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Public engagement in environmental issues: Investigating factors of disengagement from an individual and organisational perspective

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Abstract

Anthropogenic climate change is now a major issue facing the public, government, and environmental non-governmental organisations (ENGOS) alike. In order for climate goals set out by the conference of the parties (COP) summits to be reached, the public must be involved and feel a sense of responsibility to act. Though there have been previous studies investigating the levels of engagement and the actions that individuals take, the impact of certain factors on engagement is still not well understood. A UK survey open for two weeks and shared on social media was conducted. The survey consisted of open and closed questions with some offering a scale examining personal changes made from an everyday perspective, their interactions with ENGOS, levels of trust felt towards sources of information and the government and the impact of environmental movements (EMs) on engagement. The sample size (n=132) was small in relation to being open to all UK residents however, data indicated what areas may have been discouraging engagement. Five public interviews and an interview with one ENGO were also carried out. Though these interviews may not be representative of how the UK public and all ENGOS felt about these issues they gave greater insight into some of the areas covered in the survey and provided anecdotal evidence from an ENGO on what they felt were their biggest barriers to engagement. The findings identified two key areas of discouragement that had previously been overlooked: a lack in governmental competency to fulfil agreements set out by COP26 and a negative association with EMs. Just 0.9% of participants felt that agreements made at COP26 would be stuck to and 53.9% felt the agreements would not be stuck to at all. The impact of EMs was complex with 65.7% arguing that tactics used did or sometimes did deter them however, despite this most environmental movements had still raised public awareness of issues. The findings also indicated a high level of engagement with 67.5% stating they felt engaged or very engaged with the issue and strong sense of responsibility with 83.3% stating they felt responsible or very responsible to make personal changes. Public perception is vital for the ENGOS, and demographic insights into their actions and how they source information may lead to increased engagement.

Keywords: Political competency; Demographic variables; Environmental movements; Environmental non-governmental organisations; Climate change; Public understanding.

Introduction

The UK, like the rest of the world, is facing the unavoidable challenge of adapting to and combatting the change in climate (Taylor, Dessai and Bruine de Bruin, 2014). In order for the UK to tackle the climate crisis there must be collective action and stewardship (Steffen et al., 2018). For this to happen the public must be engaged with and understand the issue (Khatibi et al., 2021) and discussions between experts and the public must be improved (Taylor, Dessai and Bruine de Bruin, 2014). Knowledge on the best way to integrate public engagement with decision making and what could be discouraging it is still lacking (Van der Vegt, 2018).

Individuals not only have a vital role to play in mitigating climate change through actions such as recycling, reducing water use, using public transport, and eating a more plant-based diet but also by pushing for cleaner solutions and greater change from the government (Whitmarsh, Seyfang and O'Neil, 2011). There are many factors that could discourage engagement in environmental issues, and the trust in government, trust in source of information, and the influence of demographic factors have often been investigated and found to have a relationship (European Investment Bank, 2021; BEIS, 2021; Office of National Statistics, 2021).

Despite numerous studies in the field of environmental engagement, many did not compare the variables to one another to see if there were any relationships to be found. There was also a lack of information on how environmental non-governmental organisations (ENGOS) and environmental movements could be influencing engagement levels.

This study investigates what factors may be influencing the levels of engagement in UK residents and aims to address this gap in knowledge by examining the UK public's response to the climate crisis, whether or not demographics dictate the way in which they may behave, the trust in governmental competency and the impact that ENGOS and environmental movements may be having on engagement. It examines the findings from a UK survey of the public, several public interviews, and an interview with an ENGO in order to get both individual and organisational dimensions. Finding that a lack in trust of governmental competency, conflicting view on the tactics used by EMs and demographic influences all have an impact on public engagement.

