meet children and young people where they were at and adapt our tools to meet their needs. As such we were also able to engage with children and young people who are in specialised educational provision and capture their voices for this project.



We go beyond hearing from the usual suspects and as such our engagement delivery team were able to run workshops with diverse groups of children and young people across the UK. Most workshops such as those in hospital school provisions were with small groups of children and young people, but two were with full year groups of around 40 students at a time. As a result of our engagement strategy, we were able to engage with children in 6 mainstream primary schools, 3 secondary schools, 1 all through school and 2 specialist educational provisions for children with additional needs. We also spoke to children and young people at hospitals across the four nations as well as at 3 major universities, local libraries, cafes and spaces and youth centres.

About the data

Approach to analysis

We analysed both qualitative and quantitative data resulting from the various engagement methodologies. Quantitative data and findings in this report (unless otherwise stated) are drawn from individual conversations only. For charts, and in text, figures have been rounded to the nearest whole number so on occasion the total is other than 100%. Statistics relate to the total percentage of people who answered a particular question, rather than to the total number engaged, as not all questions were answered by everyone. The term 'base', which we list below each table or chart, refers to the number of people who responded to that specific question.

For the qualitative data in the "open" survey questions, we used thematic analysis to uncover the issues and themes raised. Thematic analysis is a qualitative analytical method which searches for themes or patterns in the data. It is a method suitable for a wide range of research questions but is particularly appropriate for questions around people's experiences, views and perceptions. To identify themes, we used the principles of 'grounded theory'. The phrase 'grounded theory' refers to theory that is developed inductively from a body of data, rather than from the preconceptions of the researchers. Statistics and proportions that are included as part of the thematic analysis also relate to the total percentage of people who answered a particular question, rather than the total number engaged.

In Northern Ireland a slightly different question set was used and so it hasn't been possible to combine responses from Northern Ireland with those from other parts of the UK. For this reason, unless otherwise specified, the charts and stats refer to CYP views in England, Scotland and Wales and the views of CYP in Northern Ireland are shared after the charts.

Quotes are drawn from both individual and small group conversations.

Notes of caution regarding the data

There are some important things to note regarding the data resulting from this engagement:

- This engagement was not designed to be demographically representative of the areas where the engagement took place. Instead, it specifically targeted views from children and young people in specific settings as described above.
- It should be noted that some sub-groups that are referenced in the covariate analysis in this report are quite small (fewer than 100 individuals). Based on this group size, it is important not to assume that the views represent the sub-group as a whole but may be indicative. Additionally, some subgroups were *very* small (fewer than about 20 individuals). In some cases, these subgroups were excluded from the tables and charts, as presenting findings from such small groups can be misleading. In other cases, subgroups were combined (for example, grouping all ages 17 and up for the sake of covariate analysis). Views from small subgroups should be taken with extreme caution, and should not be relied upon as being reflective of the overall subgroup.
- Normally, in covariate analysis it is not possible to include views shared within a small group format, because it is not possible to ascribe a particular view or response to a specific person (and thus to that person's demographic characteristics). However, because many of the group conversations were homogeneous in composition (all being within the same age group, or of the same ethnicity, for example), it could logically be deduced that any views shared in the small group were shared by a person of that age or ethnicity. Therefore, views shared within small groups of this kind were filtered and included in the covariate analysis. Views shared within small groups of a mixed composition (composed of a mix of ages or ethnicities) have not been included in the covariate analysis.
- In the qualitative analysis, we have included an indication of the number of people who shared views on each question, including the number of children and young people in group conversations. 11 of these

group conversations involved secondary school students who also completed individual questionnaires. Their comments in the group conversations have been included in the open analysis, but the number of students has not been included in the overall total number of people who shared views on this question, to avoid double counting.

Regarding language around ethnicity

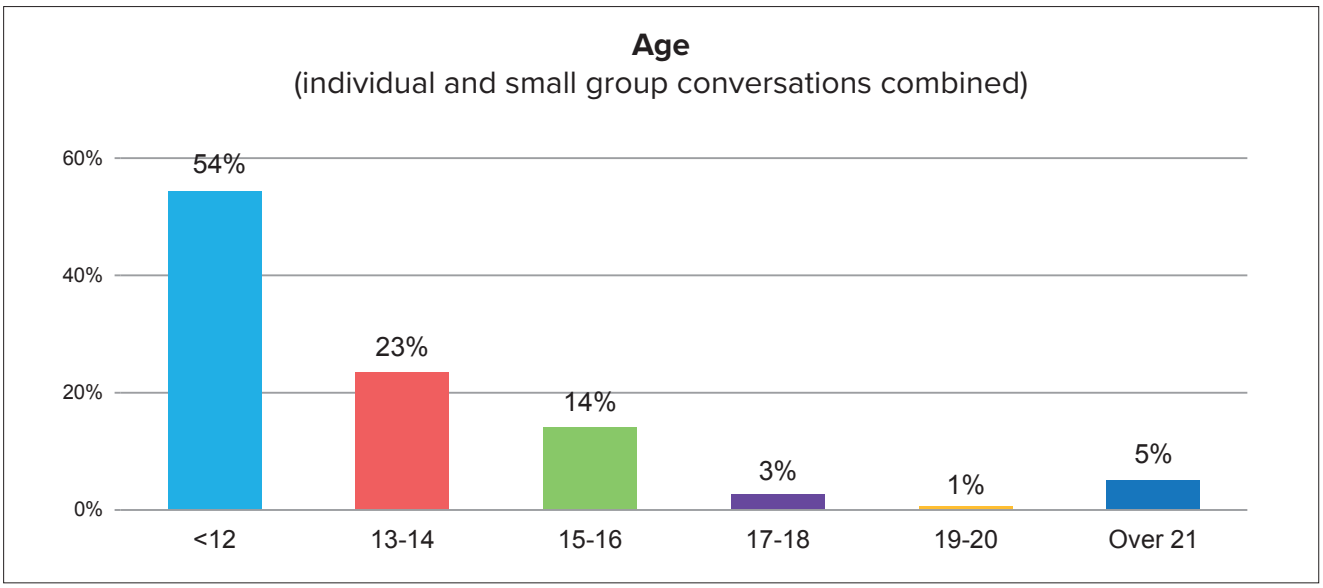
Throughout the analysis, we use the term "ethnicity" to refer to broad groupings reflecting people's racial or ethnic background. We use this term broadly, recognising that the categorisation of people by race or ethnicity is a complex one, and which people interpret differently. Our use of the term "ethnicity" and the groupings therein are intentionally broad in order to encompass race, ethnicity, lived cultural experience, and other factors that people may self-ascribe. This is also in keeping with the language used in the UK Census, in which questions about racial or ethnic background are framed through the lens of ethnicity rather than race in order to accommodate this wider meaning.

Who we spoke with

- 1077 children and young people were engaged:
  - 69 in individual conversations through street outreach
  - 339 secondary school pupils completed an individual paper questionnaire
  - 669 young people were engaged in 57 group conversations or workshops
    - Some of these group conversations took place through community engagement, in hospitals, or with a youth organisation
    - The majority of group conversations took place in primary and secondary schools' workshops

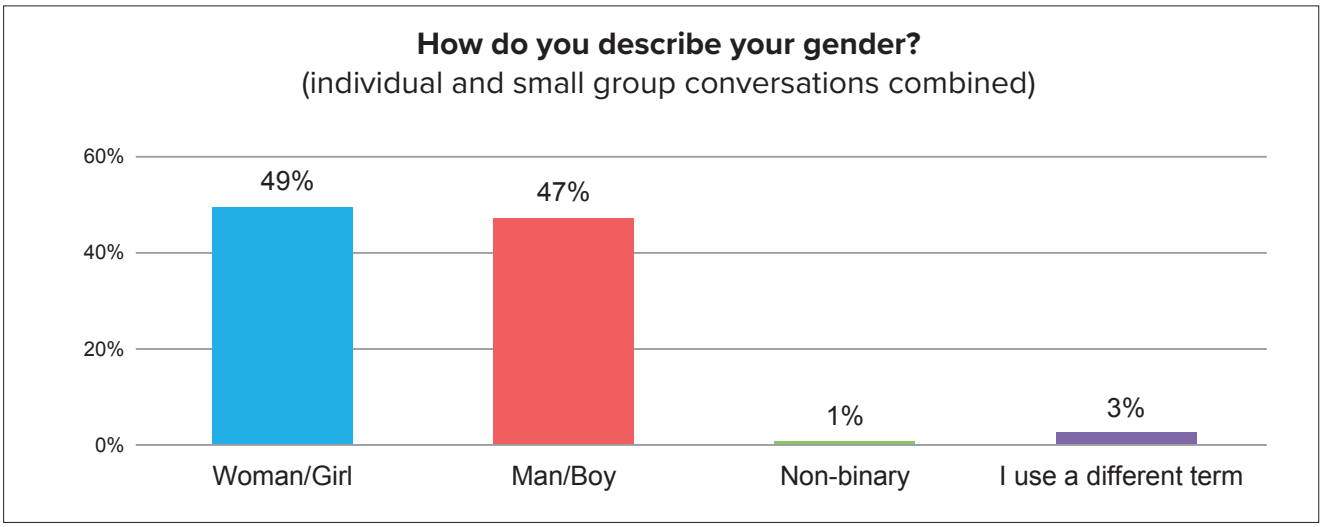
Age

Young people of a range of ages were engaged, with over half under the age of 12.



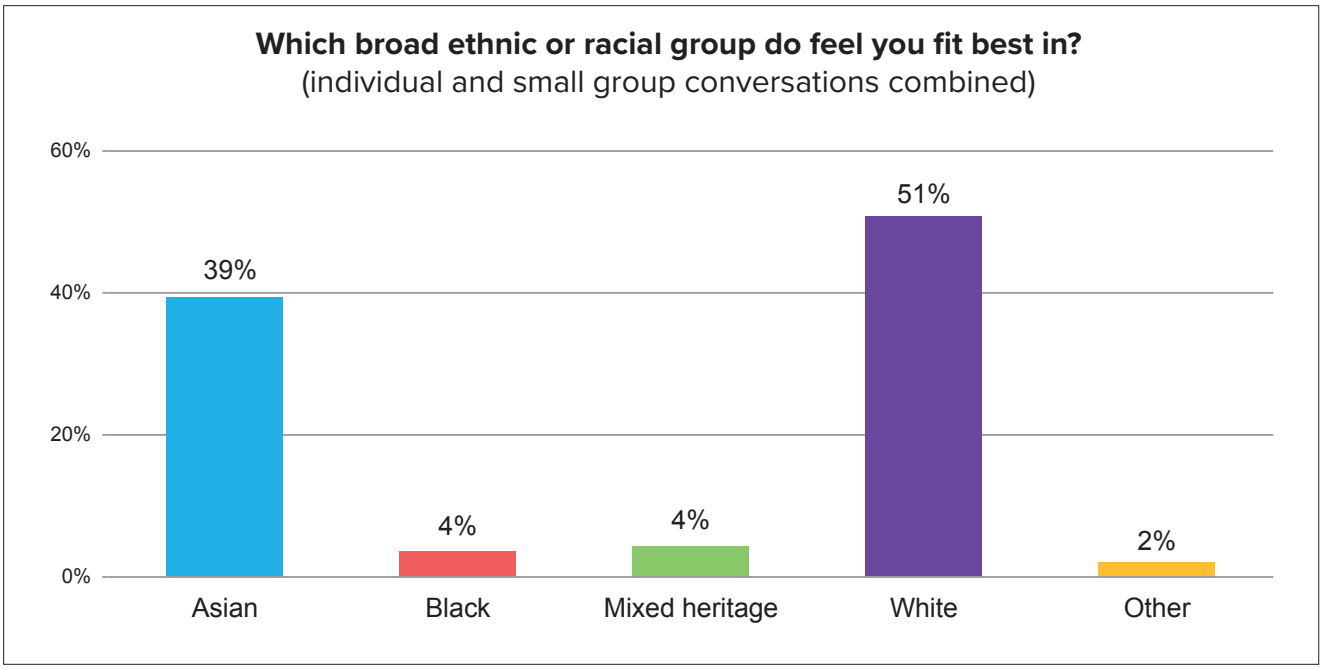
Base: 924 (378 individuals + 546 in small group conversations)

Gender identity



Base: 924 (390 individuals + 534 in small group conversations)

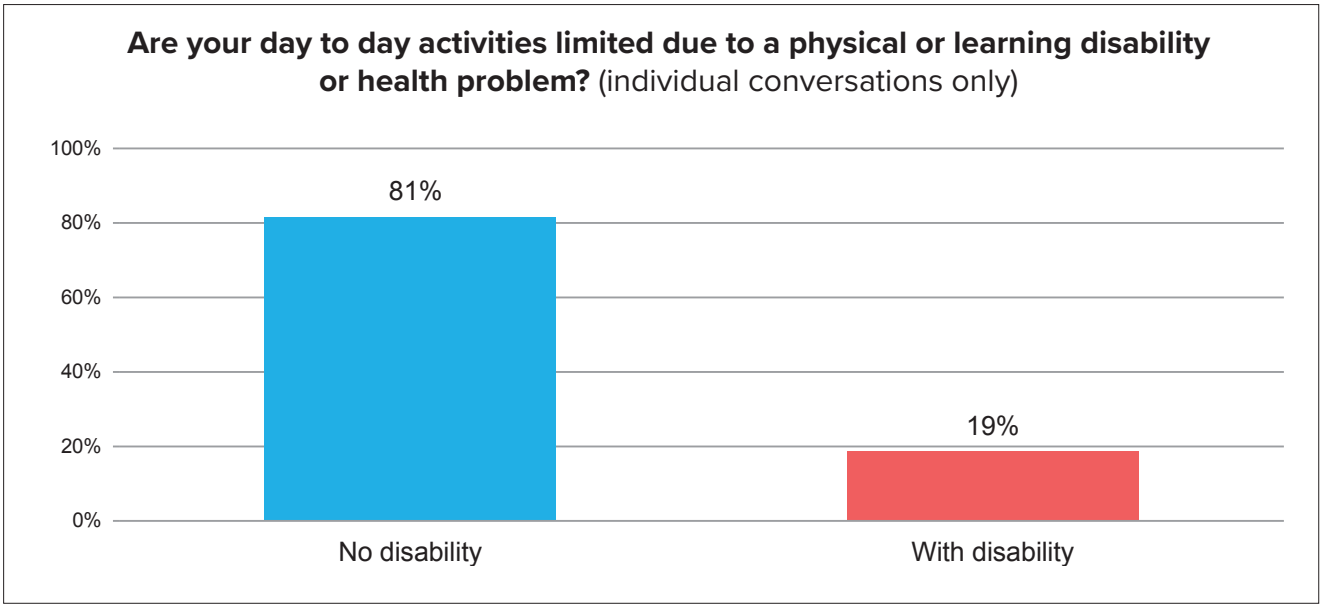
Ethnicity



Base: 907 (399 individuals + 508 in small group conversations)

Disability

19% considered themselves to have a disability or health problem that affects their day-to-day activities (383 people answered this question).



Base: 383 individuals

Region and Setting

Engagement took place in across various regions of the UK, as shown below:

Region	**Total number engaged** (Individual and group conversations combined)	**%**
Birmingham	144	13%
Manchester	202	19%
Nottingham	310	29%
Derry/Londonderry	123	11%
Glasgow	53	5%
Paisley	31	3%
Newport	76	7%
Port Talbot	138	13%
Total	**1077**	**100%**

Children and young people were also engaged in a range of settings, mostly in schools:

Setting	**Total number engaged** (Individual and group conversations combined)	**%**
School	931	86%
Town Centre / Other	53	5%
University	50	5%
Hospital	28	3%
Youth group	15	1%
Total	**1077**	**100%**

Key stats and headline findings

Who was engaged

- 1077 children and young people were engaged (the original target was 350 CYP)
- 339 secondary school students completed individual surveys
- 669 children and young people were engaged in 57 group conversations and/or workshops
- Engagement took place in
  - 7 Primary Schools
  - 5 Secondary Schools
  - 1 all through school
  - 2 specialist education provisions for children with additional needs
  - 4 hospitals
  - 3 Universities
  - Community settings such as libraries, cafes, youth centres
- Engagement happened in England (Birmingham, Manchester, Nottingham), Northern Ireland (Derry/Londonderry), Scotland (Glasgow, Paisley) and in Wales (Newport and Port Talbot)

Concern about air quality as an issue

- 47% were concerned about air quality as an issue (26% said very concerned)
- 30% were not concerned and 23% had never thought about it before
- Under 12's and over 17's were far more likely to be very concerned than 13-16 year olds
- 45% also said they felt concerned about the climate emergency (25% were neutral, 14% were not concerned and 15% didn't know)

Should clean air be a human right

- 81% thought clean air should be a human right, and 64% said definitely (17% said possibly)
- Only 5% thought it should not be a human right and 14% were not sure
- A majority of all sub-groups thought it should be a human right
- Under 12's and over 17's were more likely to feel strongly that it should be a human right than 13-16 year olds

Knowledge about clean air topics

- 25% said they felt well informed about air quality as an issue (33% were neutral, 28% said they were not well informed and 13% didn't know)
- 58% said they had learned about air quality and air pollution at school or from health providers (21% were not sure and 21% said they had not learned about it)

Perception of local and national air quality

- 31% thought that air quality in the UK was generally good (39% were not sure, 16% thought it was not good, and 14% didn't know)
- 31% thought that air quality in their area was good (17%) or very good (15%). 32% were not sure, 21% thought it was poor/very poor and 16% did not know
- 4 out the top 5 perceived causes of air pollution in their area involved petrol or diesel vehicles
- 35% believed that air quality is only poor in cities (27% were neutral, 23% disagreed and 15% didn't know)

Connection between health and poor air quality

- 82% said they believed there was a connection between air pollution and health problems (59% said definitely, 23% possibly). 12% were not sure and 6% did not think there was a connection
- In comments, the most commonly mentioned conditions impacted by air pollution were respiratory conditions. Other conditions mentioned included heart problems, cancer, skin conditions, infectious diseases, eye problems, allergies, and organ function, as well as mental health issues and shortened life expectancy.

Improving air quality

- 53% of individual responses said they believed that things can be done to improve air quality and reduce pollution (22% were neutral, 13% thought this couldn't be impacted and 12% didn't know)
- The main suggestions for how to improve outdoor air quality and reduce pollution were increasing green transportation, green spaces, renewable energy, green policies and regulations, and sustainable consumption.
- The main suggestions for how to improve indoor air quality were ventilation; using devices to improve air; having indoor plants; avoiding producing indoor pollution by limiting smoke, chemical sprays, and aerosols, and avoiding domestic gas burners; reducing energy use; and cleaning to reduce mould and dust.

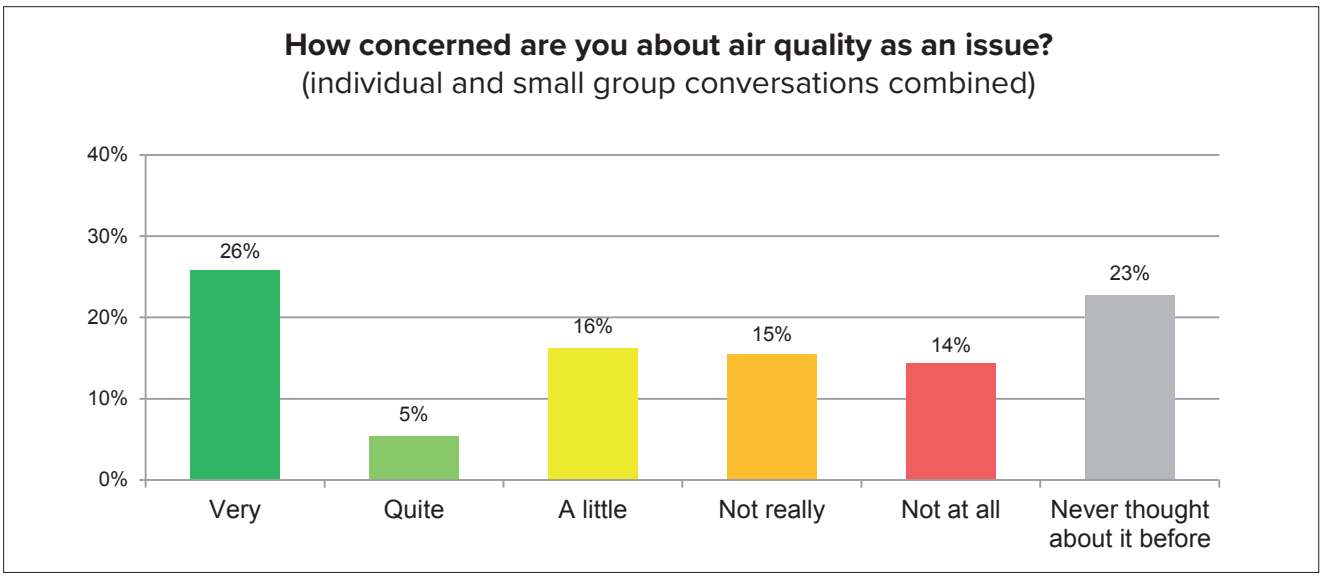
Youth voice and being involved

- 77% said that it was important for children and young people's views on improving air quality to be listened to by people in power (57% said definitely and 20% possibly). 10% thought it wasn't important and 13% were not sure
- 36% said they could be interested in getting involved to improve air quality (14% said definitely and 23% possibly). A further 23% were not sure.

General perceptions of air quality as an issue

Concern about air quality

The degree of concern from children and young people (CYP) about air quality was mixed, with significant percentages of CYP expressing different levels of concern; for example, while about a quarter of young people said they were 'very' concerned, another quarter said they had never thought about it before.



Base: 801 (406 individuals + 395 in small group conversations)

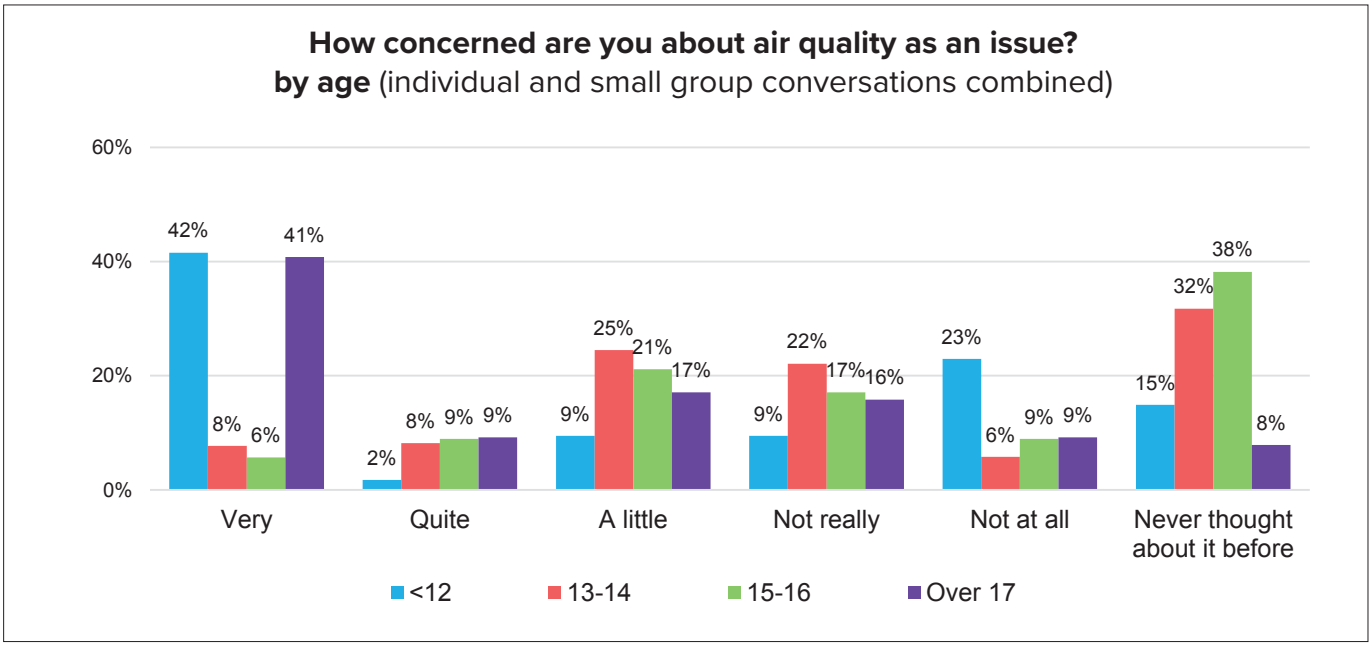
There were also some noticeable variations within subgroups on the level of concern. Almost half of children under 12 said they were 'very' concerned about air quality as an issue, with a similar percentage of over 17s also saying this. However, those aged between 13-17 typically showed less concern for air quality.

It was also noticeable that children and young people from diverse backgrounds had greater concern, with around third of Black and Asian CYP stating that they were 'very' concerned about air quality in comparison to less than a fifth of White CYP.