Background

The relationship between climate knowledge and public engagement

Anthropogenic behaviours are drastically changing the planet. The average temperature in the UK has risen by 1.2°C since pre-industrial times and further warming is inevitable (DEFRA, 2022). Awareness of the climate change issue has been around for decades (Butler, 2018; Revelle and Hans, 1957) and the reality of anthropogenic actions are coming to fruition. For the UK, even under low warming scenarios, there will be a risk of many significant and costly impacts (DEFRA, 2022). It has been suggested that by 2045 the cost of climate change to the UK could be at least 1% GDP (DEFRA, 2022). Despite the growing awareness that the changes in the climate are due to anthropogenic causes, it has been a difficult journey to get environmental issues to the forefront of policy change and news, thus leading to a lack of engagement from the public (Butler, 2018; Pidgeon, 2012).

Actions people are taking

Climate change is now frequently referred to as a climate emergency or crisis, fuelling public engagement and, in some cases, leading to mass activism (Slaven and Heydon, 2020). Whitmarsh, Seyfang and O'Neil (2011) illustrated how despite a growth in climate change awareness, behavioural changes often follow more slowly behind and was referred to as the 'value-action' gap suggesting that the interactions between environmental factors and public response are complex (Whitmarsh, Seyfang and O'Neil, 2011). However, more recent surveys suggest that this awareness and engagement with climate change issues has risen since then (Office of National Statistics, 2021). In 2021 the Office of National Statistics' (ONS') reported that 75% of UK adults had said they were worried about the impact of climate change and 43% reported feeling anxious about the future of the environment. Furthermore, of those who had reported feeling worried, 90% said they made some or a lot of changes to their lifestyle, thus indicating that worry is a driver in making more environmentally friendly choices. This is a markedly different response to the findings in Whitmarsh, Seyfang and O'Neil's (2011) study which indicated that most individuals felt that it did not pose a personal threat to them.

The BEIS 2021 public attitude tracker found that out of the list of actions they presented to participants, the top three most commonly selected were avoiding food waste (68%), minimizing energy use at home (66%), and using public transport more (49%). Avoiding/eating less meat and avoiding/eating less dairy were relatively low (29% and 16%). Out of the list of behaviours 92% of participants had adopted at least one of the behaviours, 62% had done at least three and 23% had done at least five.

In Thøgersen's (2021) study, he found that the most impactful changes that the public can make were in their levels of consumption in transport, buildings, and food. Eating less meat and dairy is a particularly impactful change the public can make due to the livestock industry accounting for an estimated 18% of anthropogenic greenhouse gas (GHG) emissions and producing more GHGs than the entire global transport industry (Weibela et al., 2019). Thøgersen (2021) advised that the environmentally friendly option should be the easiest option for the public to choose, arguing that the public often have difficulty identifying what changes are worth doing and balancing up the costs of those changes. He also found that those with higher environmental values and concerns appeared to be more open to climate friendly products.

Impact of demographics

Although an individual's environmental values often guide their environmentally friendly decision making, these values are often influenced by other social aspects and demographics (Ockwell, Whitmarsh and O'Neil, 2009). Several studies have found that women were more likely to be concerned about climate change and more supportive in taking action to reduce it (BEIS, 2021; Office of National Statistics, 2021).

Income may also have an effect on engagement (BEIS, 2021; Thøgersen, 2021). An individual's carbon footprint increases with income, thus individuals in higher income brackets should be a focus when we are considering what impact individuals can have (Thøgersen, 2021). It has been suggested that those with a higher income and social grade were more likely to feel they had the ability to make personal changes that would

help to reduce climate change (BEIS, 2021) likely due to having more disposable income.

In a study examining behaviours across Europe, it was found that education was correlated with more environmentally friendly food choices and water and energy saving behaviours (Meyer, 2015). It was also found that an extra year of education could increase the probability of an individual having more pro-environmental behaviours (Meyer, 2015). Despite this, it has been argued that approaches that focus heavily on the individuals' actions ignore social and structural barriers in engagement (Ockwell, Whitmarsh and O'Neil, 2009).

Lack of trust: media, government, and COP26

Large companies are some of the biggest emitters of GHGs (Griffin, 2017; Office of National Statistics, 2021), consequently leading to some individuals feeling that these companies and the government have a more crucial role to play in making environmental changes than the public (European Investment Bank, 2021). This is a fair stance since over half of global industrial emissions since human induced climate change can be traced to just 25 corporations or state producing entities (Griffin, 2017) and that governments typically have a greater ability to enact change on a larger scale than the everyday citizen (Tam, 2020). This has sometimes been referred to as the 'governance trap' in which the public and the government each attempt to place responsibility to make change on one another (Pidgeon, 2012).

The COP summits serve as important time stamps for the progress of governments across the world in climate change mitigation with each one improving upon the other (British High Commission Islamabad, 2021). COP26, the most recent summit, passed the 'Glasgow Climate pact' which was agreed to by nearly 200 countries aiming to keep global temperature rises below 1.5°C with all countries involved agreeing to readdress and strengthen their current emissions targets (British High Commission Islamabad, 2021). However, collective action is essential if the UK is to meet the climate agreements that have been set out and thus not only involves decarbonization of the global economy and new governance agreements but also a change in behavioural and social values (Steffen et al., 2018; Thøgersen, 2021).

However, one of the major barriers to engagement appears to be a lack of trust in governmental decision making around environmental issues (Kitt, et al., 2021; Kulin and Ingemar, 2021; Perry, 2021). UN surveys suggest that trust in public institutions in recent decades has declined and may be exacerbated by the impact of COVID-19, leading to the UN Secretary General warning of a trust deficit that threatens to undermine the progress towards the Sustainable Development Goals (Perry, 2021).

In order for the public to trust the government, they must perceive them to have the competence to carry out climate policy changes that will have impact (Kitt, et al., 2021; Kulin and Ingemar, 2021). However, competency is often undermined by conflicting news stories and goals that are either unachievable or insufficient in their ability to fulfil agreements that have been made in the United Nations Environment Programme (UNEP, 2021). For example, the 2022 UK climate change risk assessment (DEFRA, 2022) states that the 'administration fully recognizes the scale of the challenges of adapting to climate change'. However, according to the UNEP 2021 Emissions Gap

Report, the efforts made 'are still not anywhere strong enough' and even if all new climate pledges were combined, we would still be on track for a global temperature rise of 2.7°C (UNEP, 2021).

Now that environmental issues are recognized as a distinct area of policy (Defra, 2018), the government is often caught in a challenging situation of promoting their green policy changes whilst also not losing political capital (Ockwell, Whitmarsh and O'Neil, 2009). As a result, their efforts are often seen as insufficient. According to the European Investment Bank's annual climate survey, 61% of Britons felt they were more concerned with the climate emergency than their government and approximately half of citizens placed the difficulty of solving the climate crisis predominantly on government inactivity (European Investment Bank, 2021).

The implications of this may be that if the public do not have confidence in their government to make decisive action to combat climate change, then they themselves may feel hopeless and disengage with the issue, consequently, leading to a greater challenge for the government to get support for new and ongoing climate programmes (European Investment Bank, 2021; Kulin and Ingemar, 2021).

Despite this research, there was little on how current events like COP26 were being perceived by the public and whether or not these were having an impact on engagement.

Importance of engagement: ENGOs and environmental movements

ENGOS are instrumental to biodiversity and conservation movements. Engagement is a vital element to their successful operation as most of their funding depends upon public donations (Veríssimo et al., 2018). ENGOS such as Friends of the Earth (FOE) and Greenpeace not only play a key role in hands on conservation, but they are also vital to furthering research, education, and pushing through governmental policy (Carter and Childs, 2018). Despite this need for public engagement, fundraising success is still led by expert opinion and anecdotal evidence thus leading to a lack in quantitative studies in the field (Veríssimo et al., 2018).

Along with ENGOS, in recent years EMs such as Extinction Rebellion (ER) have gained notoriety in their efforts to raise public awareness of environmental issues in their sometimes-perceived extreme protests (Shah, 2019; Slaven and Heydon, 2020). However, there was a lack of research into the potential impact that EMs and ENGOS tactics may have on public perception of their tactics and thus whether they are helping of hindering environmental progress.