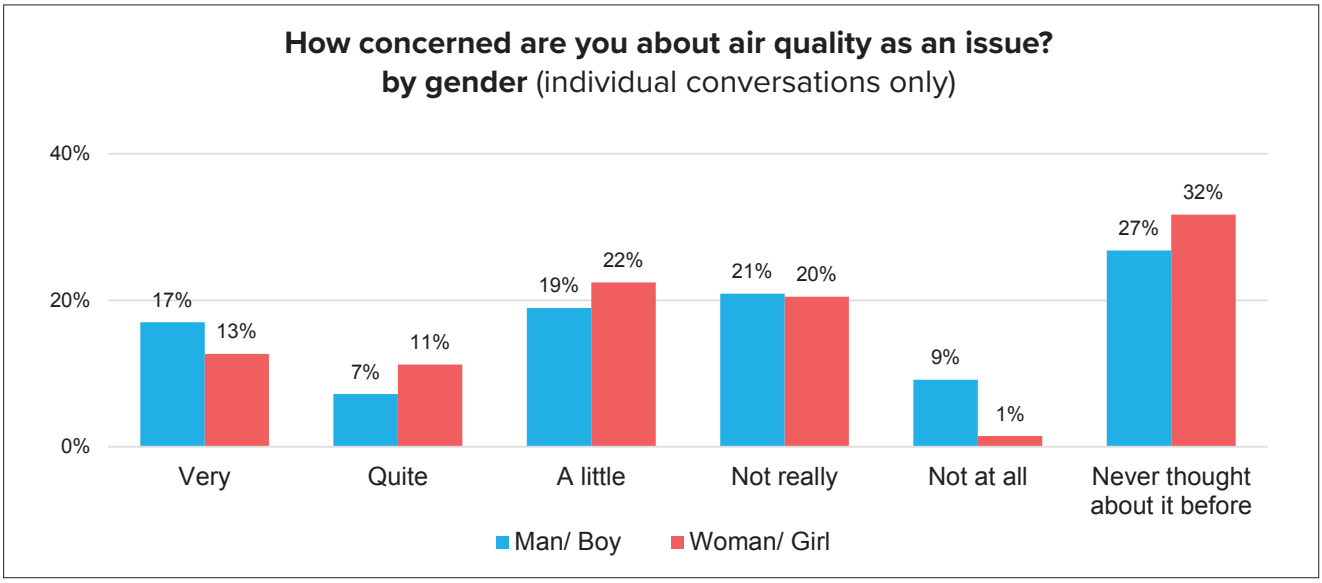
Whilst there are notable divergences in the data for children and young people along the broad subgroups of age and ethnicity, these variances cannot be explored using a single-issue lens. Intersectional approaches to understanding the role of inequality in shaping children and young people's perspectives on air quality mean that social markers that shape their lives need to be taken together, offering a more comprehensive picture of their experiences. It is also important to note the very small sample size for young people from the Black community and these views need to be seen in this context, rather than being representative as a whole.

The following table summarises views on the level of CYP concern about air quality by the various subgroups.

How concerned are you about air quality as an issue?							
	Very	**Quite**	**A little**	**Not really**	**Not at all**	**Never thought about it before**	***Base***
ALL	26%	5%	16%	15%	14%	23%	*801*
Age							
<12	42%	2%	9%	9%	23%	15%	*349*
13-14	8%	8%	25%	22%	6%	32%	*208*
15-16	6%	9%	21%	17%	9%	38%	*123*
Over 17	41%	9%	17%	16%	9%	8%	*76*
Ethnicity							
Asian	27%	4%	7%	16%	19%	27%	*186*
Black	29%	21%	0%	21%	14%	14%	*14*
Mixed heritage / Other ethnic group	12%	16%	22%	10%	2%	37%	*49*
White	18%	6%	25%	18%	11%	23%	*411*
Gender							
Man/Boy	17%	7%	19%	21%	9%	27%	*153*
Woman/Girl	13%	11%	22%	20%	1%	32%	*205*
Disability							
Without disability	13%	9%	22%	22%	5%	30%	*311*
With disability	17%	13%	17%	14%	7%	31%	*70*



Base: 756 (376 individuals and 380 in small groups): 349 aged <12, 208 aged 13-14, 123 aged 15-16, 76 aged over 17



Base: 358 individuals (153 Man/ Boy, 205 Woman/ Girl)

In both individual and small group conversations, there was a space for comments. There were 128 comments from individuals and 28 comments from group conversations on this question (386 young people participated in the group conversations).

Overall summary of comments:

Young people frequently raised concerns on the impact of poor air quality on physical health, on the environment and the health of future generations impacted by climate change. In a smaller number of conversations, people were uninterested, said they had other priorities or that air quality wasn't a problem for them.

Detailed analysis of comments:

Comments from individuals:

- Of those individuals who said they were 'very' or 'quite' concerned, **health** was by far the most raised issue, including worries about respiratory diseases, cancer, asthma, general life expectancy and mental health. **Climate change and the impact on the environment** was the next most frequently mentioned topic. Some commented that **marginalised communities** or people in urban or industrial areas were worst affected, and some expressed **concern about their future** or that of future generations.
- Of those who said they were 'a little' concerned, concerns about **health** and the **environment** remained the most common reasons for concern. Some people mentioned they had bigger problems to worry about, that it didn't affect them personally, or that they didn't think or hear much about it.
- For those who said they were 'not really' or 'not at all' concerned, the most frequent comments were that it didn't affect them, or they hadn't had any issues or noticed anything bad about the air quality. Some said they were occupied with other problems, or that they didn't care or think about air quality.
- Those who said they 'never thought about it before' commented it's not something they hear about, that the air quality in England is good compared to other countries, that the air seems clean, or that it's not something children/young people should be worrying about.

In the 28 group conversations (involving 386 young people), similar themes emerged. The most frequently raised themes were:

- **Concern about effects on health**, especially for children and older people. Concerns mentioned included: coughing, being unable to breathe, having asthma, getting enough oxygen, having bad lungs or getting lung cancer, air pollution giving a young person a heart attack, getting ill and going to hospital, or dying.
- **Concern about the effect of poor air quality on the environment**. Concerns mentioned included: climate change, animals and plants dying, trees being cut down (which would worsen the air quality), pollution of the ocean, people dying from bad air, coughing when there are lots of cars, and not being able to see the stars due to smog. In a couple of conversations, young people said they had heard much more about climate change but not much about air pollution.
- **Sources of air pollution**, such as car exhaust, rubbish, and factory emissions.
- In some conversations, young people didn't consider themselves directly impacted.

"It's going to affect my future."
- Nottingham, School setting, aged 13-14

"I don't know enough to have a concern about it." - Nottingham, School setting, aged 13-14

"I don't really care much as it doesn't affect me." - Nottingham, School setting

"Because it can affect physical health and future generations will suffer"
- Nottingham, School setting, aged 15-16

"I'm concerned for my health. Sometimes I worry about how long we will live."
- Nottingham, School setting, aged 15-16

"Air quality in my local area is not really a major issue - globally this depends heavily on the region."
- Nottingham, School setting, aged 15-16

"Particularly for marginalised communities who will be most impacted despite not being perpetrators"
- Manchester, University setting, aged 19-20

"It's a health emergency"
- Manchester, University setting, aged over 21

"I have asthma so it does worry me a lot because pollutions plays a big part."
- Glasgow, Street engagement, aged 19-20

"Don't really think about it but have thought about climate change"
- Glasgow, Street engagement, aged over 21

"Don't watch tv and nothing about it on social media"
- Glasgow, Street engagement, aged 19-20

"I am not sure what air quality is."
- Nottingham, School setting, aged 13-14

"Because our generation and the next have to think about it and suffer the consequences. It's bad because if you think about other places, you can see the smog and can't see the stars."
- Manchester, Hospital setting, Mixed ages (13-14 and 15-16)

"The air here is okay, I live away from the steel factory, so worse for people who live there"
- Port Talbot, Street engagement, aged 15-16

"It's not our job to worry as it's not something we can control" - Newport, Street engagement, aged 17-18

"Problem is people will carry on doing it, nothing is going to change, if the air is bad people will die and decrease population. I worry about air a lot as a lot of cars and gives me a cough, children still affected by passive smoking." - Newport, School setting, aged <12

"Never thought about it, not worried I just need to find a job We need money and not many jobs around here"
- Newport, Street engagement, aged 15-16

"Worry about climate change and the world ending. It's all connected" - Newport, Street engagement, Mixed ages (13-14 and 15-16)

"Poor air increases cases of asthma, allergies, lung disease/cancer also very bad or environment, increased global warming."
- Manchester, University setting, aged over 21

"I am not really worried maybe because it doesn't really affect me but I am aware that this is a rising issue that needs to raise more alternative ways to reduce air pollution rather than just awareness, so people can try incorporate those alternative solutions in their daily life." - Birmingham, School setting, aged <12

"Poor air quality can lead to health issues which is a little concerning."
- Nottingham, School setting, aged 13-14

"It's connected to climate change, if we don't do something we are going to have a disaster."
- Glasgow, Street engagement, aged 17-18

"Really worried because won't be able to breathe, asthma bad and affects health. If the air gets dirty, us, animals and plants may die rapidly. The factory makes me worry, but there is planting" - Port Talbot, School setting, aged <12

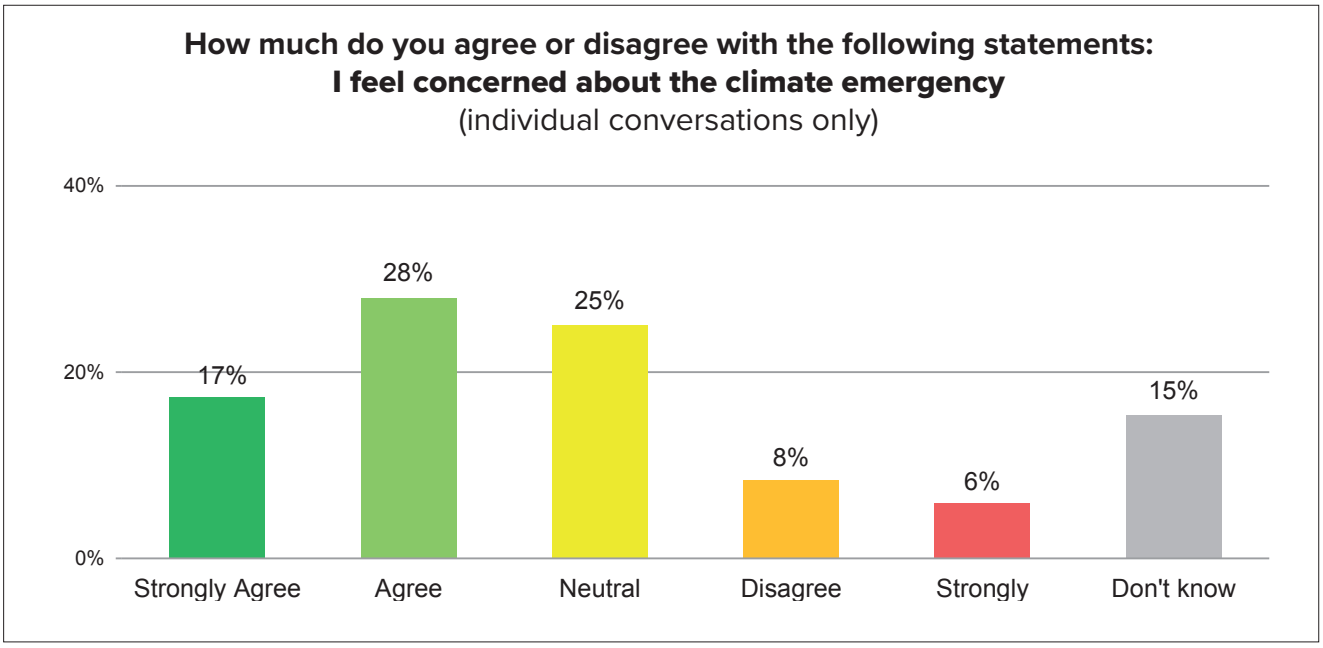
"Only a little, because people talk about it but it isn't recognised as much. It isn't taken seriously, people care about other things more."
- Birmingham, School setting, aged 13-14

"I don't care, life is too short to think about it"
- Nottingham, School setting

"It's a little worrying because they are cutting lots of trees in the world and destroying forests."
- Port Talbot, Street engagement, aged 15-16

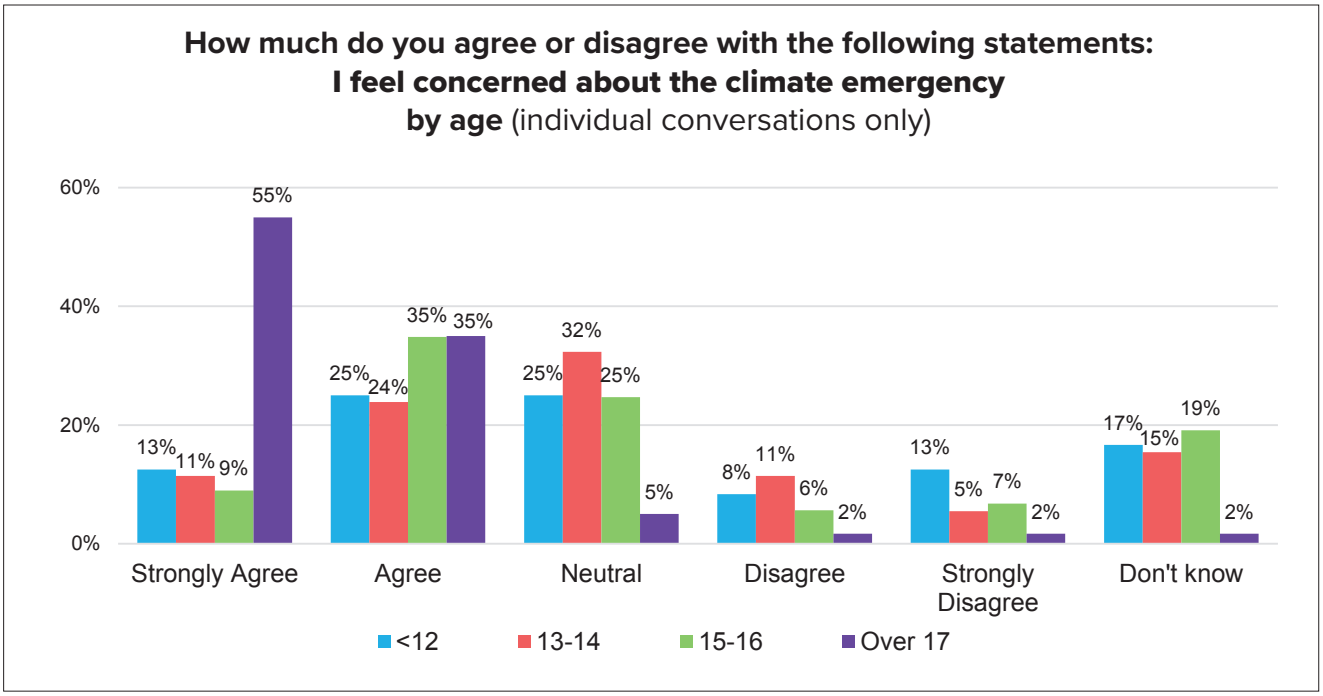
Concern about the climate emergency

There was also a broad spread of views about the climate emergency with some young people feeling very concerned about it, and others not at all, or unsure.

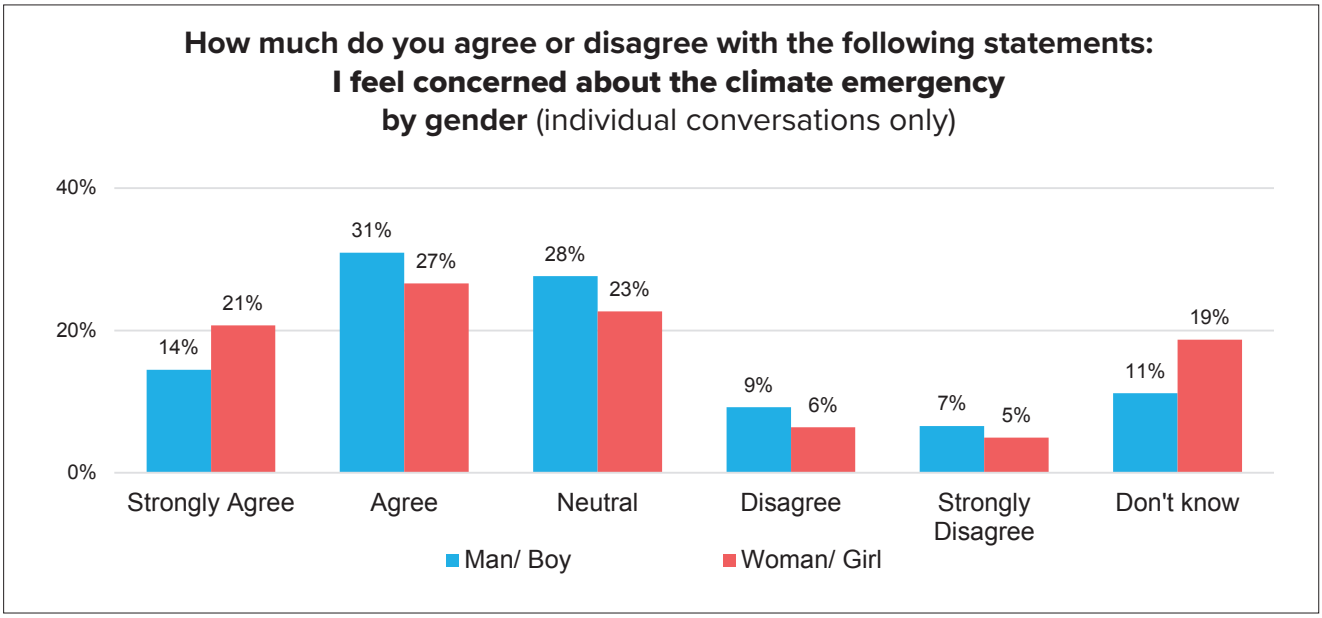


Base: 404 individuals

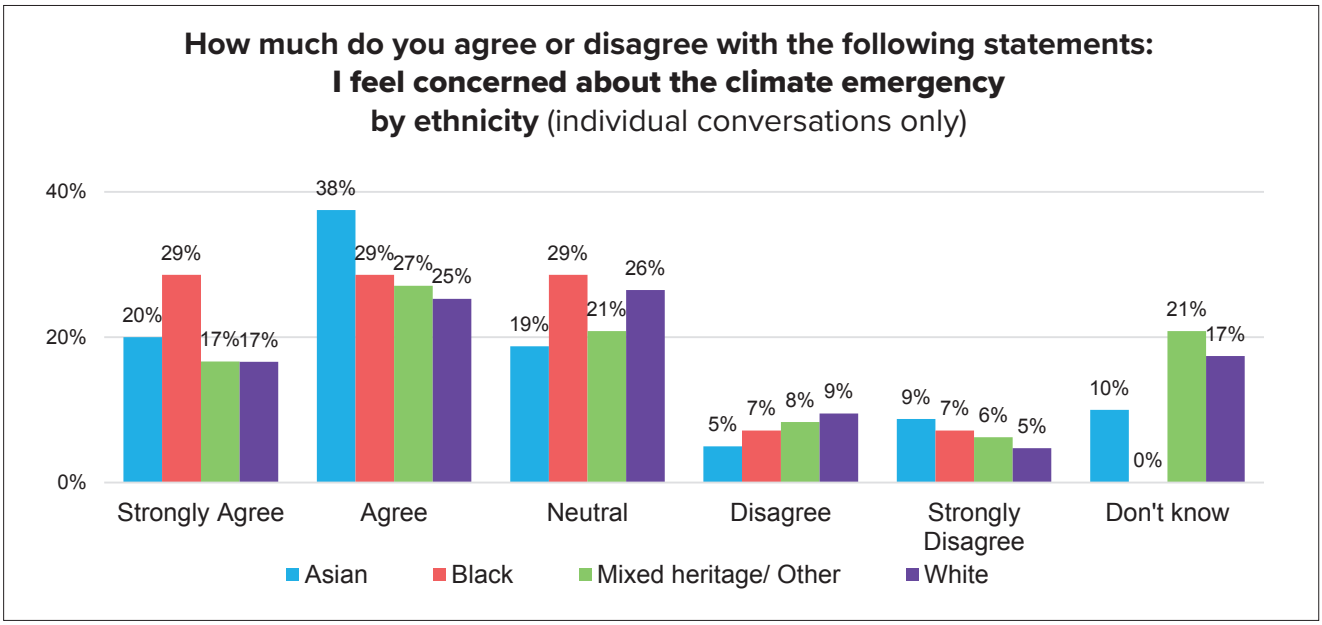
There was some noticeable variation between sub-groups as can be seen in the charts below. Those over age 17 were much more likely than other ages to strongly agree, and it is interesting that there was much less difference between the other age bands than on the question about concern around clean air.



Base: 374 individuals (24 aged <12, 201 aged 13-14, 89 aged 15-16, 60 aged over 17). NB: Low base in the "<12" subgroup.



Base: 355 individuals (152 Man/ Boy, 203 Woman/ Girl)

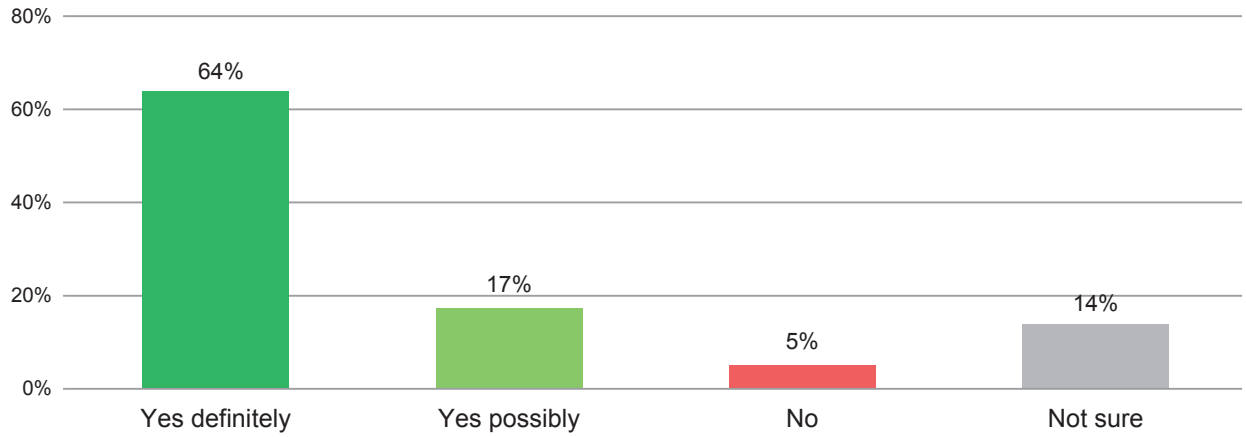


Base: 395 individuals (80 Asian, 14 Black, 48 Mixed heritage/Other ethnicity, 253 White). NB: Low base in the Black subgroup.

Should access to clean air be a human right?

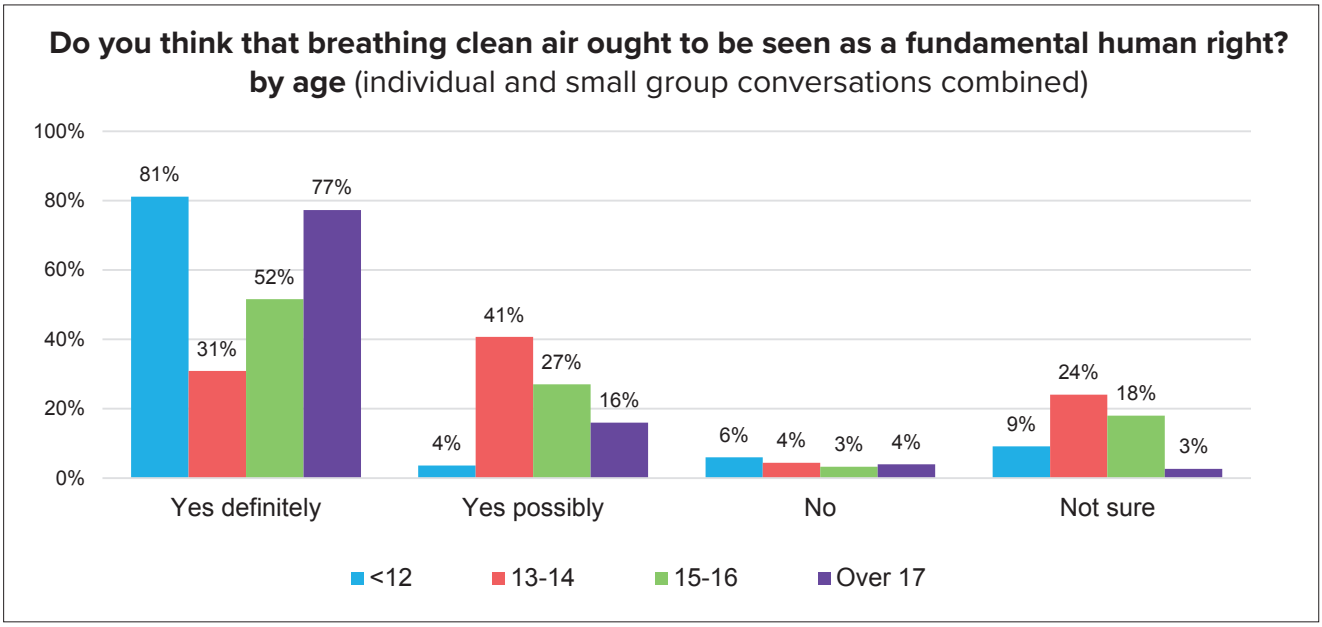
The vast majority of children and young people, across all sub-groups, thought that clean air ought to be a fundamental human right. The only minority of note are the 13-16 year groups who were more likely than other age groups to state that they were not sure if access to clean air should be a human right (saying possibly rather than definitely).