Trust and source of information

Communication of environmental issues is vital for governments and ENGOS to distribute their information, findings, and current and future projects. Therefore, the platform through which the public receives this information plays a key role in their understanding of the issue. However, some platforms are more trusted than others. The BEIS 2021 public attitudes tracker found that people were most likely to trust scientists working at universities (81%), scientific organisations (80%), TV and radio documentaries (68%) and charities or environmental/campaign groups (66%). They found the levels of trust were lowest for social media sites (22%), newspapers and websites (45%) and the UK government (59%). Though social media was the least

trusted, Ahmed et al., (2019) highlighted the importance of the increasing use of social media as a tool for organisations to spread knowledge and their message.

Despite the levels of trust of these sources being investigated a gap was identified in which these levels of trust were not compared with where the public most often found environmental information.

Factors influencing engagement

Drawing from the literature, three key areas were identified and focused on:

1. Level of engagement and responsibility:
 - Being part of an environmental society
 - Donating their time and money to environmental organisations
 - The impacts that demographics have
2. Trust:
 - Where the public were sourcing their information on environmental issues and how much they trusted these sources
 - Levels of trust in governmental response
3. ENGOs and environmental movements impact on engagement and awareness.

Methods

To investigate what factors were influencing public engagement with environmental issues, an online survey open to all UK residents aged 18+ was carried out in January 2022. The invitation was open for two weeks and shared on both Facebook and Instagram. Volunteers explicitly consented to proceed to the anonymous survey after being presented with an information section. The survey, set on google forms, had 13 to 16 sections dependent on the answers given. The survey consisted of open and closed questions, with some offering a scale and addressed levels of engagement and responsibility, engagement with environmental causes, everyday choices, reasons for disengagement, the impact of ENGOs and environmental movements on engagement, and levels of trust in media and government regarding environmental issues, along with demographic variables.

From research of similar studies (BEIS, 2021; DEFRA, 2008; Office of National Statistics, 2021; Whitmarsh, Seyfang and O'Neil, 2011) questions were created adapting from areas that had been asked previously along with questions that addressed the gaps in the current literature. The survey was piloted and revised accordingly from the feedback from pilot respondents.

Ethical approval from the University of Plymouth Faculty of Science and Engineering ethics committee was received for the survey and public interviews. Informed consent was received from the public volunteers for both the survey and interviews. This was not needed for the interview with Devon Wildlife Trust (DWT) due to the interviewee speaking on behalf of the organisation.

In total there were 132 responses, a relatively small sample size despite being open to all UK residents. The 18-24 age range accounted for 53% of participants but there were several participants in each age range apart from 75+ where there were no participants.

The participants were also disproportionately female with 73.8% writing in 'female' or 'woman' compared to only 25.4% writing in 'man' or 'male' and just 0.8% who identified as non-binary.

Interviews with five members of the public who volunteered from the survey were also carried out in order to gain a greater insight into some of the areas covered. An interview was also conducted with the DWT in order to get an organisational perspective on the issues in engagement. The DWT interview took place following the analysis of the survey and public interviews allowing for specific questions related to the findings.

Quantitative data was analysed on Excel (chi-squared) and using RStudio (Spearman's correlation coefficient), and qualitative data analysed by an inductive thematic content analysis of the interviews, looking for common patterns across the data set and areas in which the interviewees either agreed or disagreed with what was found in the survey.

Results

Individual decision-making

Relationship between levels of engagement and responsibility and actions taken

Consistent with previous research (Office of National Statistics, 2021) levels of engagement were relatively high with 67.5% selecting level 4 or 5 indicating they were engaged or very engaged in the issue. Levels of responsibility were even higher (83.3% selected level 4 or 5).

Table 1: Relationships between engagement and responsibility and their relationship with other factors, all showing a significant positive correlation as denoted by the r_s and p-values.