Do you think that breathing clean air ought to be seen as a fundamental human right?
(individual and small group conversations combined)

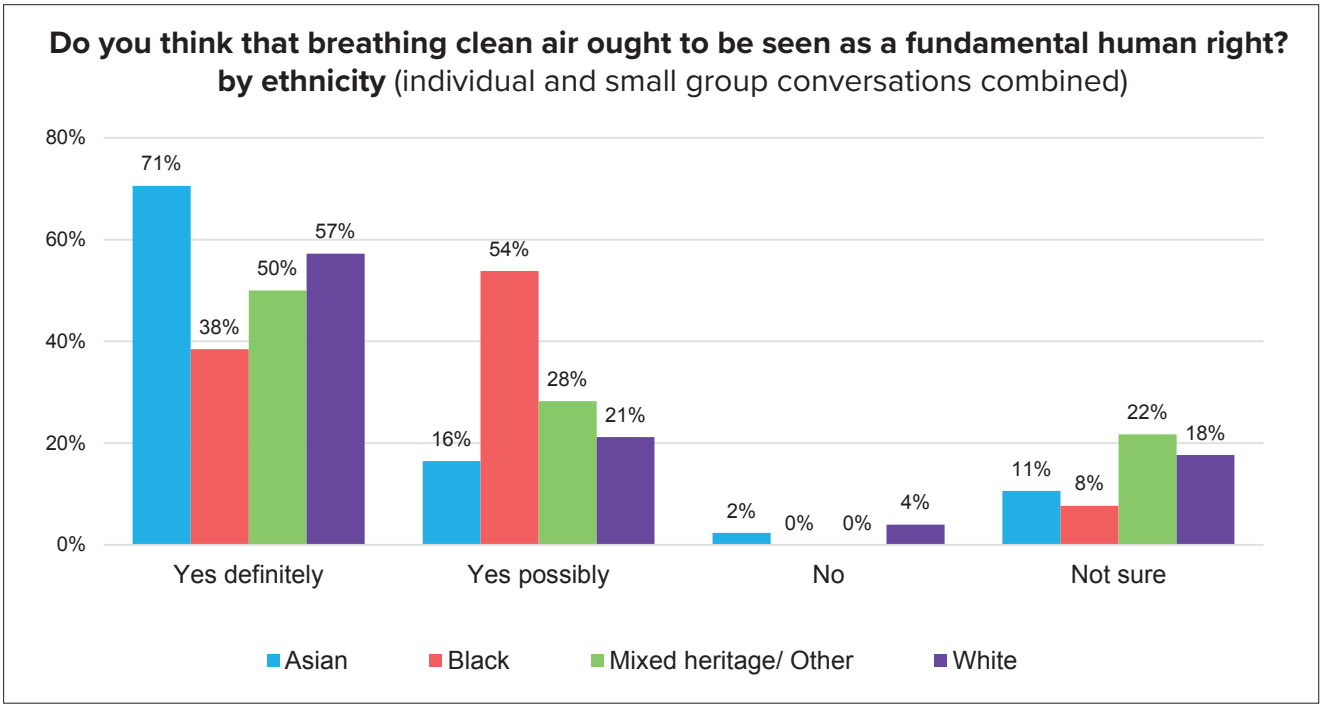


Base: 857 (398 individuals and 459 in small groups)

Do you think that breathing clean air ought to be seen as a fundamental human right?					
	Yes definitely	**Yes possibly**	**No**	**Not sure**	***Base***
ALL	64%	17%	5%	14%	*857*
Age					
<12	81%	4%	6%	9%	*414*
13-14	31%	41%	4%	24%	*204*
15-16	52%	27%	3%	18%	*122*
Over 17	77%	16%	4%	3%	75
Ethnicity					
Asian	71%	16%	2%	11%	*170*
Black	38%	54%	0%	8%	*13*
Mixed heritage/ Other ethnic group	50%	28%	0%	22%	46
White	57%	21%	4%	18%	*430*
Gender					
Man/Boy	42%	31%	8%	19%	*150*
Woman/Girl	46%	32%	1%	21%	*202*
Disability					
Without disability	45%	31%	4%	20%	*305*
With disability	45%	36%	7%	12%	*69*



Base: 815 (371 individuals and 444 in small groups): 414 aged <12, 204 aged 13-14, 122 aged 15-16, 75 aged over 17



Base: 659 (390 individuals and 269 in small groups): 170 Asian, 13 Black, 46 Mixed heritage/Other ethnicity, 430 White). NB: Low base in the Black subgroup.

CYP in Northern Ireland also overwhelmingly believed that clean air ought to be a fundamental human right – 92% agreed with this, and 8% said they were unsure.

In both individual and small group conversations, there was space for comments and discussion after the tickbox options. 50 young people who completed individual questionnaires shared a comment, along with 43 group conversations involving 502 children and young people.

Overall summary of comments:

Those who supported clean air being a human right connected it to the right to equality, health and life, as well as part of caring for the environment, and a responsibility on behalf of future generations. Others questioned what difference it would make, said there are greater issues, or argued that individuals are responsible for choosing where to live.

Thematic analysis of comments:

Comments from individual questionnaires:

- Of those individuals who said 'yes definitely':
  - The most frequent response was that it should be a human right for the sake of **equality**, because air quality has a big impact on child development, education, growth and future opportunities
  - Many agreed commenting that air is **needed for life**
  - Many agreed commenting on the **adverse health impacts** of bad air quality, especially considering the impact on children
  - A few agreed commenting that it was **part of saving the environment**, or that it is a **group responsibility**
  - A couple of people questioned the **practicalities** of how it would work
- Of those individuals who said 'yes possibly,' responses were more varied:
  - A similar number of young people said it should be a human right given the **health** impacts, as asked **what practical difference** it would make
  - Some young people said it should be a human right for the sake of **equality**, that it is **fundamental to life**, and that it's **part of saving the environment**
  - However, a few thought that **individuals have responsibility** for living in an environment with good air quality, or said that they would **put other priorities first.**
- Only two people who said 'no' or 'not sure' left a comment.

Comments from the 43 group responses touched on similar themes:

- The most common theme, mentioned in over half of the group conversations, was that clean air should be a human right due to **health impacts** of air pollution, especially on children.
- In nearly half of group conversations, young people mentioned that clean air should be a human right because it is **necessary for life.**
- In a smaller proportion of group conversations (about one quarter), young people mentioned that it should be a human right for the sake of **equality** across communities and countries.
- In a few conversations, young people asked **what difference it would make.**
- Other topics included: that it is part of saving the environment, that individuals were responsible for choosing to live somewhere with good air quality, or that other issues were more important.

> *"Oxygen is vital to life and we should all live in an equal world and have clean air"*
> - Port Talbot, Street engagement, aged over 21

> *"If some people breathe clean air then why can't others."*
> - Birmingham, School setting, aged 13-14

"Cause every human has a right to live, breath clean air and live a better life."
- Paisley, University setting, aged over 21

"We all deserve clean air but some people want to live in the city"
- Port Talbot, Street engagement, aged 17-18

"Polluted air causes health problems so nobody should have to [be] put at disadvantage."
- Manchester, University setting, aged over 21

"Yes, as hopefully this is a catalyst for change in regards to political stances on climate change."
- Manchester, University setting, aged over 21

"It should be standard but not sure how this would happen."
- Glasgow, Street engagement, aged 17-18

"Everything could be a right, adults have a choice where they live"
- Newport, Street engagement, aged 17-18

"Children should have a good start in life. Some are luckier than others"
- Newport, Street engagement, aged 17-18

"Breathing clear air should be an absolute essential and shouldn't really be a question. This is a really important aspect of life."
- Birmingham, School setting, aged 13-14

"Even if it was, who actually cares about our rights?"
- Glasgow, Street engagement, aged over 21

"I suppose so but don't think it's realistic. I think everyone should be rich but it's not realistic."
- Glasgow, Street engagement, aged 17-18

"If we can't breathe we will die. We should all have clean air but we don't"
- Newport, Street engagement, Mixed ages (13-14 and 15-16)

"No one cares about human rights, they are always violated"
- Newport, Street engagement, aged 15-16

"It should be a right because a lot of people smoke and our lungs are small. If the air isn't clean, children's lungs are more sensitive, could end up in hospital."
- Newport, School setting, aged <12

"Some people want to live in the city so it's their choice, they have control."
- Paisley, Hospital setting, Mixed ages (13-14 and 15-16)

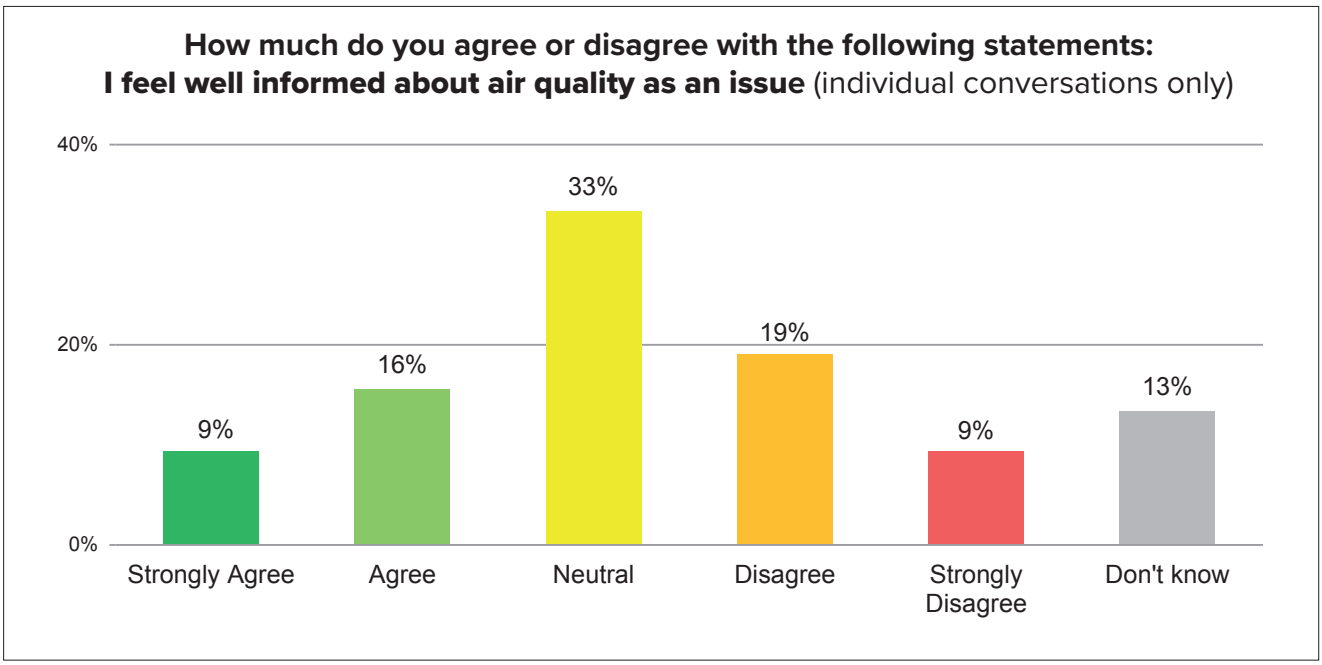
"Clean air needed to maintain good health. Everyone should have access to the same standard of air."
- Nottingham, School setting

"Everyone deserves clean air otherwise they would get diseases and die."
- Birmingham, School setting

Knowledge about air quality

How informed do CYP feel about air quality as an issue

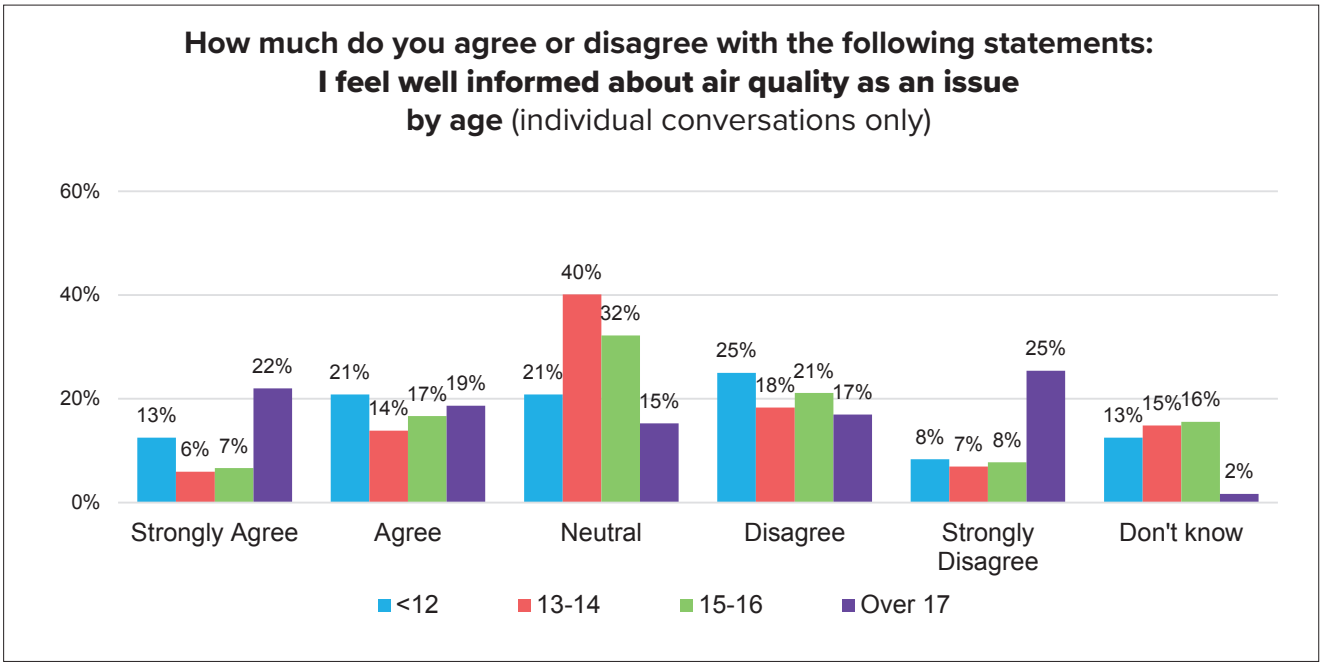
In the individual conversations with children and young people we asked a question to understand how informed they felt about air quality as an issue. While a quarter felt well informed, a third were neutral. A further third said they did not feel well informed, and a little less than a quarter said that they didn't know.



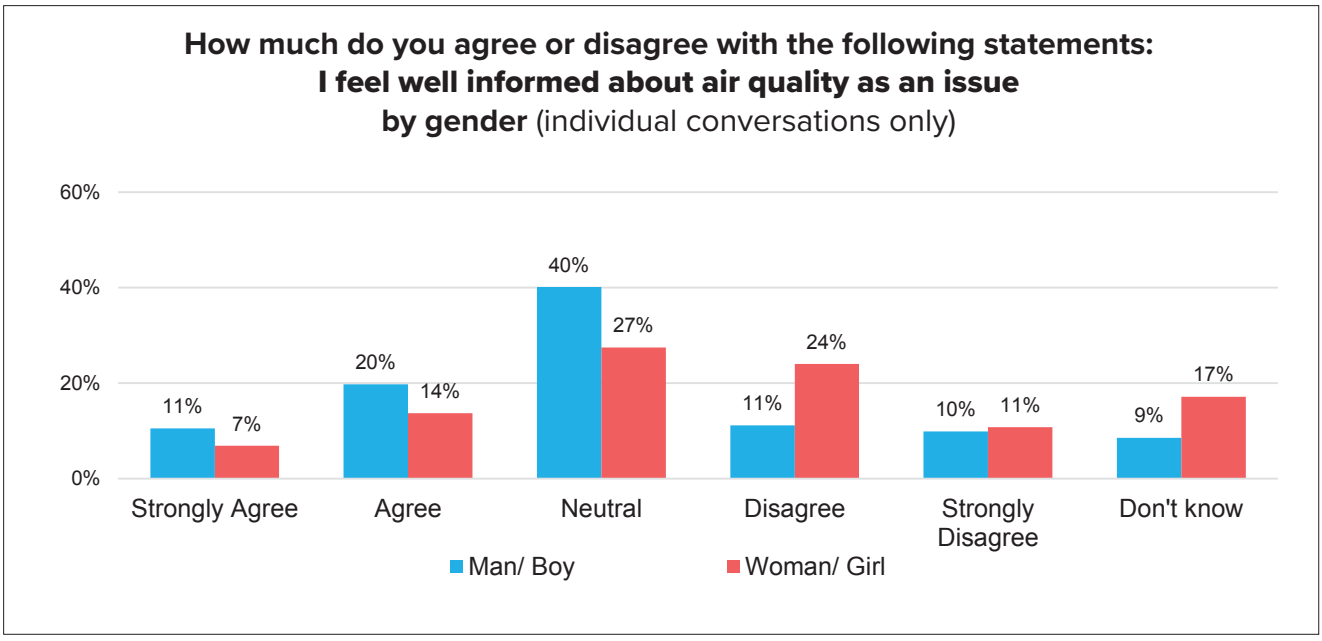
Base: 405 individuals

Responses offered by children and young people as to how well informed they feel about air quality as an issue were divided. For all age groups there was a roughly equal split between those who felt that they were informed about air quality as an issue and those who were not.

There was some variance with regards to gender around how well informed CYP felt about air quality as an issue. Boys and men were a little more likely to say that they felt informed on air quality issues, while women and girls were a little more likely to say that they *did not* feel well informed.



Base: 375 individuals (24 aged <12, 202 aged 13-14, 90 aged 15-16, 59 aged over 17). NB: Low base in the "<12" subgroup.



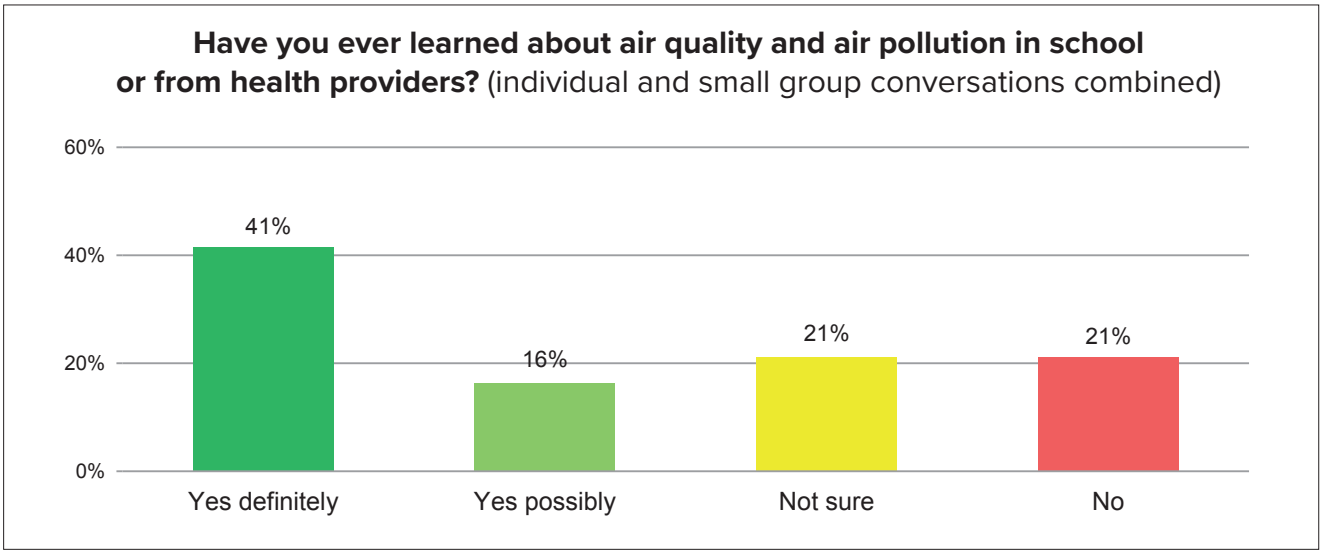
Base: 356 individuals (152 Man/ Boy, 204 Woman/ Girl)

Where CYP learn about air quality as a topic

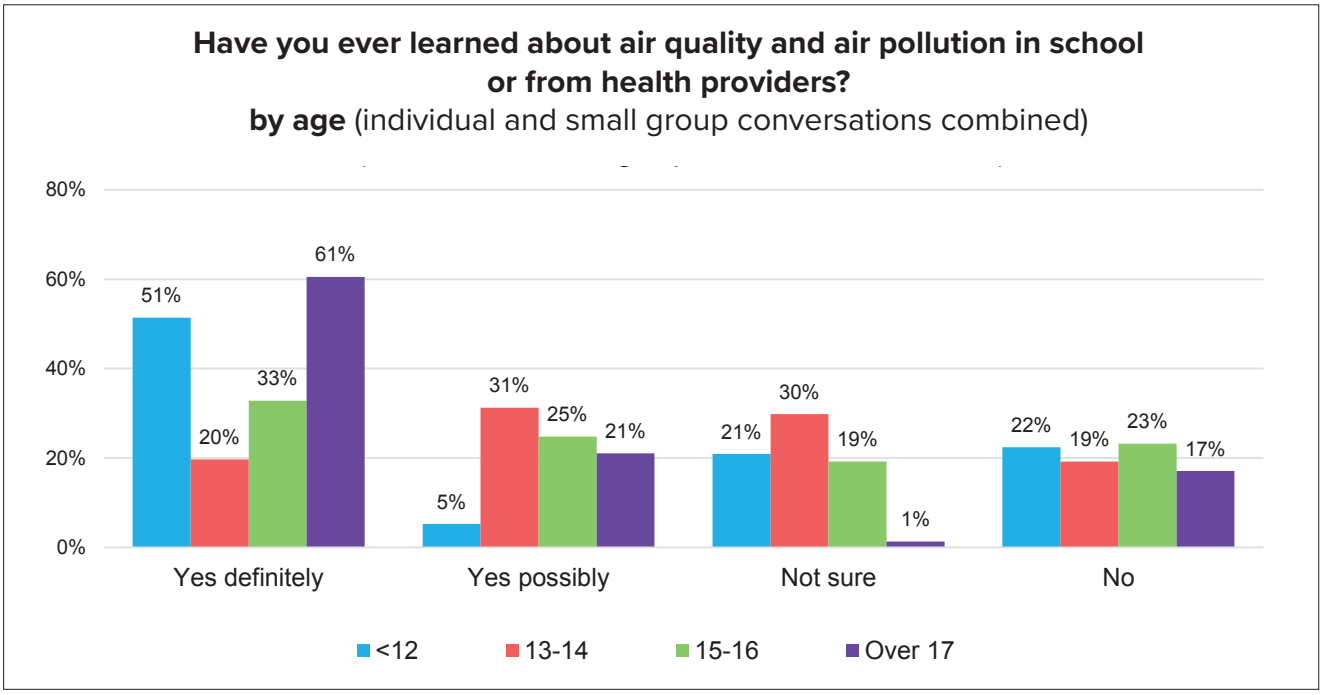
Just over half of children and young people (CYP) said they had learned about air quality and air pollution either in school or from health providers. Less than a quarter said that they had not learnt about air quality in either setting, and a similar proportion were not sure whether they had learnt about air quality.

Amongst different age groups there were noticeable differences in whether they had learnt about air quality and air pollution in either setting. The older young people (over 17) were more likely than younger age groups to either 'definitely' or 'possibly' have learnt about air quality in school or from a health provider, with 4 in 5 people in this age group saying they had learnt about it.

There were no significant differences between children and young people from different backgrounds or genders around whether they had learnt about air quality and air pollution in these settings.

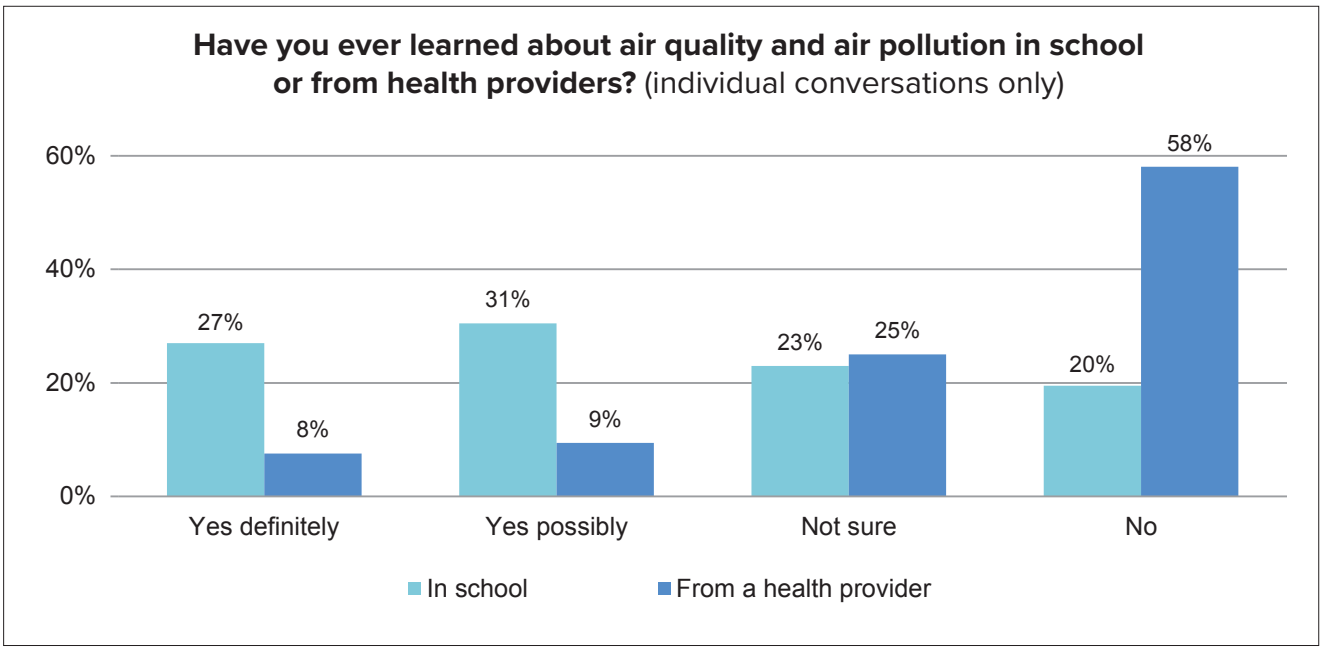


Base: 913 (407 individuals and 506 in small groups)



Base: 868 (377 individuals and 491 in small groups): 459 aged <12, 208 aged 13-14, 125 aged 15-16, 76 aged over 17

In individual conversations, where young people were asked separately about school and health settings, the findings showed they were much more likely to have been taught about air quality in school than from a health provider:



Base: 400 individuals (school), 372 individuals (health provider)

In Northern Ireland this question was asked slightly differently, in the workshops and small group conversations. Instead of specifying *where* they had learned about it (from health providers or in school), it was asked as a broad question: 'Have you ever learnt about air quality or pollution?' Response options were also simplified, to Yes / No / Not sure. 59% of CYP engaged in Northern Ireland said they had learnt about it, 15% said they had not, and 26% were unsure.

On individual questionnaires and in small group conversations, there was space for additional comments after the tickbox question. There were comments from 2 individual questionnaires 28 small group conversations (in which 465 young people participated).

- In a large majority (about three quarters) of conversations, young people added comments saying they had learned something about air quality or air pollution **in school**.
  - Some young people recalled a specific course or topic that discussed air pollution, such as geography or science classes.
  - Some young people mentioned that it had been taught as part of learning about climate change or about historical events such as the industrial revolution.
  - Others mentioned learning about specific topics relating to air pollution, such as the value of planting more trees or about the damage from chimneys and smoke.
- In fewer than half of conversations, young people commented that they had **not learned** about air quality and air pollution, or were **unsure**.
  - In some conversations, young people mentioned that they recalled learning about related topics such as climate change or recycling, but didn't recall learning about air pollution directly.
  - Other comments included that it was a long time ago, that they'd forgotten, or that it hadn't been enough.

- Some young people added they had learnt about air quality and air pollution **through different sources**, such as family, social media, or online
- Young people said they had learned about air quality from **a health provider** in only a handful of conversations

"In school about pollution and how to help our planet."
- Newport, School setting, aged <12

"My asthma nurse said it's better to have clean air for asthma"
- Newport, School setting, aged <12

"In school, learnt about air pollution, oil spills, exhaust pipes what they release, chimneys, smoke"
- Newport, School setting, aged <12

"In school, internet, learnt about global warming."
- Glasgow, School setting, aged 15-16

"I think have done it once but can't remember."
- Glasgow, School setting, aged 15-16

"We have done climate change but never talked about air pollution."
- Port Talbot, Street engagement, aged 15-16

"In Geography we learned a little"
- Port Talbot, Street engagement, aged 15-16

"I think I learnt but not enough"
- Port Talbot, School setting, aged <12

"Think we've done it in geography."
- Paisley, Hospital setting, Mixed ages (13-14 and 15-16)

"Biology - learns about mould."
- Glasgow, Street engagement, Mixed ages (<12 and 13-14)

"Learnt about it on the internet."
- Glasgow, School setting, aged 13-14

"We learnt about industrial revolution in year 3"
- Manchester, School setting, aged <12

"I learnt at home"
- Manchester, School setting, aged <12

"Factories release chemicals into the air"
- Manchester, School setting, aged <12

"Not sure - I think I forgot about it."
- Manchester, School setting, aged <12

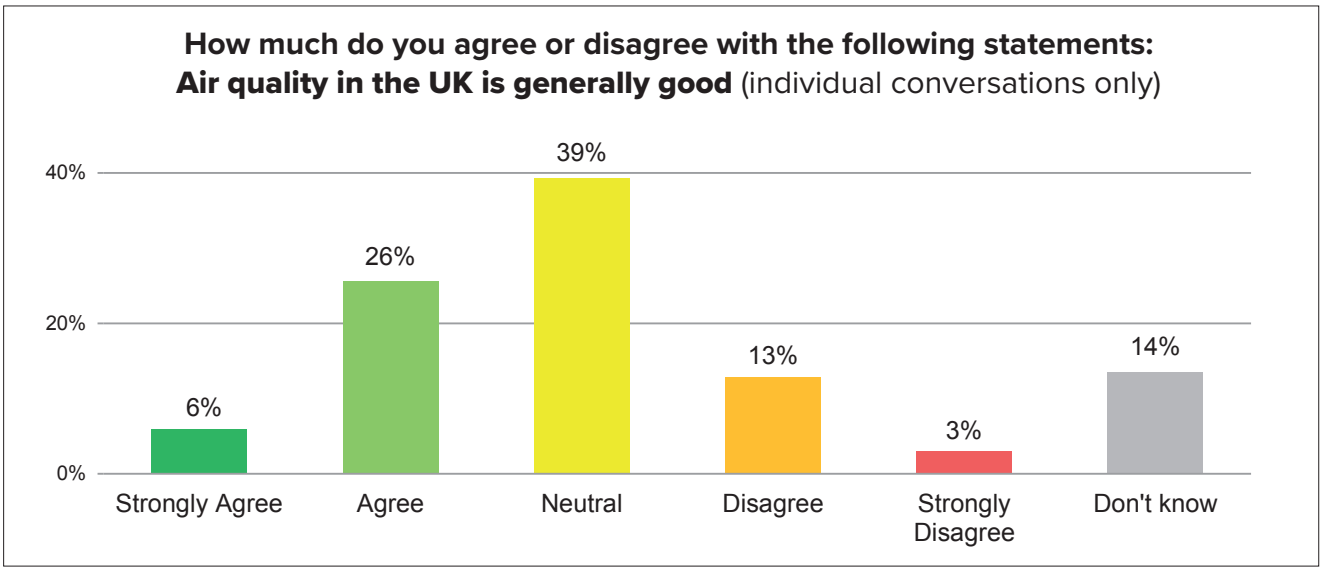
"No - I think we haven't ever learnt about it." - Manchester, School setting, aged <12

"Think so, not sure where it was though"
- Manchester, School setting, aged <12

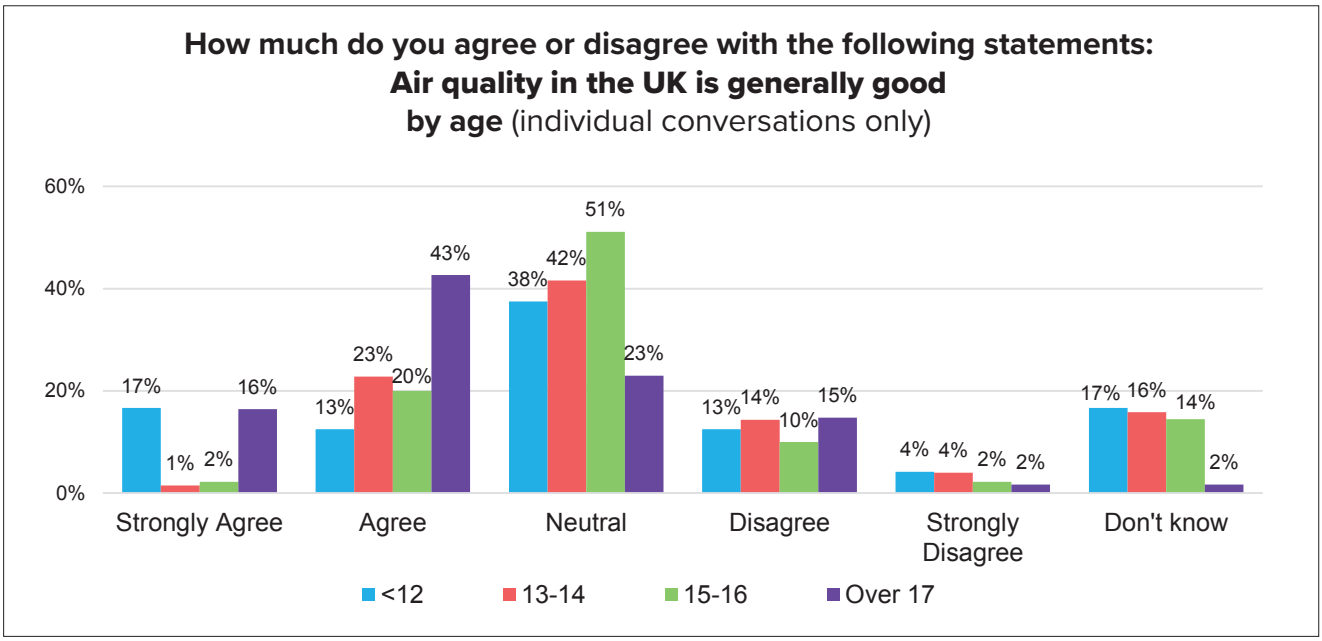
"School, climate change, if we plant more trees it will help us breathing, gives oxygen, oxygen keeps us alive"
- Newport, School setting, aged <12

Views on how good/bad the air quality is in the UK

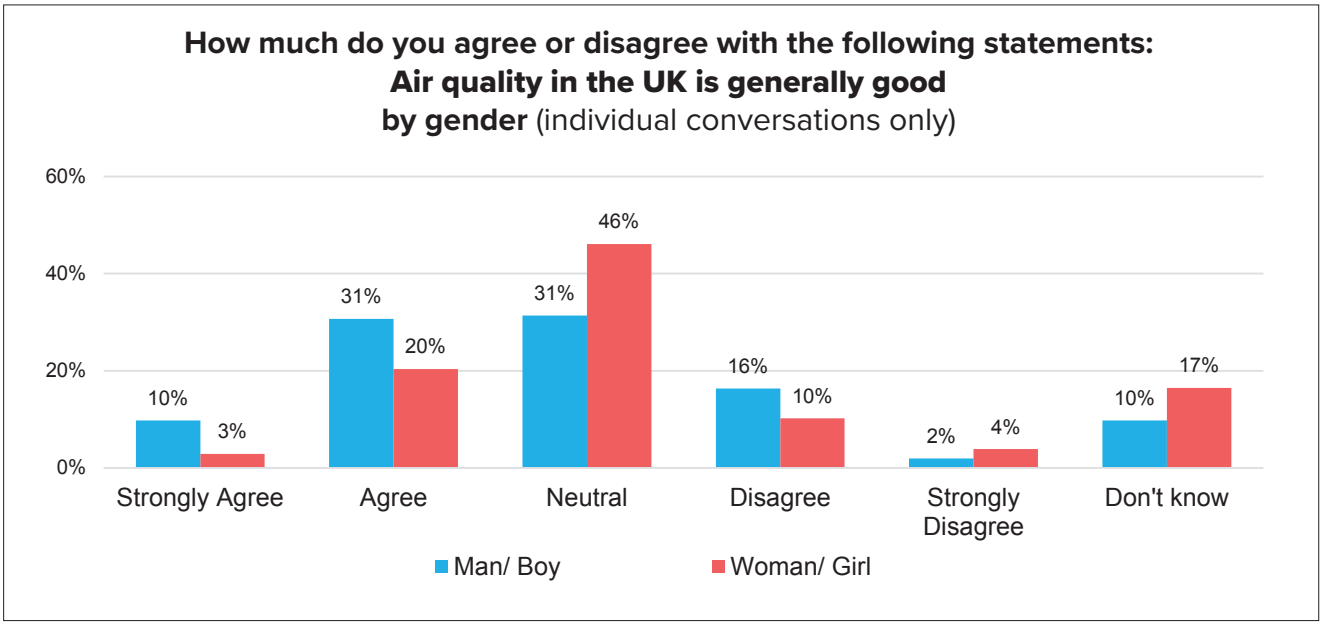
In the individual surveys we asked to what extent they agreed or disagreed with the statement that the air quality in the UK is generally good. Nearly two in five were neutral, while over a third either strongly agreed or agreed that air quality is generally good in the UK and about one in six disagreed. There were some noticeable differences by subgroup in relation to this question.



Base: 407 individuals



Base: 377 individuals (24 aged <12, 202 aged 13-14, 90 aged 15-16, 61 aged over 17). NB: Low base in the "<12" subgroup.



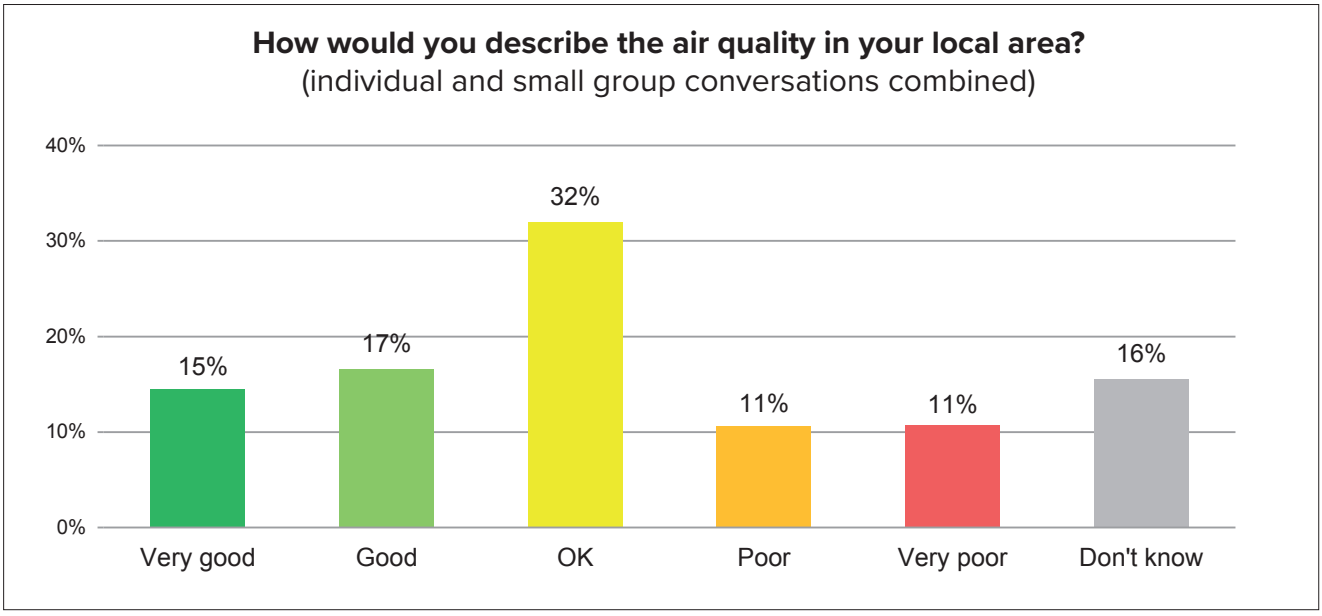
Base: 359 individuals (153 Man/ Boy, 206 Woman/ Girl)

Views on how good/bad the air quality is in their local area

In both individual and small group surveys, CYP were asked how good or bad they thought the air quality was in their local area. Views from young people were mixed on this question, with a third saying they thought the air quality in their area was 'OK', while one in six said they didn't know.

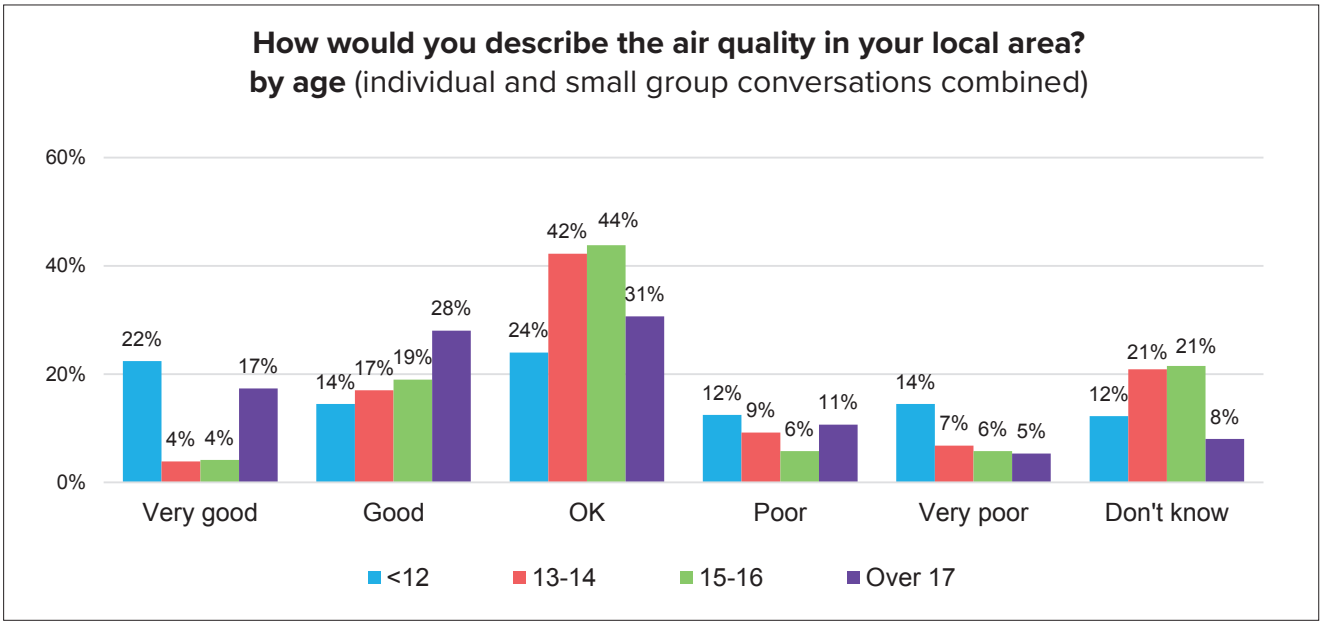
Despite young people broadly either being neutral or agreeing that air quality is good in the UK overall, there were distinct differences in responses in relation to their local areas.

There were some notable variances by age. 13 to 16-year-olds were the most likely to say that the air quality in their local area was 'OK' or that they didn't know. This parallels their responses in earlier questions, where these age groups also felt the least informed of all the age groups around air pollution and air quality.

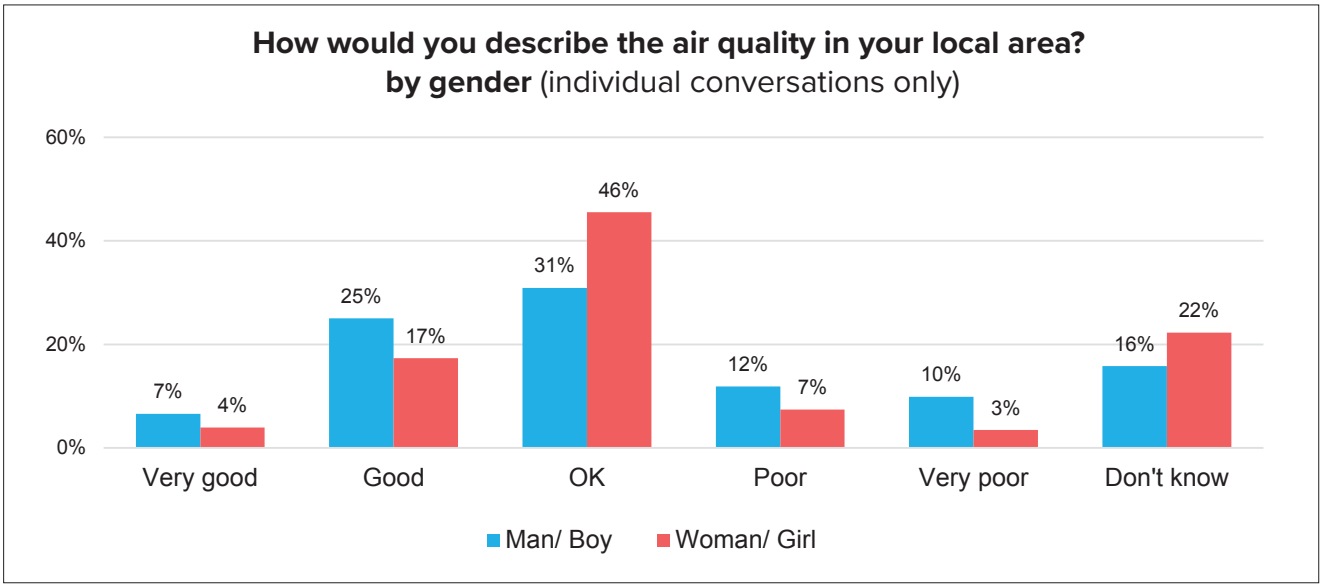


Base: 887 (400 individuals and 487 in small groups)

How would you describe the air quality in your local area?							
	Very good	**Good**	**OK**	**Poor**	**Very poor**	**Don't know**	***Base***
ALL	15%	17%	32%	11%	11%	16%	*887*
Age							
<12	22%	14%	24%	12%	14%	12%	*442*
13-14	4%	17%	42%	9%	7%	21%	*206*
15-16	4%	19%	44%	6%	6%	21%	*121*
Over 17	17%	28%	31%	11%	5%	8%	*75*
Ethnicity							
Asian	28%	23%	19%	10%	3%	18%	*177*
Black	0%	36%	21%	21%	7%	14%	*14*
Mixed heritage/ Other ethnic group	6%	9%	49%	17%	6%	13%	*47*
White	13%	13%	35%	9%	11%	19%	*429*
Gender							
Man/Boy	7%	25%	31%	12%	10%	16%	*152*
Woman/Girl	4%	17%	46%	7%	3%	22%	*202*
Disability							
Without disability	5%	20%	39%	10%	7%	19%	*305*
With disability	9%	23%	37%	7%	4%	20%	*70*



Base: 844 (372 individuals and 472 in small groups): 442 aged <12, 206 aged 13-14, 121 aged 15-16, 75 aged over 17



Base: 354 individuals (152 Man/ Boy, 202 Woman/ Girl)

In Northern Ireland, CYP were asked whether they felt that the air quality in their area was 'good enough', with response options being Yes / No / Not sure. A slight majority (59%) felt it was good enough, 15% said 'no' it wasn't good enough and around one in four (26%) said they were not sure.

There was space for comments and discussion after the tickbox options, in both individual and small group conversations. There were comments from 144 individual responses and 31 group conversations (involving 503 children and young people) to this question.

Overall summary of comments:

Positive comments about local air quality frequently mentioned green spaces, being far away from factories or busy roads, good cleanliness and waste disposal, low emission zones or green development. Negative comments about local air quality frequently raised bad smells from traffic, factories, smoking, vaping and rubbish, as well as dust and fog in the air from factories and fires, and a lack of trees and green spaces.

Thematic analysis of comments:

In comments from individual questionnaires:

- Among those young people who said the air quality in their local area was 'very good' or 'good,' frequent comments included that the local area was green, with trees, flowers, open spaces, an ocean breeze, that they lived in a rural area or not close to any factories or large roads, and that the area was clean and well kept. A few people mentioned the positive effect of local sustainable development, green transport, and low emission zones.
- Of those who said 'OK,' many commented that the air quality wasn't bad but could be better, or reflected that there were many places that were much worse. Some pointed out the effect of traffic and exhaust fumes, especially in city centres, as well as issues with smoking and littering. Some comments highlighted green areas, and clean neighbourhoods
- Of those who said 'poor' or 'very poor' many commented on the smells from car exhausts, rubbish and smoke. A few people mentioned specific observations such as fog, orange dust or being able to feel dirt on your skin and in your mouth.
- Of those who said 'I don't know' some said they'd never thought about it, or asked how they would know.

Young people who participated in the 32 group conversations expressed similar themes. The most commonly raised were:

- Poor air quality due to individual people's actions, such as car exhausts, congestion, fires, rubbish and smoking (mentioned in about two thirds of conversations).
- Good air quality thanks to green spaces, trees, waste disposal, a good breeze, local green policies and development (mentioned in about half of conversations).
- Poor air quality due to nearby factories or chemical plants resulting in bad smelling air and black smoke or orange dust in the air. Some young people also mentioned the negative effects of trees being cut down. (Mentioned in nearly half of conversations.)
- In a smaller number of conversations, young people mentioned that the air quality is ok compared to other places, or that they don't know (with some adding that they wouldn't know how to know what's in the air).