Variable combinations	r_s	P-value
Engagement level vs. responsibility level	0.511	P<0.001
Level of engagement vs. other factors		
Donating time	0.424	P<0.001
Donating money	0.325	P<0.001
Part of an environmental society	0.341	P<0.001
Independent research	0.302	P<0.001
Level of responsibility vs. other factors		
Donating time	0.352	P<0.001
Donating money	0.335	P<0.001
Part of an environmental society	0.335	P<0.001
Independent research	0.276	P<0.001

Note: Responses for donating time and money and membership to an environmental society were allocated a numerical value (rank), to perform statistical analysis.

By carrying out a Spearman's correlation coefficient test on levels of both engagement and responsibility with other factors several positive correlations were found (see Table 1). There was a relatively strong positive correlation between an individual's level of engagement and the level of responsibility they felt to make changes with a r_s value of 0.511.

Furthermore, there was a positive correlation between engagement and the following factors: frequency of donating time, frequency of donating money, being part of an environmental society and frequency of carrying out independent research, with all having p-values <0.05 threshold of significance. There were also similar correlation relationships found between level of responsibility and those same factors tested with engagement. All of which were significant with a p-value <0.05 and a r_s value in the region of 0.3 suggesting a moderate positive correlation.

Despite these correlations, there was still a relatively low number of people carrying out these actions frequently (see Fig.1). For both time and money, the most selected frequency of donating was 'never' and 'rarely'. Furthermore, when asked if they were part of any environmental societies, from the 132 responses the highest chosen answer was 'No' (46.2%), followed by 'I would consider joining one in the future' (33.3%) and finally 'Yes' (20.5%).

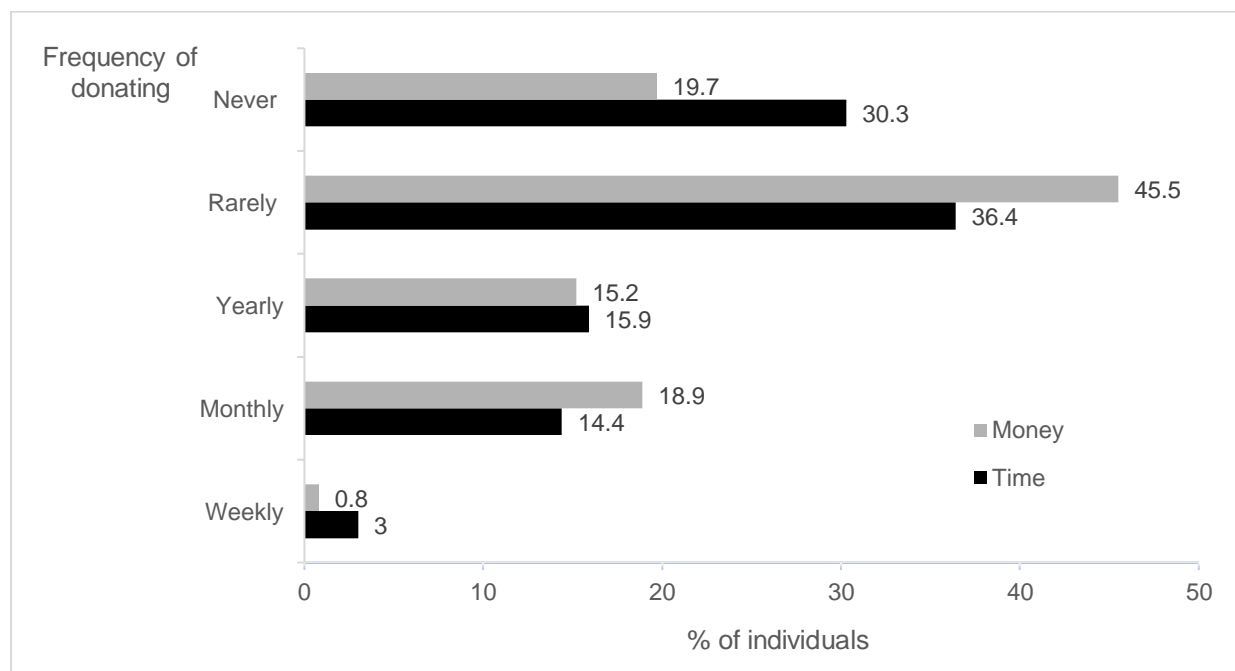


Figure 1: The frequency to which individuals were donating their time and money to environmental causes (N=132).