"Never thought about it, never had any problems where I live"
- Paisley, University setting, aged 15-16

"How am I supposed to know my air quality?"
- Nottingham, School setting, aged 13-14

"We have clean air from the beach breeze which pushes bad air out"
- Port Talbot, Street engagement, aged 15-16

"There is a lot of nature, trees and opens space by me."
- Paisley, Hospital setting, aged 17-18

"Generally its good but we do have pollution. I used to work near the steel factory and my car was always covered in orange dust"
- Port Talbot, Street engagement, aged over 21

"I am far from manufacturing area so air quality is good"
- Paisley, University setting, aged over 21

"It's hard to know because we assume that we have good air, no one tells us where is good or bad air and in which areas."
- Paisley, Hospital setting, aged 19-20

"They do have some good areas and bad areas like everywhere."
- Glasgow, Street engagement, aged over 21

"Factory is making all the dust from steel works go into our air, it's not good for us, around certain areas I smell cigarettes and vapes."
- Port Talbot, School setting, aged <12

"Feels like I'm choking in some areas."
- Nottingham, School setting, aged 13-14

"It is satisfactory because I'm not suffocating, so that must count as something."
- Nottingham, School setting, aged 15-16

"Glasgow is fighting to make improvements with low emission zones but it's still not the best."
- Glasgow, Street engagement, aged 19-20

"Sometimes my area stinks and when we go on a walk we see rubbish. There is also a lot of traffic"
- Birmingham, School setting, aged <12

"It just stinks in town"
- Nottingham, School setting, aged 13-14

"The air quality in my local area is good as there is use of electric buses and the surrounding area is clean."
- Paisley, University setting, aged over 21

"I wake up to fog most days, one day we won't breathe."
- Nottingham, School setting, aged 15-16

"You can feel the dirt on your skin and in your mouth and smell it especially in congested areas but it is better in places like parks."
- Glasgow, Street engagement, aged 17-18

"Smoke from fires wood burning"
- Port Talbot, School setting, aged <12

"It will improve now with the factory closing but people will lose their jobs so it's not great"
- Port Talbot, Street engagement, aged 15-16

"There are not enough trees here and lots of cars, people vaping and smoking."
- Glasgow, School setting, aged 13-14

"Can't see the stars but in countryside you can." - Manchester, Hospital setting, Mixed ages (13-14 and 15-16)

"Yes it's quite good because there is no any company's or factories which can pollute air around us."
- Paisley, University setting, aged over 21

"The air quality in my local area is pretty good as it has a lot of trees, ponds with sustainable development planning."
- Paisley, University setting, aged over 21

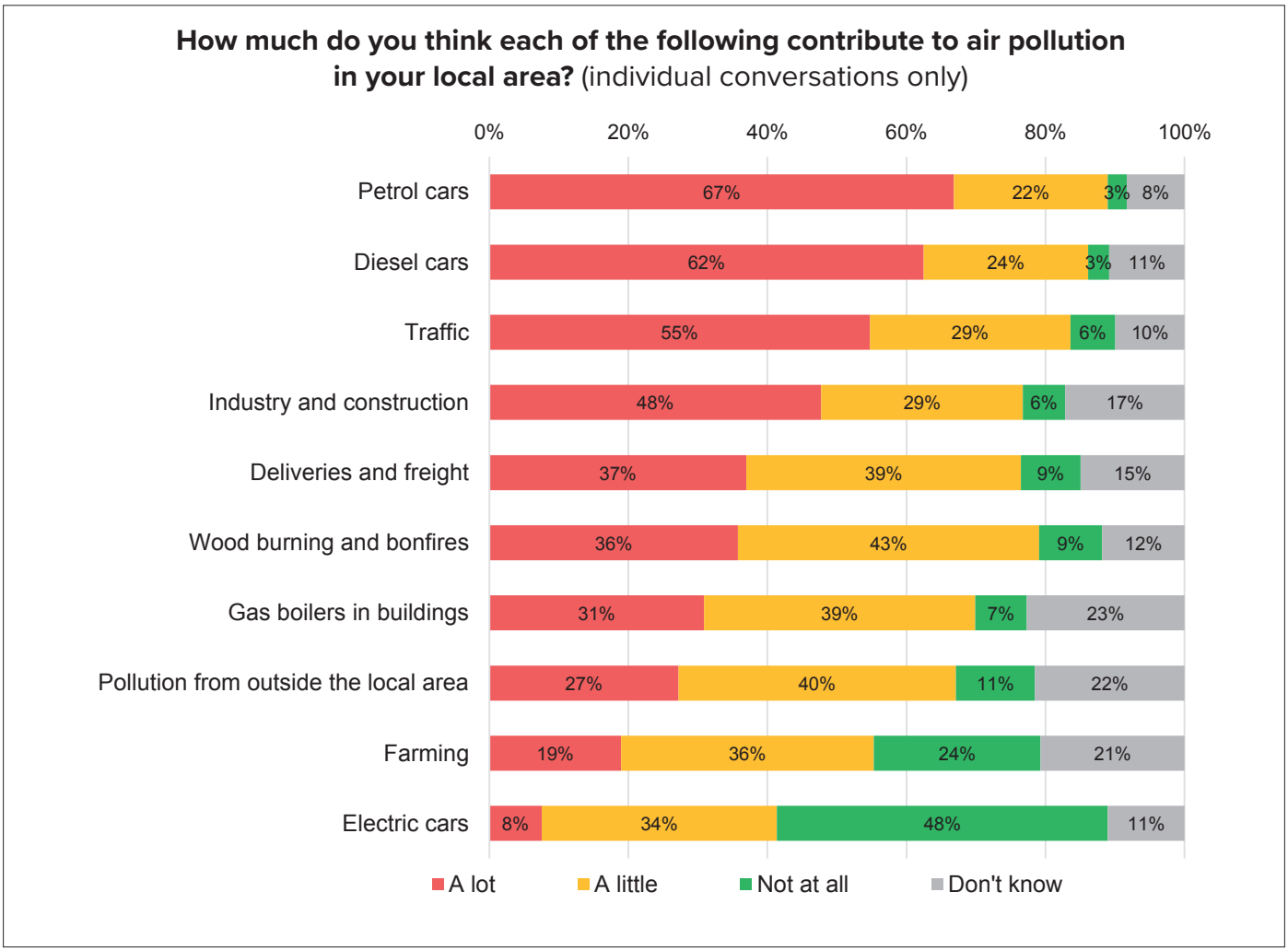
"I live in a clean and peaceful environment that is modernised."
- Birmingham, School setting, aged <12

"Smells of trees and nature here, we have a beach and beach sprays."
- Port Talbot, School setting, aged <12

"We need oxygen to survive, the trees turn bad air into good air."
- Port Talbot, School setting, aged <12

Knowledge of the causes of poor air quality

In the individual surveys the CYP were given a list of factors and ask to rate how much they believed each factor contributed to air pollution in their local area (rating from not at all to a lot).



Base: 386 to 402 (slight variation by answer option)

In the individual questionnaire, there was a comment box following the quantitative ranking question where people could add other things that cause pollution. In group conversations, the question of what causes pollution and poor air quality was addressed as an open discussion.

There were 199 comments from individuals on this question, and feedback from 26 group discussions, which involved 323 young people.

Overall summary of comments:

The main causes raised were transportation, power plants and industry using fossil fuels, and smoking/vaping. Other causes mentioned were improper disposal of waste, smaller scale greenhouse gas emission and combustion, and deforestation.

Thematic analysis of comments:

Comments from individuals:

- Young people mentioned causes that had not been offered as options in the quantitative question, as well offering comments that reinforced the tickbox options. These included:
  - **Smoking and vaping** (mentioned in a quarter of comments from individuals)
  - **Factories and industry** (mentioned in over one in five comments)
  - **Cars**, planes, trains, and other **transport** using diesel and petrol (mentioned in one in five comments)
  - About one in six comments said that people **didn't know**
  - Over one in ten comments from young people mentioned **greenhouse gases and methane** (including from cows)
  - A similar proportion of young people mentioned **rubbish**, **littering**, the use of plastics and similar contamination of the environment
  - About one in ten comments mentioned **fires, BBQs, or fireworks**
  - Less frequently mentioned causes included deforestation, overpopulation, overconsumption, wars, viruses and agriculture.

Comments from group discussions:

- The causes most commonly raised were:
  - **Cars**, as well as planes, trains, and other **transport** using diesel and petrol (mentioned in nine out of ten group conversations)
  - **Factories and industry** (mentioned in three quarters of group conversations)
  - **Littering**, rubbish, plastic and other waste (mentioned in two thirds of group conversations)
- The following causes were also frequently mentioned:
  - **Greenhouse gases**, methane or meat production (mentioned in half of group conversations)
  - **Smoking and vaping** (mentioned in nearly half of group conversations)
  - **Fires, BBQs / burning wood outside, fireworks, and forest fires** (mentioned in nearly half of group conversations)
  - **Chopping down trees** / deforestation (mentioned in over a third of conversations)

"Factories, mining ore, oil rigs, commercial flights, construction work."
- Nottingham, School setting, aged 13-14

"Using petroleum vehicles increase more pollution"
- Paisley, University setting, aged over 21

"Incineration of waste. Harvest of fossil fuels of neutral gas. Burning of fossil fuels in factories."
- Manchester, University setting, aged over 21

"There are many things such as industry, deforestation, etc."
- Paisley, University setting, aged over 21

"Wars, bombing and plastic, stop polluting our seas."
- Glasgow, Street engagement, aged 17-18

"If you live in a poor country the air might be bad."
- Paisley, University setting, aged 15-16

"An abundance of cars, not using public transport, factories a lot of corporations not spending money on proper waste/ disposal stuff."
- Glasgow, Street engagement, aged 17-18

"Smoking, it should not be allowed but even when it's not allowed people do like the hospital car parks."
- Paisley, Hospital setting, aged 17-18

"Smoking, vaping, cars, bonfires, petrol, trains, litter, dust"
- Newport, Street engagement, Mixed ages (13-14 and 15-16)

"Smoke by power plants, waste processing."
- Glasgow, School setting, aged 15-16

"Cars - gas, aeroplanes, lawn mowers, diesel."
- Glasgow, School setting, aged 15-16

"I don't know because I don't know what's in the air, so how am I meant to know?"
- Nottingham, School setting, aged 13-14

"Any form of transport that uses diesel or petrol"
- Glasgow, School setting, aged 15-16

"The ongoing conflicts all around the world." - Manchester, University setting, aged over 21

"Chopping of trees."
- Glasgow, School setting, aged 15-16

The following is a list of all causes mentioned in the **individual comments** (duplicates have been removed, so this list does not show frequency):

Airplanes

Aerosol cans

Agriculture

Any source of transport

Bad air

Bad smells

Bin isn't emptied

Breathing after cigarette

Burning fossil fuels

Burning fuels

Burning of fuels in power stations

Burning things

Carbon dioxide

Cars

Cars and stuff

Chimneys

China

Cigarettes

Cigarettes and other forms of smoking

Cigarettes/E-cigs

Cigarettes/vaping

Civilian factories

Climate change and the weather

CO2

Combustion of materials for mass production

Construction and factories

Corona virus

Coughing

Couldn't care less

Cow farts

Cows

Cows - cow farts - methane

Cutting trees (deforestation)

Deforestation - trees are carbon sinks

Electricity generation through solar panel

Electronic fridges etc

Electronics (not all)

Factories

Factories & mining

Feces

Fires

Fireworks

Food

Forest fires

Garbage

Gas in atmosphere

Gas works - outside on road

Gasses

Greenhouse gases

Harvest of fossil fuels of neutral gas

Human consumption

Humans

I don't know because I don't know what's in the air

I have no clue until I notice from today

If you live in a poor country the air might be bad

Ignorance

Incineration of waste

Keeping leftover rubbish unattended

Lack of green spaces and poor house designs (ventilations) for air quality

Lack of trees/carbon emissions

Like industrialization

Littering

Lorries

Mainly cars and burning materials

Methane

Micro plastic

Motorbikes

N/A - Green spaces

No idea

Not really sure

Not sure

Nothing comes to mind

Nuclear powerplant

Oil factories

Other non-renewable energy

Over consumption

Overpopulation

People breathing

People smoking/vaping

Perfume

Planes

Planes trains

Plant chemicals

Plants

Plastic

Plastic and chimneys

Pollen

Pollution

Poor ventilation in buildings

Power plants

Power stations

Private jets

Rich people - they have all the big companies that cause it

Road works

Rubbish

Segways

Smoke

Smoking

Sports stadiums

The ongoing conflicts all around the world

There are many things such as industry

Trains

Transport

Travel factors that contribute to climate change

Travel industry - planes

Unventilated/stuffy rooms

Usage of CFC related products like refrigerators contribute as well

Use number of paper/ tissue

Using petroleum vehicles increase more pollution

Using plastics bag

Vapes

Vaping/smoking output

Viruses

War eg weapons

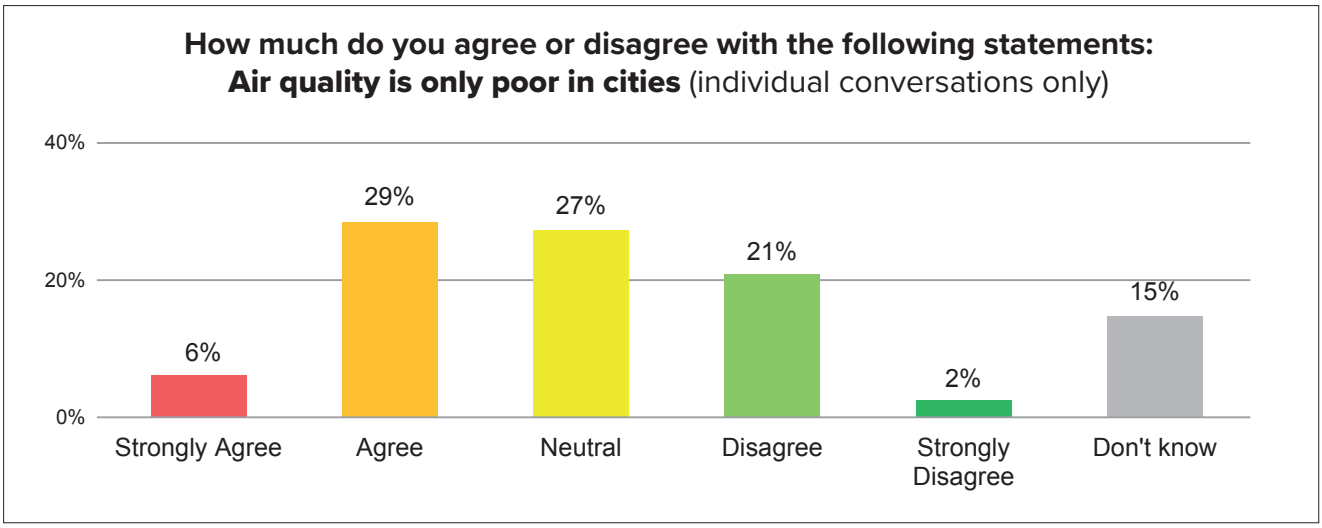
Weed & vapes in public areas

Who knows

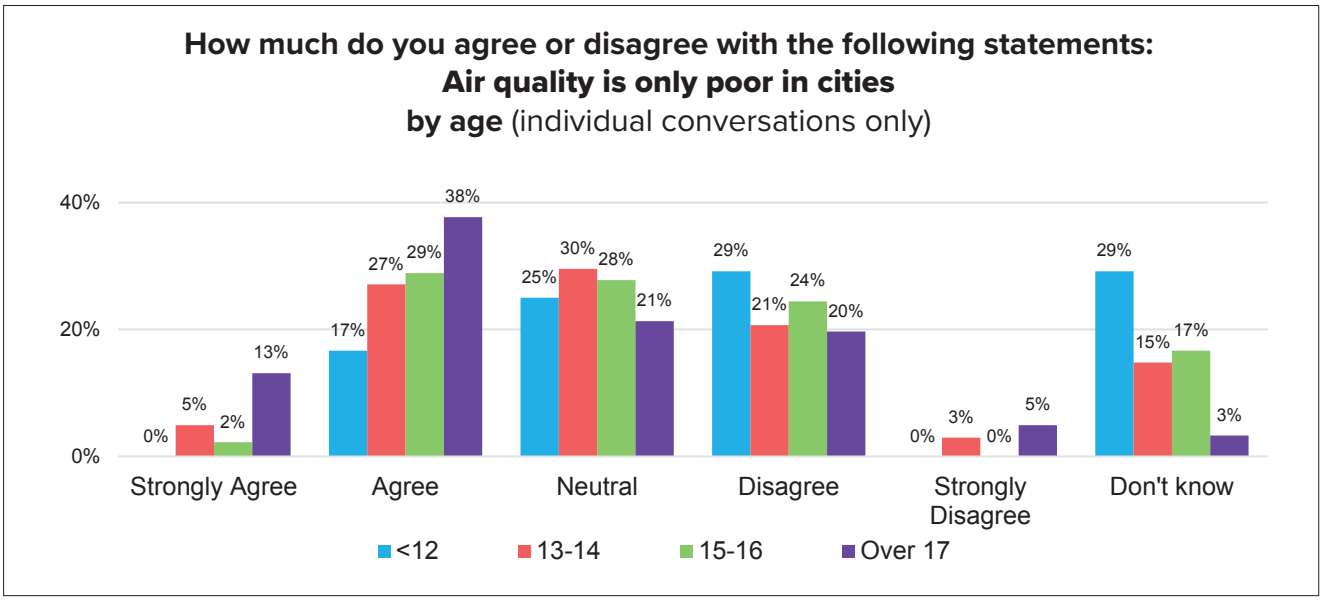
Is poor air quality only a factor in cities?

In the individual surveys we asked young people whether they believed that poor air quality was only a factor in cities. There were mixed responses to this question with a third agreeing that are quality is only poor in cities, a little over a quarter were neutral and a little less than a quarter disagreed. A small number did not know.

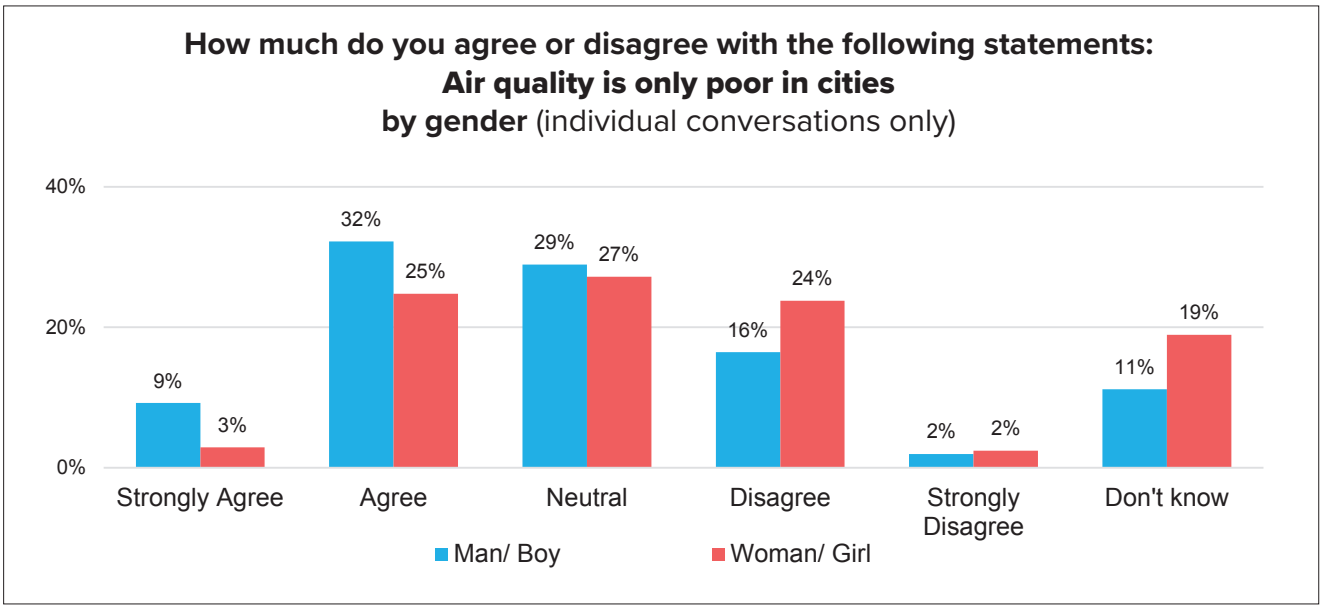
There were some variances in age, such as those over 17 were more likely to agree that air quality was poor in cities. Although this data cannot be taken as representative as we did not speak to an equal spread of ages across all regions, and the overall subgroup was relatively small (61 people aged 17 and over answered this question), it is interesting to note that this age group was also the most likely to have learnt about air pollution previously (either in school or from a health provider).



Base: 407 individuals



Base: 378 individuals (24 aged <12, 203 aged 13-14, 90 aged 15-16, 61 aged over 17). NB: Low base in the "<12" subgroup.

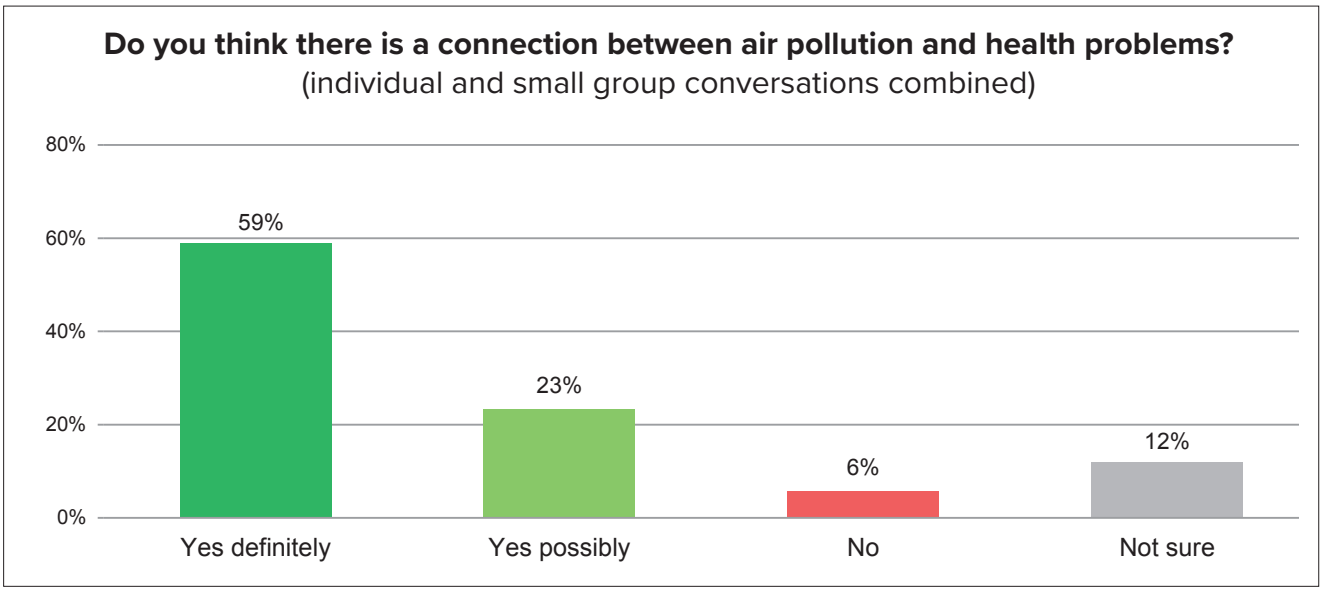


Base: 358 individuals (152 Man/ Boy, 206 Woman/ Girl)

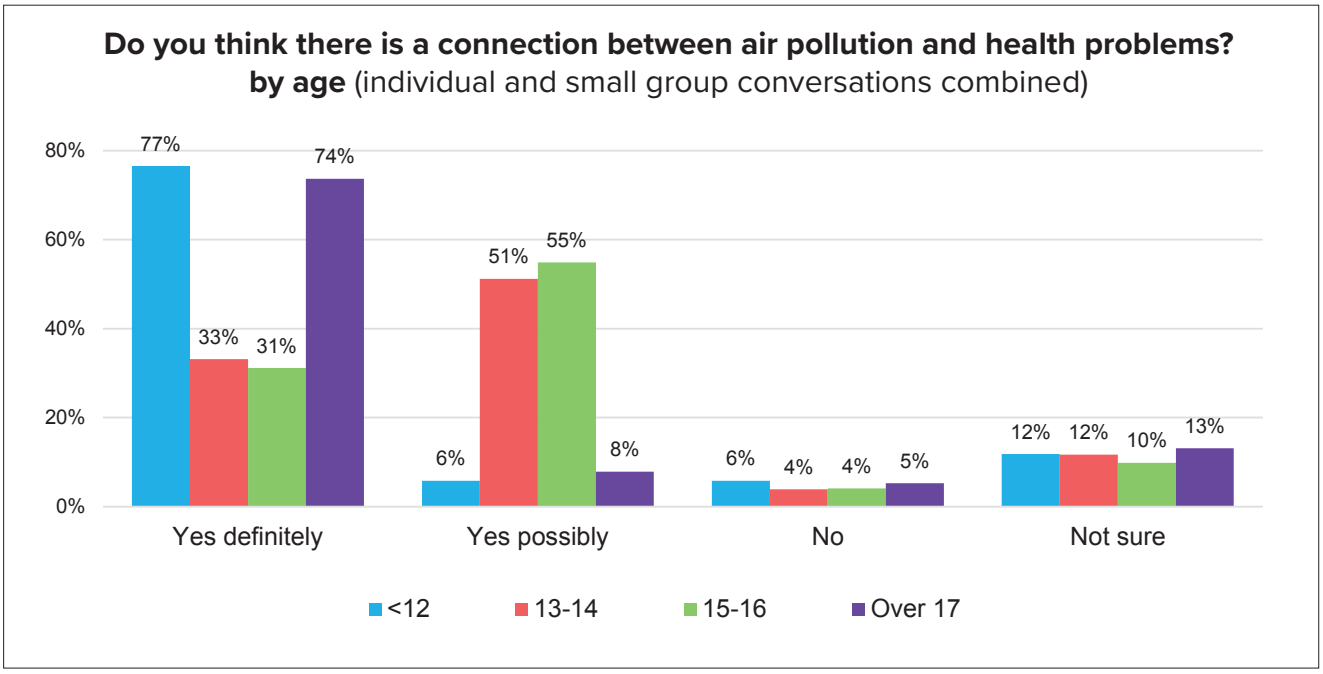
Knowledge about the health consequences of poor air quality

CYP were asked several questions to explore their understanding of the links between poor air quality and health.

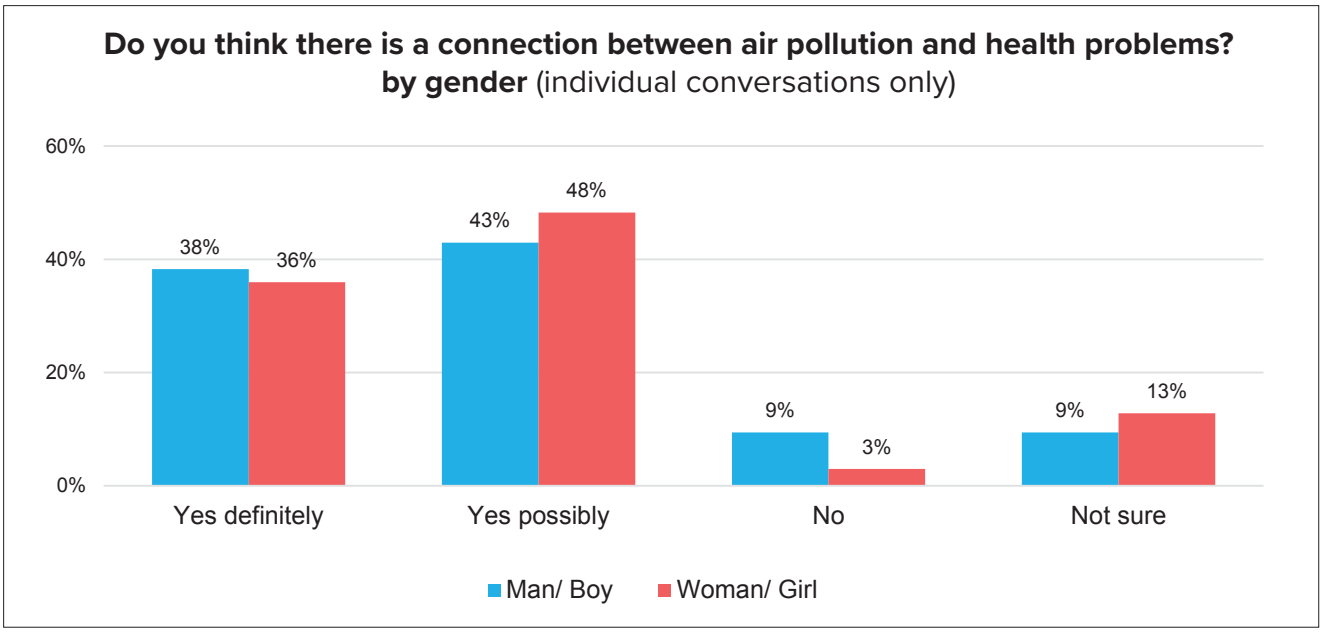
Most children and young people thought there was a connection between air pollution and health problems, and a majority held this as a strong belief. Much like children and young people's responses to the role of human rights in access to clean air, here again there is a strong perception that there is a direct link between health outcomes and air pollution. When looking at 'definitely' and 'possibly' responses together, there is little variance by age or gender. However, when looking at these responses separately, it is interesting to note that the under 12's group and over 17's group were more likely to say 'definitely', while the 13–16-year-old groups were more likely to say 'possibly'. This again reflects the broad trend emerging in this research that older young people and younger children tend to be more concerned, informed and aware of air quality issues.



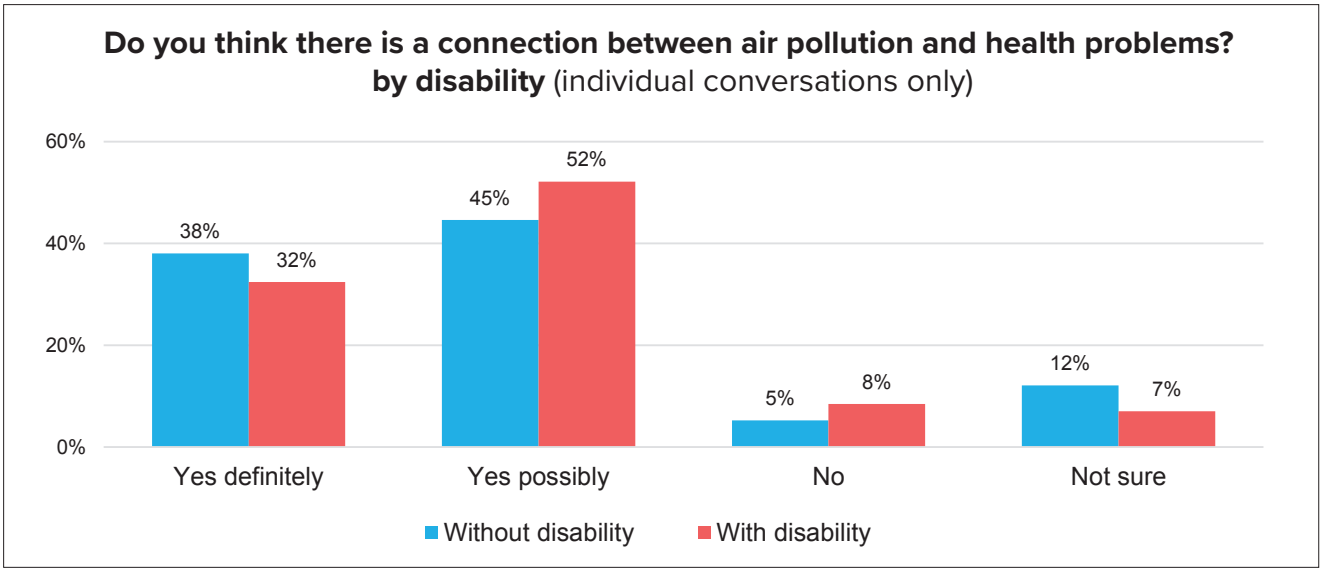
Base: 946 (400 individuals and 546 in small groups)



Base: 902 (371 individuals and 531 in small groups) : 499 aged <12, 205 aged 13-14, 122 aged 15-16, 76 aged over 17



Base: 352 individuals (149 Man/ Boy, 203 Woman/ Girl)



Base: 376 individuals (305 without disability, 71 with disability)

In Northern Ireland, 90% of CYP said they believed there was a connection between air pollution and health problems (10% said they were unsure). The response options used in Northern Ireland were yes/no/not sure (rather than 'yes definitely/yes possibly') and so it isn't possible to combine them with the responses from other locations, however the broad finding was similar.

In both individual and small group conversations, there was space for comments and discussion after the tickbox options. 62 young people who completed individual questionnaires shared a response, along with 49 group conversations involving 531 children and young people.

Overall summary of comments:

A large majority of conversations mentioned respiratory conditions that would be caused or worsened by air pollution. Other frequently mentioned conditions included heart problems, cancer, skin conditions, infectious diseases, eye problems, allergies, and organ function, as well as mental health issues and shortened life expectancy.

Thematic analysis of comments:

- By far the most commonly raised health conditions (mentioned in) were **respiratory conditions**, including asthma, throat and lung problems. This came up in three quarters of group conversations, and seven out of ten individual comments.
- In about a quarter of group conversations, and in a small number of individual comments, young people mentioned **heart problems** or **cancer** as conditions that would be impacted by air pollution.
- **Shortened life expectancy** was mentioned in about one in seven conversations. In similar frequency, young people said **the whole body is affected**.
- In a smaller number of conversations, young people mentioned other issues such as skin conditions, infectious diseases, chronic conditions, eye problems, allergies, organ function (e.g kidney and liver), and the mental health impacts of knowing you are breathing poor quality air.
- In a handful of responses, young people reflected that **people get sick for other reasons than air pollution**, so maybe it is not the most significant factor in their illness.

"Even before air pollution and cars, people got ill, sometimes worse diseases"
- Newport, Street engagement, aged 17-18

"Bad [air] will cause lung and heart problems and people will die young. We all need oxygen to breathe and be healthy."
- Newport, Street engagement, aged 15-16

"You don't need a health condition to be affected. From what happened with my car, breathing in that orange dust would be extremely harmful"
- Port Talbot, Street engagement, aged over 21

"I think air pollution can cause health problems for healthy people and make it worse for people with an existing health conditions."
- Paisley, Hospital setting, aged 17-18

"We all need oxygen, we don't know what we are breathing in, it can't be good."
- Glasgow, Street engagement, aged 17-18

"When there is environment of pollution there are diseases and you don't live for long." - Paisley, University setting, aged over 21

"Mainly respiratory health problems, but that's not all because air pollution can cause other health problems and disease related to the environment."
- Manchester, University setting, aged over 21

"Air pollution affects every part of the body."
- Paisley, University setting, aged over 21

"A lot of inflammatory conditions have been shown to be linked to inhalation of poor quality air/particles."
- Manchester, University setting, aged over 21

"Breathing problem, lung disease, eye irritation, flu, asthma."
- Paisley, University setting, aged over 21

"Increase in air pollution increased morbidity and morbidity of those with pre-existing respiratory diseases. Air pollution burdens the excising health inequalities gaps."
- Manchester, University setting, aged over 21

"Even people with really good air all get ill so more are lots of other more important reasons like lack of exercise or sport or genetics."
- Paisley, University setting, aged 15-16

"Nobody tells us about it, but if you are breathing in bad air it will affect your quality of life"
- Port Talbot, Street engagement, aged 15-16

"Worrying about the world ending. Any living organism needs oxygen and air."
- Glasgow, School setting, aged 15-16

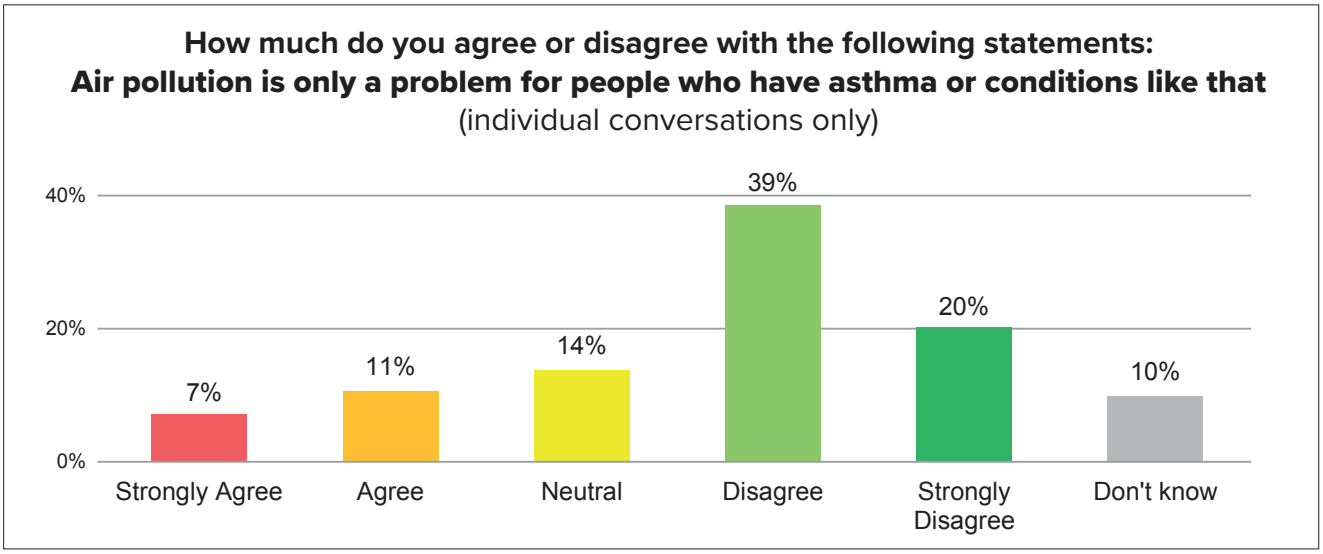
"Our body needs oxygen otherwise we might die or suffer and not be able to breathe"
- Port Talbot, Street engagement, aged 15-16

"I'm not a Doctor, only they can say, scientists know what's in the air, not us"
- Newport, Street engagement, aged 17-18

"Causes asthma and lung cancer and death"
- Glasgow, Street engagement, aged 15-16

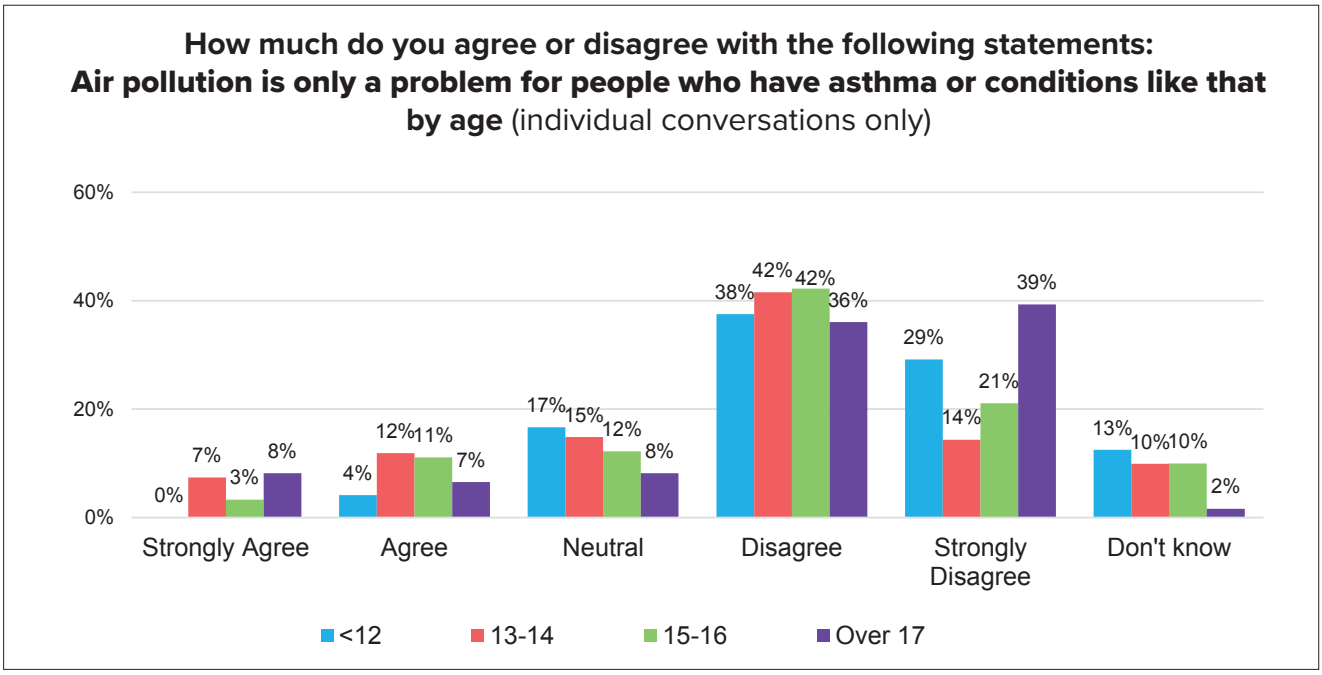
"Of course there is, our brains and cells need oxygen, breathing in chemicals ultimately passes through your bloodstream so would impact your whole body"
- Glasgow, Street engagement, aged 17-18

In the individual survey we also asked to what extent they felt that air pollution was only a problem for people who had asthma or other similar conditions.

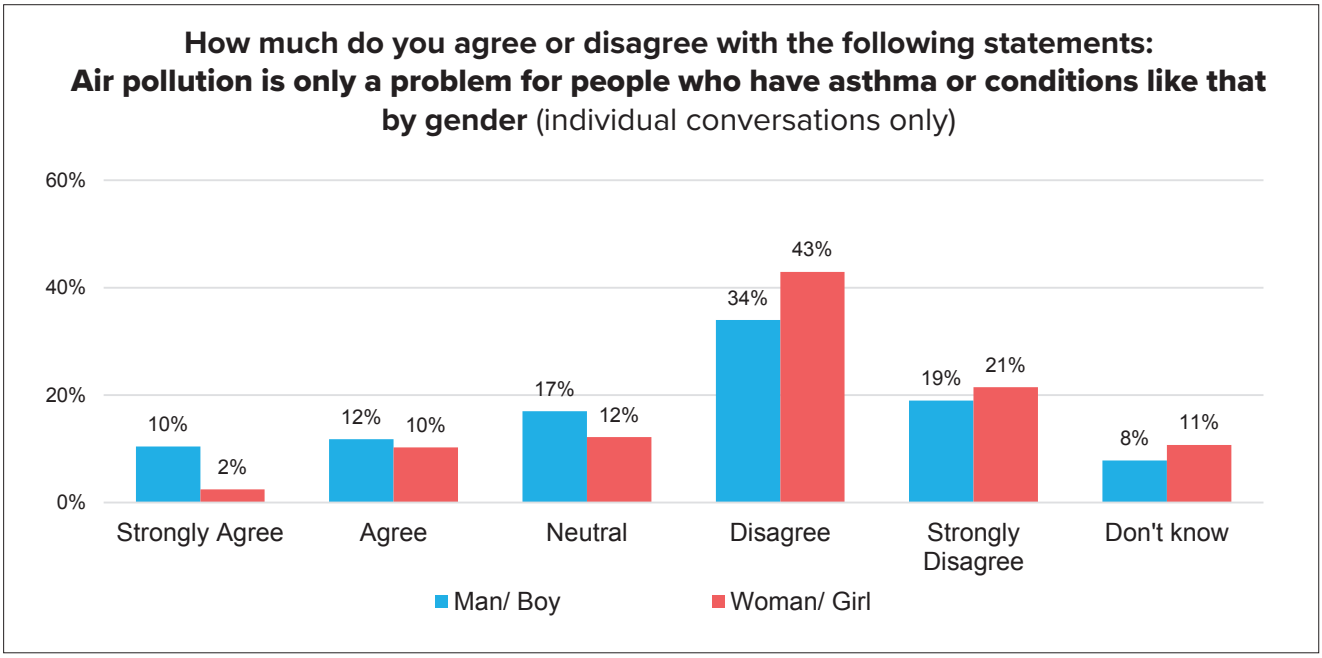


Base: 407 individuals

On the whole CYP stated that they disagreed that air pollution was only a problem for people with asthma and other similar health conditions. There were some minor differences between sub-groups on this question.



Base: 377 individuals (24 aged <12, 202 aged 13-14, 90 aged 15-16, 61 aged over 17). NB: Low base in the "<12" subgroup.

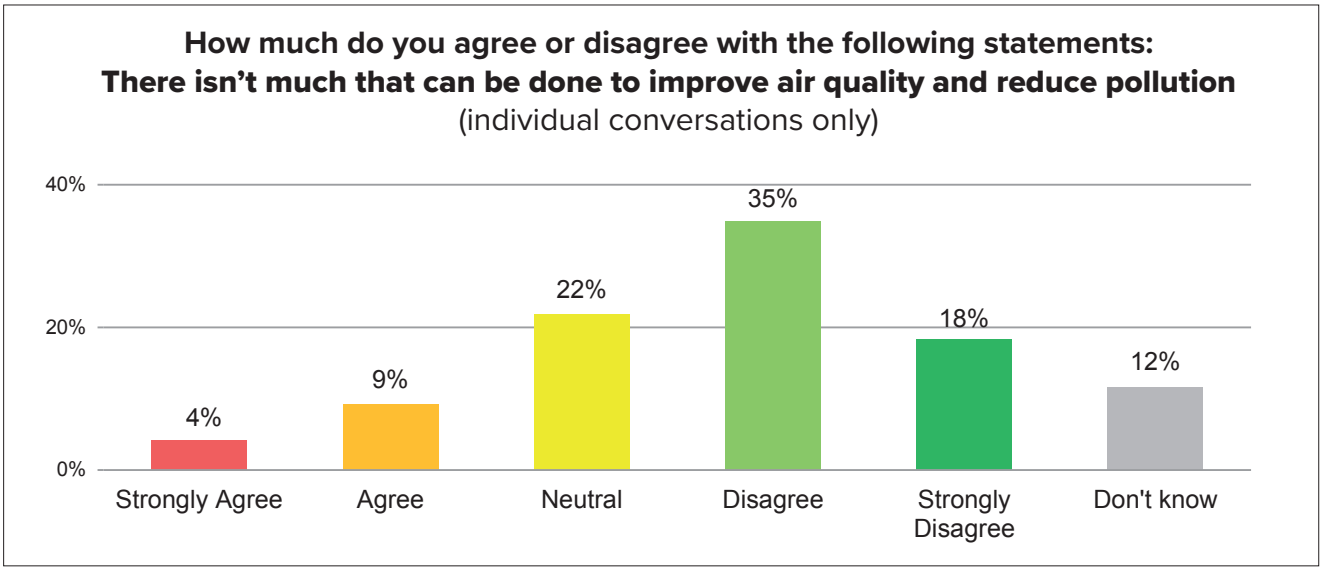


Base: 358 individuals (153 Man/Boy, 205 Woman/Girl)

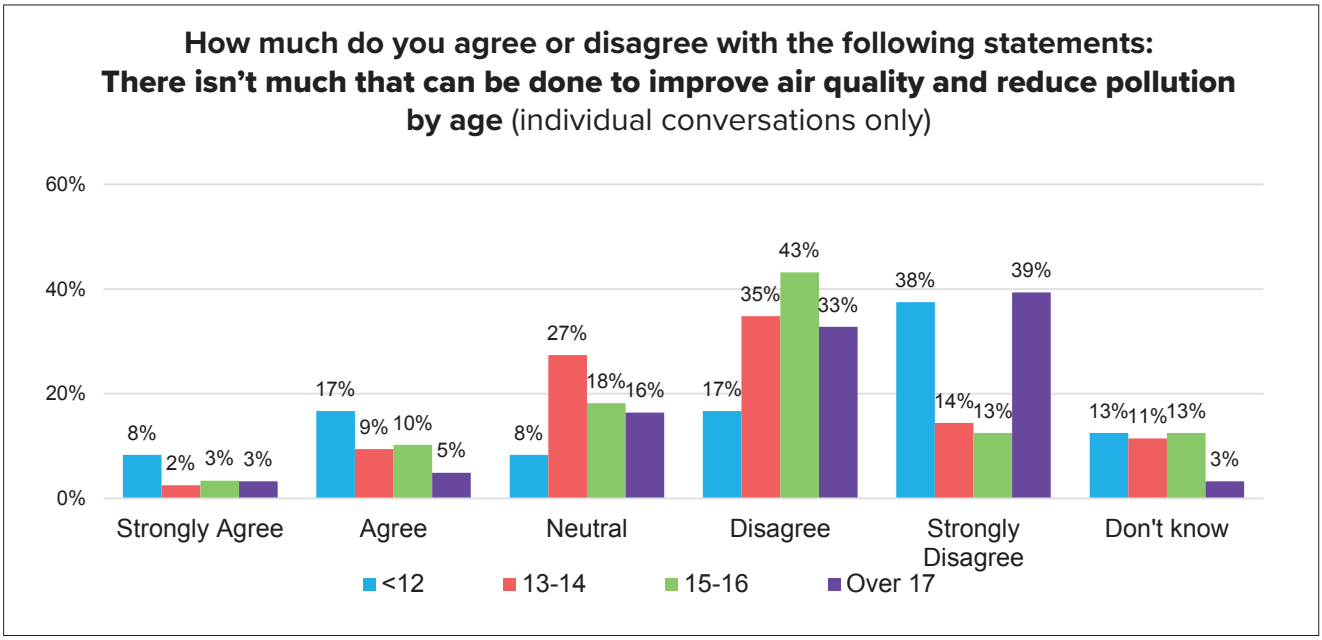
How to improve indoor and outdoor air quality

Is it possible to improve air quality and reduce pollution?

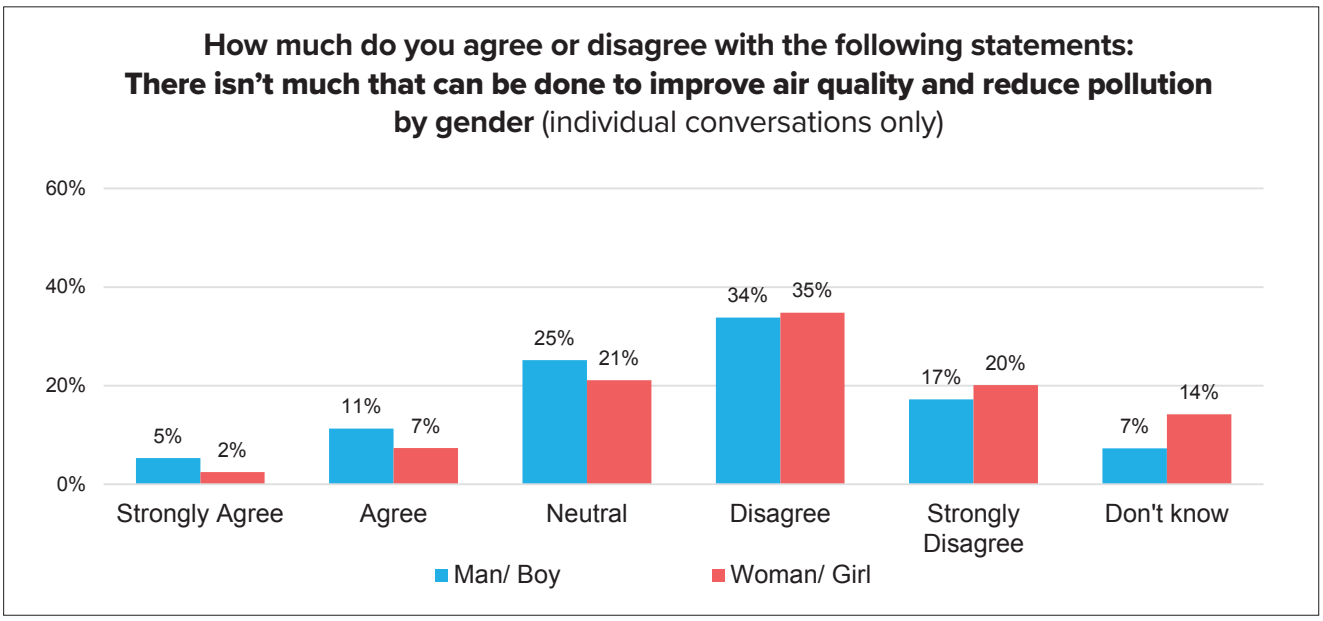
In the individual surveys we asked CYP to what extent they agreed or disagreed with the statement that there wasn't much that could be done to improve air quality and reduce pollution. A slight majority overall disagreed (feeling that things can be done). Interestingly, one in three either were neutral or said they didn't know.



Base: 404 individuals



Base: 374 individuals (24 aged <12, 201 aged 13-14, 88 aged 15-16, 61 aged over 17). NB: Low base in the "<12" subgroup.



Base: 355 individuals (151 Man/ Boy, 204 Woman/ Girl)

Ideas for improving outdoor air quality

This question was explored as an open question in both individual questionnaires and in group conversations. 65 individual young people shared their ideas, along with 40 group conversations involving 279 young people.

Overall summary of comments:

The main suggestions involved green transportation, green spaces, renewable energy, green policies and regulations, and sustainable consumption.

Thematic analysis of comments:

- In a majority of conversations (about three quarters of group conversations, and half of individual comments), young people sad that we should **preserve nature and create more green spaces** by stopping deforestation, planting trees, and rewilding.
- In a majority of conversations (in about two thirds of group conversations, and over half of individual comment), young people said that **green transport options** needed to be made available and affordable, including electric cars, green public transport, and schemes to encourage walking, cycling and scooting.
- In about half of the group conversations, and a quarter of the individual comments, young people voiced a need for **policies that should be undertaken by government**, including fines and taxation, education, clean air zones, prioritising local agriculture, separating industry from residential areas, and limiting smoking to designated areas.
- In about a third of group conversations and a quarter of the individual comments, young people expressed the need for **a change to cleaner energy production** and a shift away from using diesel and fossil fuels.