Lifestyle changes

The most selected change that participants made was recycling (98.5%) (see Fig.2). Recycling was also cited in the public interviews with interviewee 2 and 4 stating that it was one of the areas of environmental issues they were most engaged in. Avoiding fast fashion came out as the second most chosen change with 67.9%, closely followed by reducing water use with 65.6%. The number of participants that selected

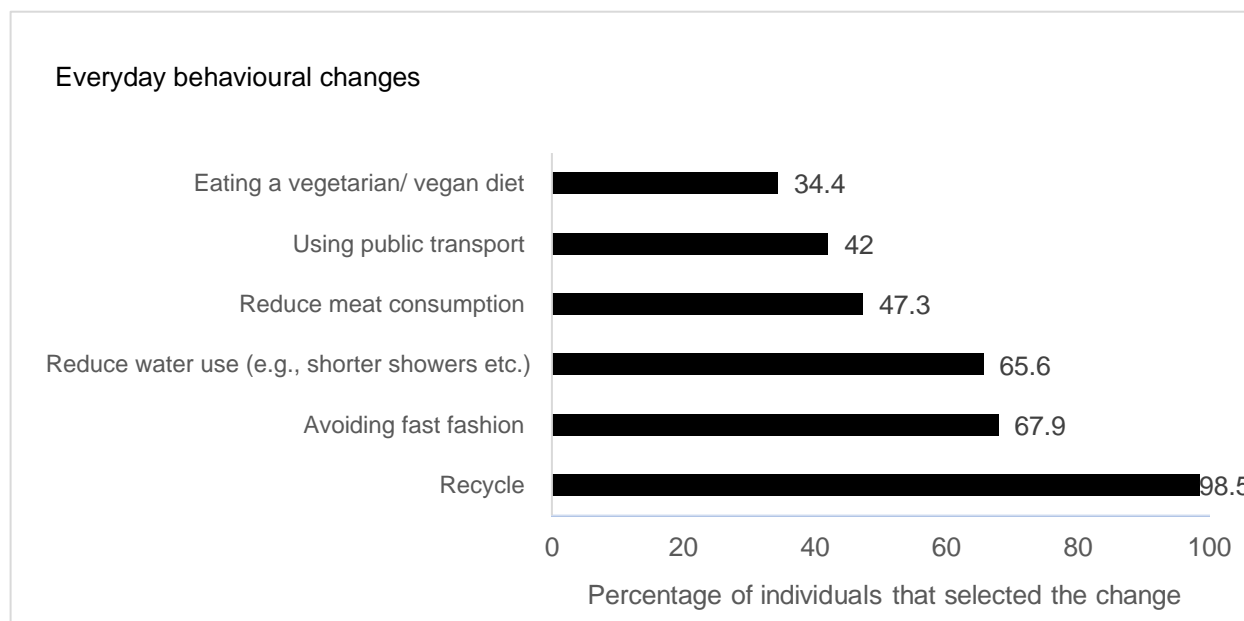


Figure 2: The most common behaviour changes carried out by participants in order to lessen their impact on the environment (n=131). Any of the changes could be selected thus percentages adding to more than 100%.

‘reducing meat consumption’ (47.3%) when combined with those that chose ‘eating a vegetarian/ vegan diet’ (34.4%) was 81.7%. This is markedly higher than previous findings by HM Government Department for Business, Energy & Industrial Strategy (2021) where avoiding/eating less meat and avoiding/eating less dairy combined was only selected by 43% of participants.