- In about a third of group conversations, and about one in ten individual comments, young people also mentioned **actions that can be taken by the individual**, such as living in the countryside, buying sustainable products, cutting down consumption, not smoking, eating less meat, not having BBQs, as well as protesting and campaigning.
- In almost a third of group conversations, and in a few individual comments, young people raised related issues such as proper waste disposal (curbing littering, encouraging people to recycle, etc), pollution of oceans, and use of chemical pesticides.

"Higher corporate tax on vehicles producing high carbon dioxide."
- Manchester, University setting, aged over 21

"More public transport that is accessible & cheaper. More green spaces."
- Manchester, University setting, aged over 21

"Move industries far from residential areas."
- Paisley, University setting, aged over 21

"Plant trees everywhere. Stop using bad fuel. Don't litter. Cut down on eating meat."
- Port Talbot, Street engagement, aged 15-16

"Stop all the construction and new buildings during the daytime - so much dust"
- Glasgow, Street engagement, aged 19-20

"More encouragement to make electric cars more accessible. More local agriculture and industry to reduce pollution"
- Glasgow, Street engagement, aged 19-20

"Cut industrial emissions"
- Manchester, University setting, aged over 21

"More greenery"
- Manchester, University setting, aged over 21

"Use renewable source f energy. Clean air zones"
- Manchester, University setting, aged over 21

"Cycle routes"
- Nottingham, School setting

"Aim higher ratio of land or trees. Expand public gardens. Controlled construction site to minimise air pollution"
- Manchester, University setting, aged over 21

"Afforestation. Use electric vehicles"
- Paisley, University setting, aged over 21

"Make electric cars and motorbikes free"
- Newport, Street engagement, aged 15-16

> *"Use less concrete. Improve public transport options that are better and cheapest. Use more green energy."*
> - Glasgow, Street engagement, aged 17-18

> *"No fires. Industrial areas removed from living areas. Increase electric vehicles"*
> - Nottingham, School setting

> *"Live in the country because cities are worse"*
> - Newport, Street engagement, aged 17-18

> *"Walk or ride a bike"*
> - Port Talbot, Street engagement, aged 15-16

Ideas for improving indoor air quality

This question was explored as an open question in both individual questionnaires and in group conversations. 58 individual young people shared their ideas, along with 39 group conversations involving 279 young people. Anecdotally, it was noted that many children and young people had not thought about indoor air quality before, so for many this was the first time exploring this question. Perhaps for this reason, some comments mention factors unrelated to indoor air quality, such as conserving electricity.

Overall summary of comments:

The main suggestions were ventilation; using devices to improve air; having indoor plants; avoiding producing indoor pollution by limiting smoke, chemical sprays, and aerosols, and avoiding domestic gas burners; reducing energy use; and cleaning to reduce mould and dust.

Thematic analysis of comments:

- In a large majority (over three quarters) of small group conversations and in one quarter of individual comments, young people said that **ventilation** would improve indoor air quality.
- In about half of both small group conversations and individual comments, young people mentioned using **devices** such as air conditioning, air purifiers, CO2 alarms, dehumidifiers, or fans to improve air quality.
- In nearly half of small group conversations, and about a quarter of individual comments, young people suggested **having plants inside** to clean the air and provide oxygen.
- In about one in five group conversations, and in over a quarter of individual comments, young people mentioned **stopping or reducing the use of things which contribute to indoor air pollution**. Things to avoid included smoking or vaping indoors, using chemical sprays and aerosols, having indoor fires, using candles, and cooking on gas burners.
- In about one in ten conversations, young people emphasised the importance of **keeping things clean** – such as cleaning the house to remove mould and dust, and keeping household equipment and boilers maintained.
- In about one in five group conversations, young people mentioned **reducing energy use** by turning off gadgets at night, reducing heating use, or turning off lights.

- In a small number of conversations, young people mentioned switching to solar power or reducing the use of gas boilers, not using fridges, or things the government should do (such as subsidising air purifiers, or being involved in preventing mould)

> *"Plants and flowers inside house. Plant trees in your garden. Turn everything off at night"*
> - Newport, Street engagement, aged 15-16

> *"Open windows. Use fan. Turn off lights. Stay downstairs. Air conditioning. Recycle. Plants and water them"*
> - Newport, School setting, aged <12

> *"Dehumidifier, air purifier. Plants. Stricter housing laws eg against mould and damp"*
> - Manchester, University setting, aged over 21

> *"Not use gas boilers but would need government to help air purifiers"*
> - Paisley, Hospital setting, aged 19-20

> *"Open doors and windows. Don't use chemical sprays and air fresher sprays."*
> - Paisley, Hospital setting, aged 17-18

> *"Open space. Should open windows and live away from big factories."*
> - Paisley, Hospital setting, Mixed ages (13-14 and 15 16)

> *"Air filters to circulate air as much as possible as there is no air conditioning in the UK."*
> - Glasgow, Street engagement, aged 19-20

> *"Real plants to give off O2. Opening the doors/windows. Unplug wires. Limit heating use. Use a fan. Turn lights off. Don't turn on devices too long. Shorter showers. Reduce candle use. Turn gas off after cooking."*
> - Manchester, School setting, aged <12

> *"Indoor plantation. Well ventilated home construction. Awareness about ventilation importance."*
> - Manchester, University setting, aged over 21

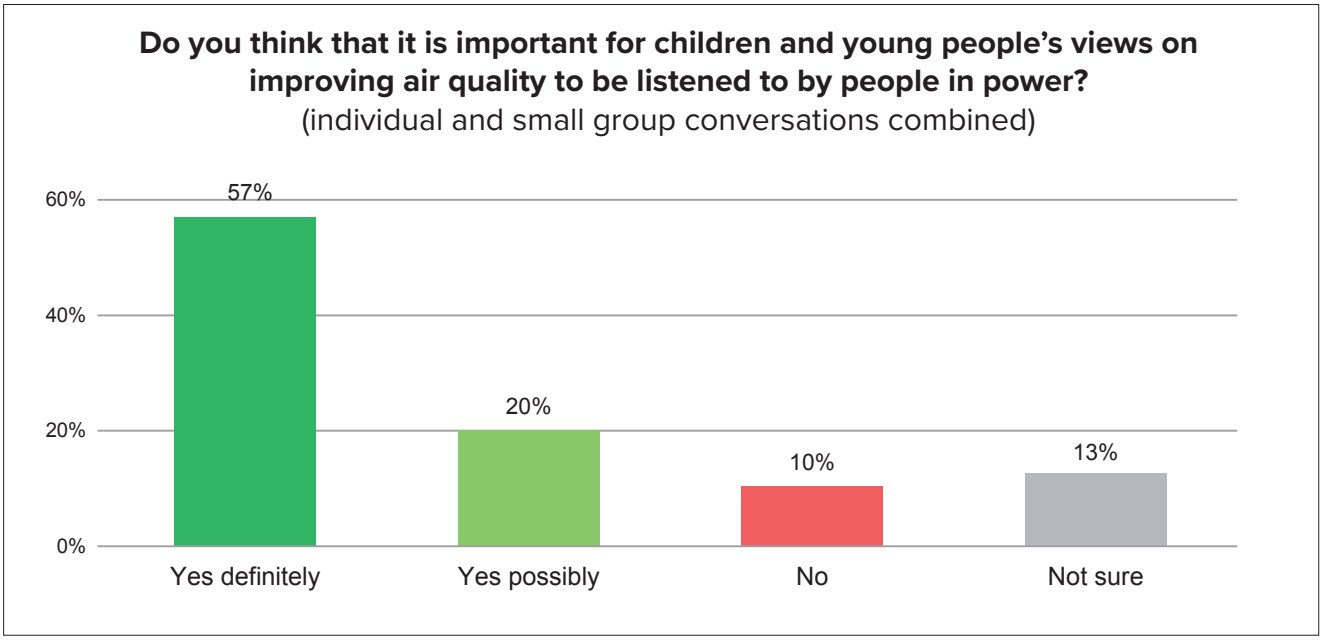
> *"Reducing cooking with gas"*
> - Manchester, University setting, aged over 21

> *"Put ventilation into buildings (like the gym)"*
> - Nottingham, School setting

Interest in being involved in improving air quality

Should views of CYP on air quality be listened to by people in power?

The vast majority of young people thought that it is important for their views on air quality to be listened to by people in power:

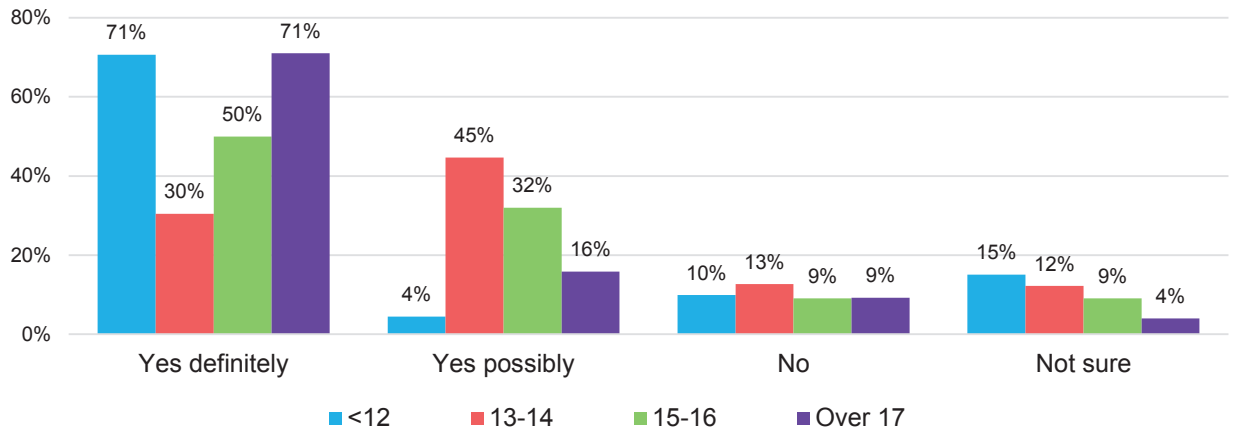


Base: 882 (391 individuals and 431 in small groups)

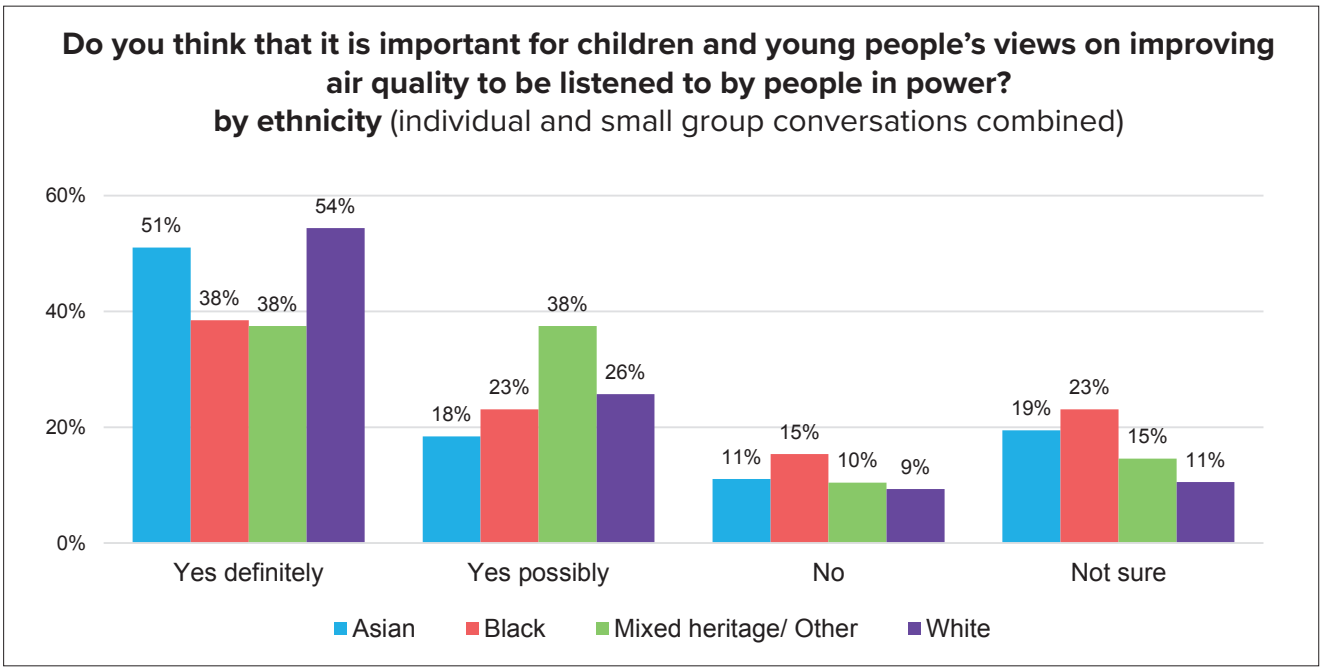
Much like CYP responses in this research around the link between human rights and access to clean air and the role of air pollution in health outcomes, across the board CYP strongly aligned around how important it is that people in power listen to them. There were no significant variances between age, ethnicity gender or ability.

Do you think that it is important for children and young people's views on improving air quality to be listened to by people in power?					
	Yes definitely	**Yes possibly**	**No**	**Not sure**	*Base*
ALL	57%	20%	10%	13%	*822*
Age					
<12	71%	4%	10%	15%	*385*
13-14	30%	45%	13%	12%	*197*
15-16	50%	32%	9%	9%	*122*
Over 17	71%	16%	9%	4%	*76*
Ethnicity					
Asian	51%	18%	11%	19%	*190*
Black	38%	23%	15%	23%	*13*
Mixed heritage/ Other ethnic group	38%	38%	10%	15%	*48*
White	54%	26%	9%	11%	*408*
Gender					
Man/Boy	30%	42%	15%	13%	*148*
Woman/Girl	41%	35%	11%	13%	*199*
Disability					
Without disability	35%	39%	13%	13%	*300*
With disability	43%	37%	11%	9%	*70*

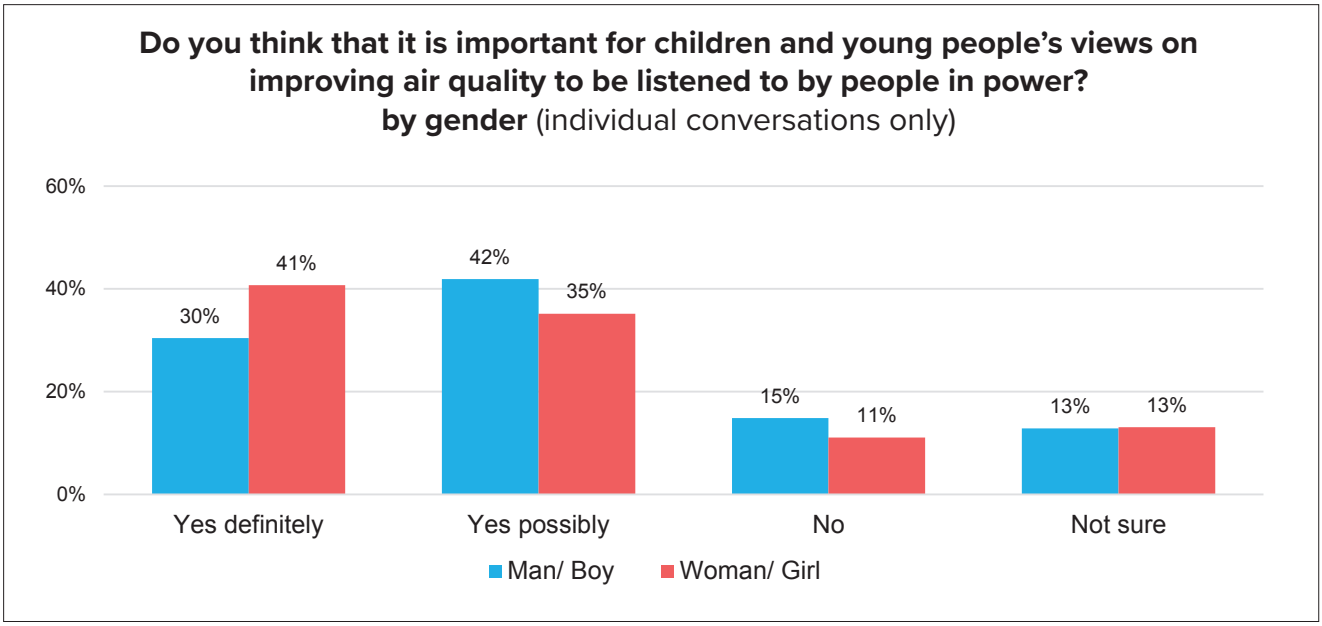
Do you think that it is important for children and young people's views on improving air quality to be listened to by people in power?
by age (individual and small group conversations combined)



Base: 780 (364 individuals and 416 in small groups): 385 aged <12, 197 aged 13-14, 122 aged 15-16, 76 aged over 17



Base: 659 (384 individuals and 275 in small groups): 190 Asian, 13 Black, 48 Mixed heritage/Other ethnicity, 408 White. NB: Low base in the Black subgroup.

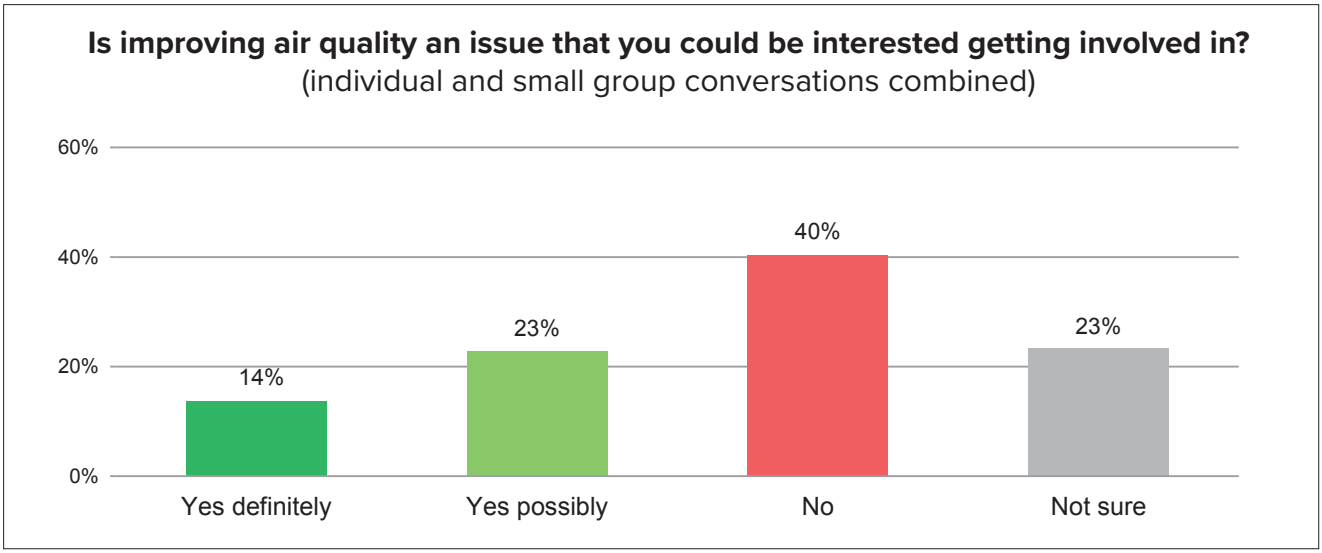


Base: 347 individuals (148 Man/ Boy, 199 Woman/ Girl)

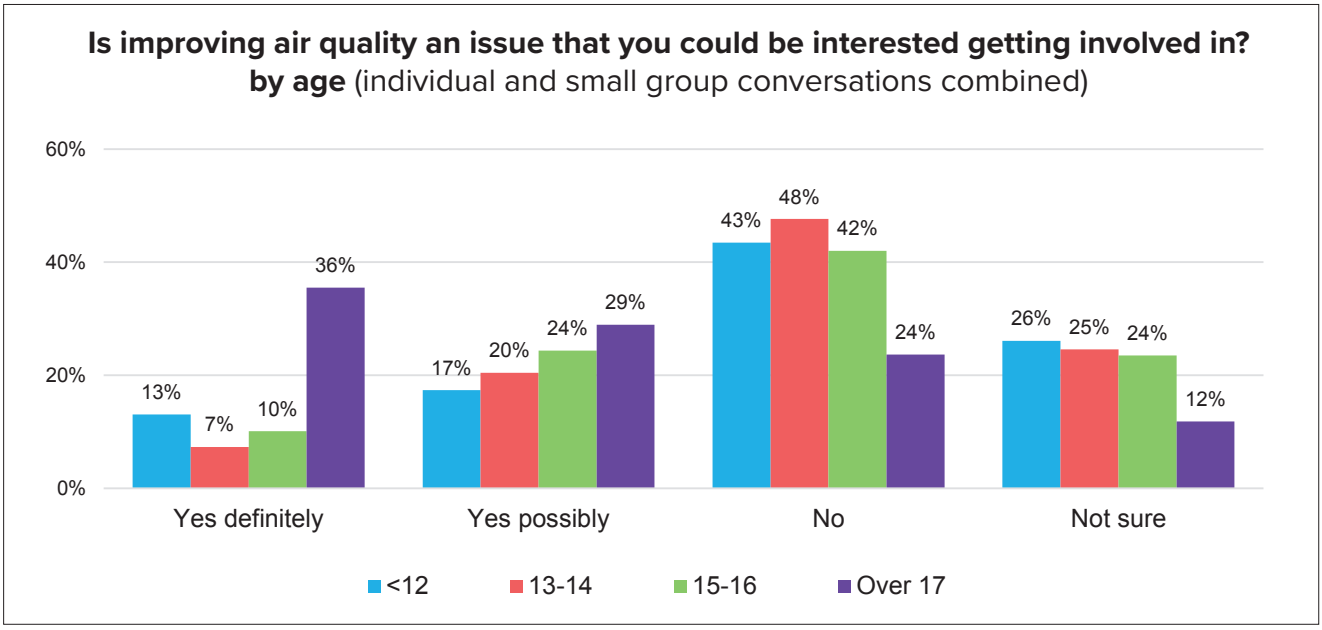
Interest in being more active on this issue

Over one in three CYP said that they could be interested in being involved in action to improve air quality. This suggests a substantial latent capacity to advocate for change.

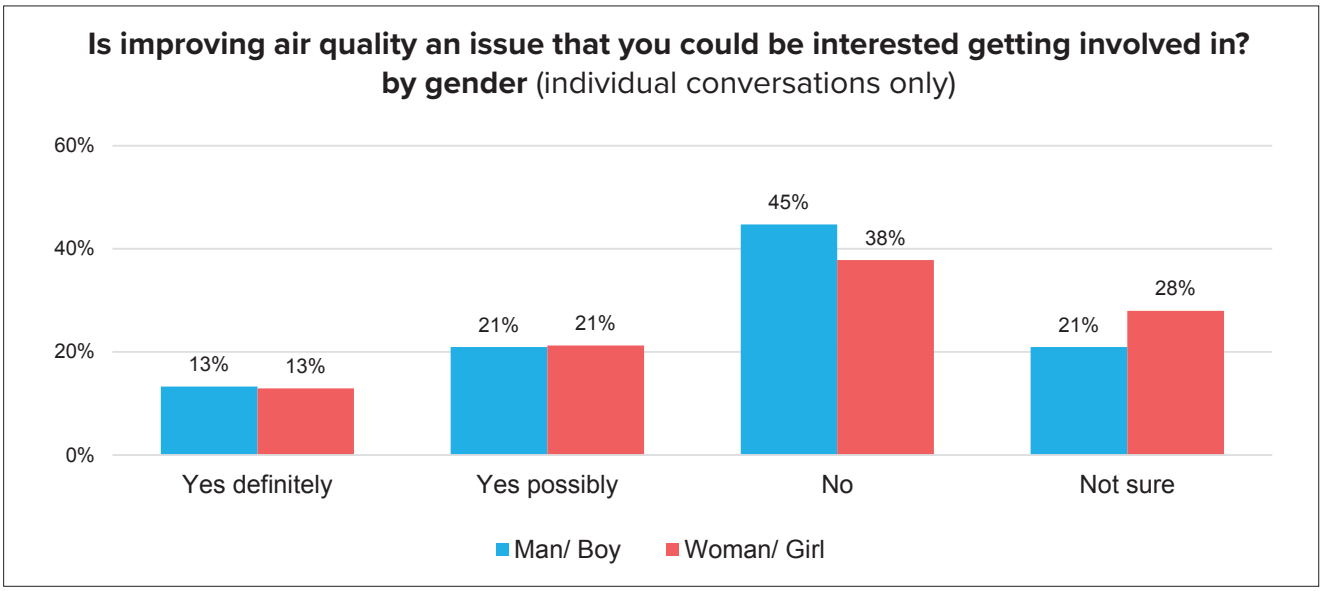
Whilst over a third of CYP overall, those who were over 17 were more likely to say they could be interested in getting involved in improving air quality, with nearly two thirds saying they could be interested. There were some small variations by ethnicity, and no significant variances in respect of ability or gender.



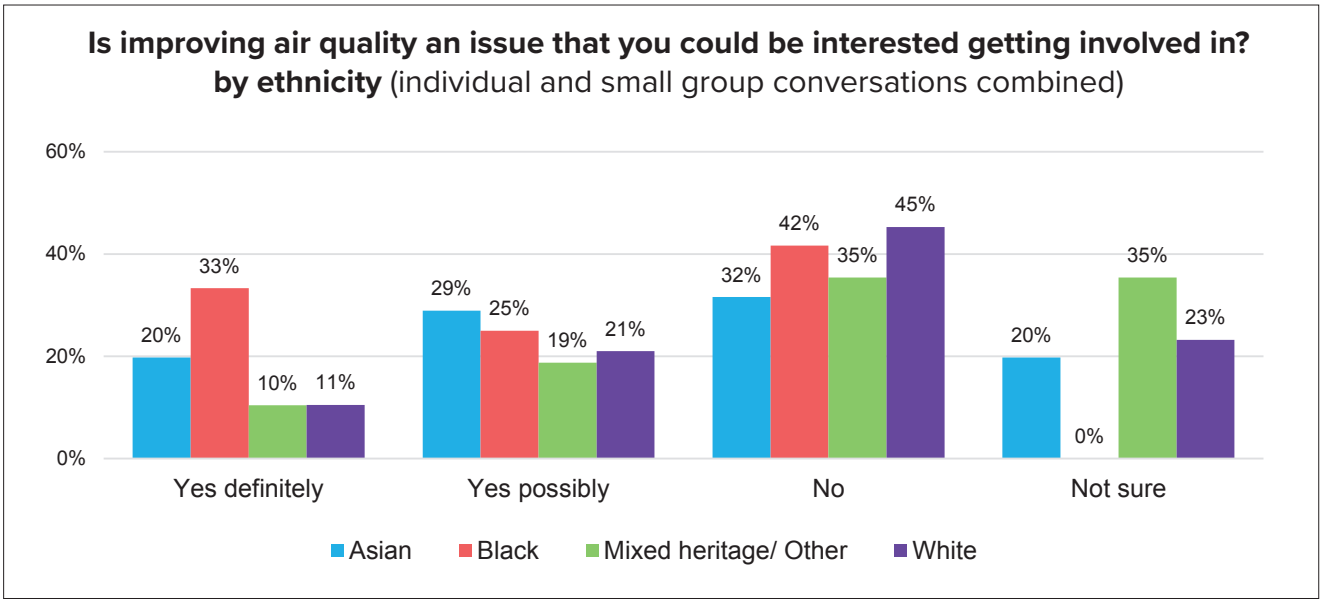
Base: 449 (379 individuals and 70 in small groups)



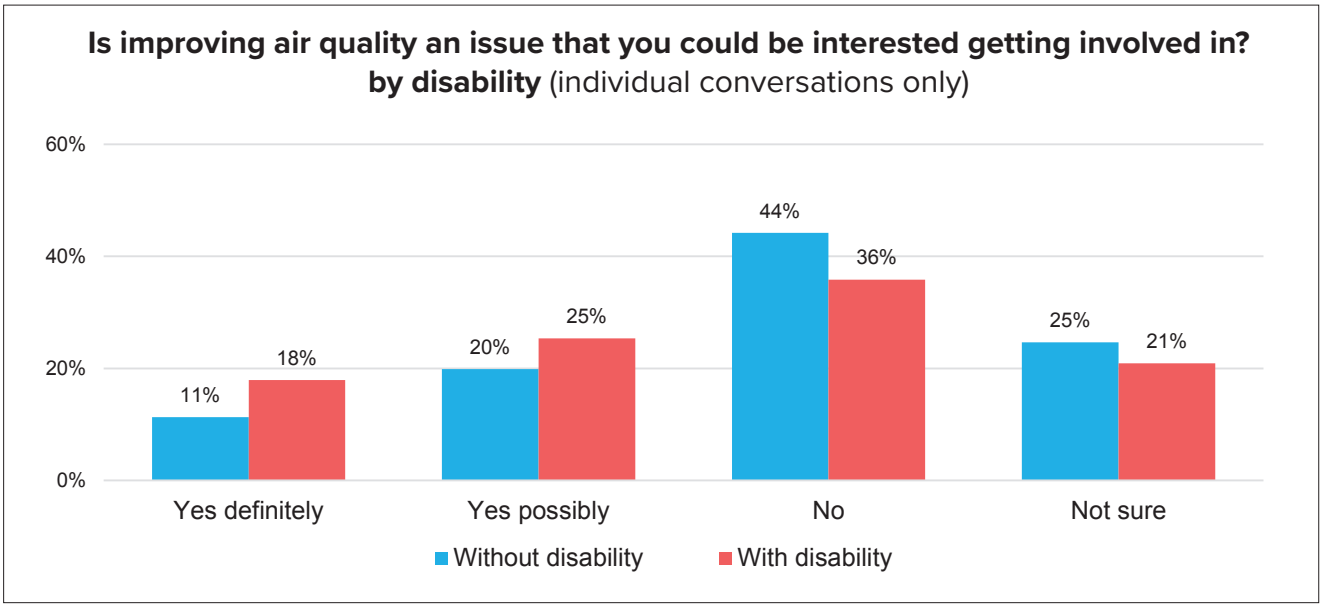
Base: 409 (354 individuals and 55 in small groups): 23 aged <12, 191 aged 13-14, 119 aged 15-16, 76 aged over 17. NB: Low base in the "<12" subgroup



Base: 336 individuals (143 Man/ Boy, 193 Woman/ Girl)



Base: 412 (372 individuals and 40 in small groups): 76 Asian, 12 Black, 48 Mixed heritage/Other ethnicity, 276 White. NB: Low base in the Black subgroup.



Base: 359 individuals (292 without disability, 67 with disability)

There was a comment box after the multiple choice question in both individual questionnaires and small group conversations. There were 55 comments on this question from individuals as well as comments from 12 group conversations (involving 43 young people).

Overall summary of comments:

While many comments mentioned a responsibility to future generations, and how serious the issue is, others said they needed to know more, that they weren't interested, didn't have time, or didn't think it would make a difference.

Thematic analysis of comments:

- In many conversations, young people said they were interested because it is a problem that more people should be taught about and there is a collective responsibility to improve air quality for future generations. A few people added qualifiers saying they didn't want to take part in protests but would want to support in other ways.
- In some conversations, young people said they weren't interested or didn't have time.
- In a few conversations, young people said they wanted to support but weren't sure what they could do, or said they'd need more information.
- In a small number of conversations, young people said that they didn't think getting involved would make a difference or that it's up to the government.

> *"More people should be taught about clean air"*
> - Newport, Street engagement, aged 15-16

> *"Young people are important and our future is in our hands."*
> - Paisley, Hospital setting, aged 17-18

"To show them our opinions, we are the future [...] and our voices must be heard."
- Glasgow, Street engagement, aged 15-16

"It is not something I'm interested in"
- Birmingham, School setting, aged 13-14

"Won't make any difference"
- Glasgow, Street engagement, aged over 21

"I don't have much time"
- Port Talbot, Street engagement, aged 17-18

"I don't really know, it depends on the circumstances."
- Birmingham, School setting, aged 13-14

"I think everyone has a role to play if everyone does a little but it's better than nothing."
- Glasgow, Street engagement, aged 19-20

"We all need to speak up"
- Glasgow, Street engagement, aged 19-20

"Yes, the government doesn't really listen to young people but yes they should."
- Glasgow, School setting, aged 15-16

"I wouldn't protest or get involved physically but I would support the cause through donation or voting etc."
- Nottingham, School setting, aged 15-16

"We all breathe so should all care."
- Glasgow, Street engagement, aged 17-18

"I wouldn't protest but support others."
- Nottingham, School setting, aged 15-16

"Sounds interesting but need to learn more. People need to know about what they can do"
- Newport, Street engagement, Mixed ages (13-14 and 15-16)

"It's interesting but it's the government's job"
- Port Talbot, Street engagement, aged 15-16

"We could protest and government should listen to young people because they are destroying our world"
- Port Talbot, Street engagement, aged 15-16

"Don't have time, it should not be up to young people, we have enough to deal with in life."
- Glasgow, Street engagement, aged 15-16

Any other comments

At the end of the surveys and group conversations, young people were asked if there was anything else they'd like to say. There were comments from 195 individuals and 5 group conversations involving 51 young people.

- The majority of comments (four out of five) said they had nothing else to say. Some added that they didn't care about the topic, while others expressed thanks for the experience.
- In many of the remaining comments, young people emphasised the need to protect nature, stop people littering, monitor air quality, raise awareness or educate.
- In some of the comments, young people had particular suggestions for clean air campaigns, including showing people how they can make changes in their lives and involving children.
- In a small number of comments, young people said there were bigger problems to worry about.

"Effects of bad air quality should be taught along side effects of smoking and doing drugs in school, e.g. Science, personal development"
- Nottingham, School setting, aged 13-14

"Air pollution is a thing that affects everyone and I would like to be a part of stopping it."
- Birmingham, School setting, aged <12

"I get some headaches due to a lack of air regulation"
- Nottingham, School setting, aged 15-16

"I think the awareness of climate change and air pollution is good and improving but we also need more people to raise alternatives that people can add to their daily lives that'll slowly improve the Earth's air quality. Where I come from, I know so little about climate change and global warming but when I moved to the UK, I understood how serious this topic was for not only us but for future generations."
- Birmingham, School setting, aged <12

"What children think is different to adults. Children have good ideas, children have bigger imagination"
- Newport, School setting, aged <12

"Learnt how important it is, how clean air can affect us not physically but also mentally as you will inhale polluted, dirty air and it can damage your lungs and might (if very serious) damage your mental growth. Thank you for this experience :)"
- Birmingham, School setting, aged <12

Reflections and recommendations

Since 2018 there has been an increase in environmental activism which is being witnessed across the global north and south. Children and young people in particular have been at the forefront of such activism which also plays a part in raising awareness about environmental issues more broadly amongst non-activist children and young people. The research that we have done on children and young people's awareness and perceptions of air quality is not happening in isolation. Rather The Clean Air Project at RCPCH is happening in tandem with a great deal of research globally that is often recognising the need for more participatory and climate justice orientated research on this topic.

More work needs to be done to better understand the nuanced experiences and perspectives of children and young people. In particular more representative research that explores the intersections of social inequalities that shape children and young people's experiences and perspectives of air quality are needed to be able to make more significant claims about such experiences. We know that young people do not experience inequalities in isolation. Intersectionality offers a helpful framework to explore how multiple interwoven inequalities shape CYP experiences and perspectives of climate and air quality issues. Moreover, intersectionality also provides a useful framework to help us to explore the role of transformation with CYP around this topic.

The following offers some reflections on the findings in our report. Children and young people in our research were concerned about air quality which ties in more broadly with the global youth concern for the climate and environment. Whilst in our research there was concern, this was also mixed with other perspectives with some CYP were not concerned about such issues. Interestingly the data in this report shows negligible differences in environmental concern between different genders. Typically media representations of youth involved in environmental concerns focus on White middle-class girls which is unrepresentative of the broad and varied experiences of children and young people from different backgrounds who are concerned about the climate emergency.

Age was a clear differentiator in our research. Those aged between 13-16 typically showed less concern for air quality. These variances are typical of the other research that highlights that children often show higher levels of environmental concern, followed by a dip in the teenage years with environmental concern growing again as young people get older (Lee et al, 2021).

The key findings of this research demonstrate that broadly speaking regardless of age, gender, ability, region or ethnicity, many children and young people are aware of and interested in air quality issues. Many children and young people are concerned about the issue, they consider access to clean air a fundamental human right and see a direct connection between health outcomes and air pollution. However not all children and young people feel informed to the same extent or want to get involved in improving issues around air quality to the same extent. Our research shows that while some children and young people do want to champion clean air, others do which demonstrates the nuanced and varying experiences amongst children and young people who are by no means a homogeneous group.

Based on the findings of this research it is our recommendation that for the purposes of the Clean Air Project at RCPCH, children under the age of 12 and young people over the age of 17 are prioritised for engaging into the continuing objectives of the project. Our research demonstrates that these two age groups are the most concerned, most informed, and hold the strongest perceptions around the role of rights and need for action on air quality issues. Whilst some 13–16-year-olds also demonstrated a keen interest and engagement in climate and air quality issues, they were the most ambivalent age group reflecting their life stage where they are experiencing major life course transitions - socially (moving into secondary school and college), educationally (taking GCSE's and A Levels) and physiologically (puberty). For this reason, while it would be possible to find and platform young people in this age group as clean air champions, we would suggest targeting comms and awareness raising at the younger and older age groups that would in general be more receptive to it.

We hope that the findings of this research are useful both to the continued work of the Clean Air Project and also to the wider goals and aspirations of RCPCH in ensuring that children and young people have a voice around climate as matter of health and wellbeing.

Appendix 1 – Questionnaires

Individual Questionnaire

Clean Air Fund – Community Research

1. **How concerned are you about air quality as an issue?**
   Very ☐ Quite ☐ A little☐ Not really☐ Not at all☐ Never thought about it before☐
   Comments:

2. **Have you ever learned about air quality and air pollution in school or from health providers?**
   In school: Yes definitely☐ Yes possibly☐ Not sure☐ No☐
   From a health worker: Yes definitely☐ Yes possibly☐ Not sure☐ No☐

3. **How would you describe the air quality in your local area?**
   Very good☐ Good☐ OK☐ Poor☐ Very Poor☐ Don't know☐
   Comments:

4. **How much do you agree or disagree with the following statements?**

   Air quality in the UK is generally good
   Strongly Agree☐ Agree☐ Neutral☐ Disagree☐ Strongly Disagree☐ Don't know☐

   Air quality is only poor in cities
   Strongly Agree☐ Agree☐ Neutral☐ Disagree☐ Strongly Disagree☐ Don't know☐

   Air pollution is only a problem for people who have asthma or conditions like that
   Strongly Agree☐ Agree☐ Neutral☐ Disagree☐ Strongly Disagree☐ Don't know☐

   There isn't much that can be done to improve air quality and reduce pollution
   Strongly Agree☐ Agree☐ Neutral☐ Disagree☐ Strongly Disagree☐ Don't know☐

   I feel well informed about air quality as an issue
   Strongly Agree☐ Agree☐ Neutral☐ Disagree☐ Strongly Disagree☐ Don't know☐

   I feel concerned about the climate emergency
   Strongly Agree☐ Agree☐ Neutral☐ Disagree☐ Strongly Disagree☐ Don't know☐

5. **Do you think there is a connection between air pollution and health problems?**
   Yes definitely☐ Yes possibly☐ No☐ Not sure ☐
   If yes, which kinds of heath conditions do you think are affected by air pollution:

6. **Do you think that breathing clean air ought to be seen as a fundamental human right?** *[A fundamental human right is a basic entitlement that every individual is granted, regardless of nationality, gender, race, religion, or other personal characteristics, simply because they are human. These rights are universally recognised and protect individuals from injustice and inequality.]*
   Yes definitely☐ Yes possibly☐ No☐ Not sure ☐
   Comment

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7. How much do you think each of the following contribute to air pollution in your local area?

	Not at all	A little	A lot	Don't know
Traffic	☐	☐	☐	☐
Electric cars	☐	☐	☐	☐
Petrol cars	☐	☐	☐	☐
Diesel cars	☐	☐	☐	☐
Deliveries and freight	☐	☐	☐	☐
Wood burning and bonfires	☐	☐	☐	☐
Gas boilers in buildings	☐	☐	☐	☐
Pollution from outside the local area	☐	☐	☐	☐
Industry and construction	☐	☐	☐	☐
Farming	☐	☐	☐	☐

What other things do you think cause air pollution and poor air quality?

8. What ideas do you have for things that could be done to improve *outdoor* and *indoor* air quality?

Outdor air quality	**Indoor air quality**

9. Do you think that it is important for children and young people's views on improving air quality are listened to by people in power?

Yes definitely☐ Yes possibly☐ No☐ Not sure ☐

10. Is improving air quality an issue that you could be interested in getting involved in? *[eg: by joining a campaign or helping to promote clean air initiatives] If yes, complete contact info sheet*

Yes definitely☐ Yes possibly☐ No☐ Not sure ☐

Comment

ABOUT YOU

11. Age <12☐ 13-14☐ 15-16☐ 17-18☐ 19-20☐ 0ver 21☐ Rather not say☐

12. Which ethnicity do you feel best describes you? _____ Rather not say☐

13. Which broad ethnic or racial group do feel you fit best in? Asian☐ Black☐ Mixed heritage☐ White☐ Other☐

14. Are your day to day activities limited due to a physical or learning disability or health problem? Yes☐ No☐

15. How do you describe your gender?

Woman/Girl☐ Man/Boy☐ Non-binary☐ I use a different term☐ _____ Rather not say☐

16. Is there anything else you would like to say?

Location of Interview (town/region)_____ Date _____ Interviewer_____

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Group Questionnaire

Clean Air Fund – Community Research – Small group questions

1. **How concerned are you about air quality as an issue?**
   Very__ Quite__ A little__ Not really__ Not at all__ Never thought about it before__
   Comments:

2. **Have you ever learned about air quality and air pollution in school or from a health provider?**
   Yes definitely__ Yes possibly__ Not sure__ No__

3. **How would you describe the air quality in your local area?**
   Very good___ Good___ OK___ Poor___ Very Poor___ Don't know___
   Comments

4. **Do you think there is a connection between air pollution and health problems?**
   Yes definitely___ Yes possibly___ No___ Not sure___
   Comment

5. **Do you think that breathing clean air ought to be seen as a fundamental human right?** *[A fundamental human right is a basic entitlement that every individual is granted, regardless of nationality, gender, race, religion, or other personal characteristics, simply because they are human. These rights are universally recognised and protect individuals from injustice and inequality.]*
   Yes definitely___ Yes possibly___ No___ Not sure___
   Comment

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6. What kinds of things do you think cause air pollution and poor air quality?

7. What ideas do you have for things that could be done to improve *outdoor* and *indoor* air quality?

Outdoor air quality	**Indoor air quality**

8. Do you think that it is important for children and young people's views on improving air quality are listened to by people in power?

Yes definitely___ Yes possibly___ No___ Not sure___

9. Is improving air quality an issue that you could be interested in getting involved in? *[eg: by joining a campaign or helping to promote clean air initiatives] If yes, complete contact info sheet*

Yes definitely___ Yes possibly___ No___ Not sure___

Comment

10. About You

Total number in group: ____ Ages: <12__ 13-14__ 15-16__ 17-18__ 19-20__ 0ver 21__

Gender Identity: Woman/girl_____ Man/boy____ Non Binary____ I use a different term_____

Ethnicities:
How do you describe your ethnicity?

Broad ethnic/racial groups: Asian_____ Black____ Mixed heritage____ White_____ Other_____

11. Is there anything else you would like to say?

LOCATION of Interview (town/region): _____ Date _____ Interviewer_____

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Individual questionnaire for self-completion in secondary schools

Clean Air Fund – Community Research

1. How concerned are you about air quality as an issue?
Very ☐ Quite ☐ A little☐ Not really☐ Not at all☐ Never thought about it before☐
Comments:

2. Have you ever learned about air quality and air pollution in school or from health providers?
In school: Yes definitely☐ Yes possibly☐ Not sure☐ No☐
From a health worker: Yes definitely☐ Yes possibly☐ Not sure☐ No☐

3. How would you describe the air quality in your local area?
Very good☐ Good☐ OK☐ Poor☐ Very Poor☐ Don't know☐
Comments:

4. How much do you agree or disagree with the following statements?

Air quality in the UK is generally good
Strongly Agree☐ Agree☐ Neutral☐ Disagree☐ Strongly Disagree☐ Don't know☐

Air quality is only poor in cities
Strongly Agree☐ Agree☐ Neutral☐ Disagree☐ Strongly Disagree☐ Don't know☐

Air pollution is only a problem for people who have asthma or conditions like that
Strongly Agree☐ Agree☐ Neutral☐ Disagree☐ Strongly Disagree☐ Don't know☐

There isn't much that can be done to improve air quality and reduce pollution
Strongly Agree☐ Agree☐ Neutral☐ Disagree☐ Strongly Disagree☐ Don't know☐

I feel well informed about air quality as an issue
Strongly Agree☐ Agree☐ Neutral☐ Disagree☐ Strongly Disagree☐ Don't know☐

I feel concerned about the climate emergency
Strongly Agree☐ Agree☐ Neutral☐ Disagree☐ Strongly Disagree☐ Don't know☐

5. Do you think there is a connection between air pollution and health problems?
Yes definitely☐ Yes possibly☐ No☐ Not sure ☐

6. Do you think that breathing clean air ought to be seen as a fundamental human right? *[A fundamental human right is a basic entitlement that every individual is granted, regardless of nationality, gender, race, religion, or other personal characteristics, simply because they are human. These rights are universally recognised and protect individuals from injustice and inequality.]*
Yes definitely☐ Yes possibly☐ No☐ Not sure ☐

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7. How much do you think each of the following contribute to air pollution in your local area?

	Not at all	A little	A lot	Don't know
Traffic	☐	☐	☐	☐
Electric cars	☐	☐	☐	☐
Petrol cars	☐	☐	☐	☐
Diesel cars	☐	☐	☐	☐
Deliveries and freight	☐	☐	☐	☐
Wood burning and bonfires.	☐	☐	☐	☐
Gas boilers in buildings	☐	☐	☐	☐
Pollution from outside the local area	☐	☐	☐	☐
Industry and construction	☐	☐	☐	☐
Farming	☐	☐	☐	☐

What other things do you think cause air pollution and poor air quality?

8. Do you think that it is important for children and young people's views on improving air quality are listened to by people in power?
Yes definitely☐ Yes possibly☐ No☐ Not sure ☐

9. Is improving air quality an issue that you could be interested in getting involved in? *[eg: by joining a campaign or helping to promote clean air initiatives] If yes, complete contact info sheet*
Yes definitely☐ Yes possibly☐ No☐ Not sure ☐
Comment

ABOUT YOU

10. Age <12☐ 13-14☐ 15-16☐ 17-18☐ 19-20☐ 0ver 21☐ Rather not say☐

11. Which ethnicity do you feel best describes you? _____
Rather not say☐

12. Which broad ethnic or racial group do feel you fit best in? Asian☐ Black☐ Mixed heritage☐ White☐ Other☐

13. Are your day to day activities limited due to a physical or learning disability or health problem? Yes☐ No☐

14. How do you describe your gender?
Woman/Girl☐ Man/Boy☐ Non-binary☐ I use a different term☐ _____
Rather not say☐

15. Is there anything else you would like to say?

Location of Interview (town/region)_____ Date _____

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Workshop Questions for Secondary Schools

Clean Air Fund – Community Research

Secondary School Workshop Questions (to be completed in groups after the individual questionnaires)

1. **Do you think there is a connection between air pollution and health problems? (do this activity as a where do you stand exercise).**

   Yes definitely☐ Yes possibly☐ No☐ Not sure ☐

   If yes, which kinds of heath conditions do you think are affected by air pollution:

2. **Do you think that breathing clean air ought to be seen as a fundamental human right? (do this activity as a where do you stand exercise).**
   [A fundamental human right is a basic entitlement that every individual is granted, regardless of nationality, gender, race, religion, or other personal characteristics, simply because they are human. These rights are universally recognised and protect individuals from injustice and inequality.]

   Yes definitely☐ Yes possibly☐ No☐ Not sure ☐

   Comment

3. **What ideas do you have for things that could be done to improve *outdoor* and *indoor* air quality?**

Outdoor air quality	**Indoor air quality**

Location of Interview (town/region)_____ Date _____ Interviewer_____

Appendix 2 - Locations

Nation	Location	Higher deprivation	Urban/ Rural	Diversity	Air Quality	Details
England	Nottingham	X	City	X	Air quality monitoring area NCC Nottingham City Centre North, East and South	• Nottingham is a small city of 323,600 people. • Nottingham ranks 11th most deprived area of the country and 30% of our neighbourhoods are in the 10% most deprived wards in England overall • Nottingham City Council supports 573 Children in Need and 629 children on a Child Protection Plan. • High proportion of Black And Minority Ethnic Communities, 42.7%, compared to an average of 37.7% in other core cities (2021 Census) and 26.5% nationally
England	Birmingham	X	City		Poor air quality	• Birmingham experiences elevated levels of deprivation, with 43% of the population living in the 10% most deprived localities in England, and 51% of children (under 16) living in the 10% most deprived areas. • Over 1,000 deaths a year, in Birmingham alone, are caused by air pollution, mostly caused by road transport and the increased use of diesel vehicles. • Birmingham's ethnically diverse population has increased by almost ten percentage points, from 41.9% in 2011 to just over half the region's population (51.2%) in 2021. The majority (48.6%) of Birmingham's ethnically diverse population are Asian
England	Manchester	X	City	X	Poor air quality	• Manchester is located in the North – there is a significant north/south divide in terms of funding and health outcomes so it is important to represent this • Manchester has high levels of deprivation • Manchester has high levels of air pollution – alongside Nottingham it has higher levels of NO2 than pre covid • The North West has the highest number of asthma admissions in under 19's 22/23 • Manchester has a diverse population – 66% English/ 34% other birth places with Pakistani 5.6%

Nation	Location	Higher deprivation	Urban/ Rural	Diversity	Air Quality	Details
Scotland	Glasgow	X	City	-	Air Pollution information – Glasgow breaking legal limits for Nitrogen Dioxide.	• Glasgow is a medium sized city of 635,100 people. • 17.3% of Glasgow's population consider themselves to be an ethnic minority • According to the Scotland Deprivation index 44% of Glasgow City is living in deprivation.
Scotland	Paisley	X	Town	-	Near Airport	• Paisley is a large town with a population of 77,210 people. • Deprivation stats for Paisley – Scottish Index of Multiple Deprivation 2020.
Wales	Port Talbot and/or Bridgend	X	Town	-	Low air quality	• Port Talbot Population: 35, 633 (small/medium town). • Historically, Port Talbot has been subject to high levels of air- borne particle pollution, referred to as PM10 (particles less than 10microns in diameter), which is generally attributed to the industrial nature of the area. • Port Talbot is one of the most deprived areas in Wales • Bridgend population: 49, 597 • Air Pollution Information – Air Quality Management Area – Whilst there have been improvements in deprivation rates in Bridgend, they are still an issue -
Wales	Newport	X	City	-	Below air quality objectives	• Population – 145, 700 • Annual average concentrations of nitrogen dioxide below the Wales air quality objectives. • Newport also continues to have issues with high levels of deprivation.
N. Ireland	Derry/ Londonderry	X			Some issues with air pollution – especially Ozone levels	• Population – 85, 279 • Limited ethnic diversity as most ethnic minorities live in Belfast. • More than 54% of people living in Derry/ Londonderry live in deprivation.


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