Though the options of behaviour changes were slightly different to the BEIS 2021 public attitude tracker, the number of changes carried out by participants were similar (see Fig.3). Individuals adopting at least three behavioural changes were slightly higher at 79.3% when compared to 62% in the BEIS 2021 public attitude tracker however, the number of participants who had adopted at least five behaviours were very similar with 23.6% in this study and 23% in the BEIS 2021 public attitude tracker.

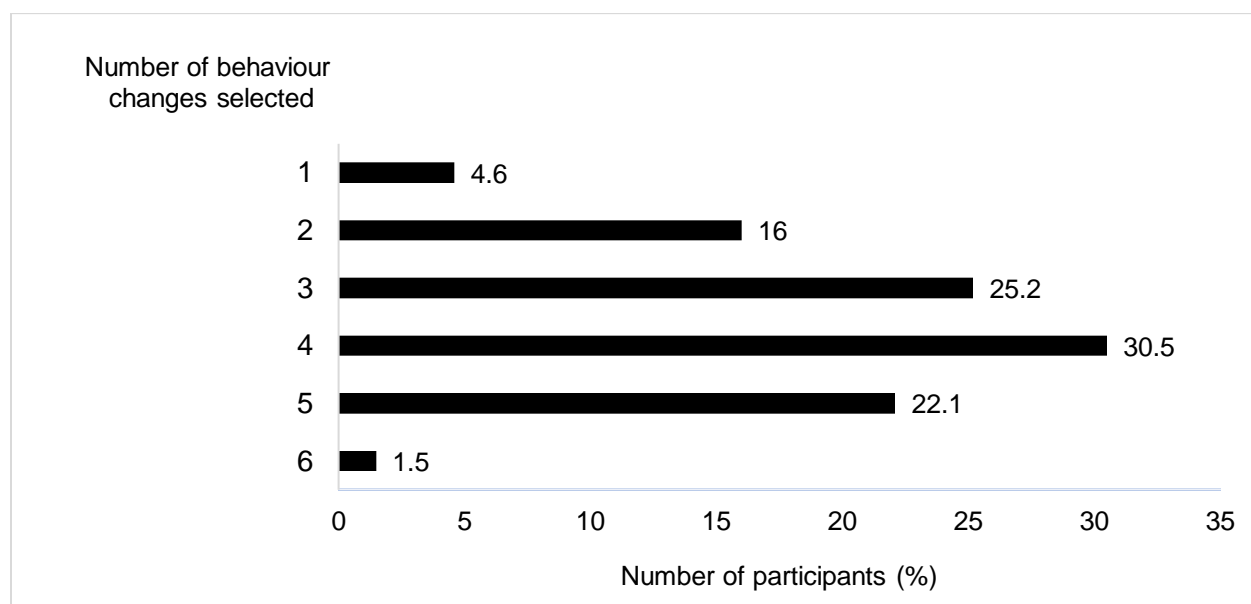


Figure 3: Percentages of how many behavioural changes were selected from the question: 'Have you made any of the following personal changes to lessen your impact on the environment?' (n=131).

Impact of demographics

The effect of demographic factors on engagement and action were examined using Spearman's correlation coefficient tests and chi-squared tests (X^2).

Education had a weak positive correlation with engagement and donating money with r_s values of 0.17 and 0.18. There was also a weak positive correlation (r_s 0.9) between education and the number of behavioural changes an individual had made. However, education appeared to have no significant relationship with the other factors (level of responsibility, donating time and the amount of research) all having a p value >0.05. Thus, contradicting the findings from Meyer (2015) suggesting that education is a key factor in making more environmentally friendly choices.

Age and donating time had a moderate negative correlation with a r_s value of -0.2. However, age had the opposite relationship with donating money where a moderate positive correlation was found (r_s 0.26). Age appeared to have no relationship with the other factors, all having a p value >0.05. DWT also stated that their main demographic is in the age brackets 30-40 or 60-75 and very few in the younger age brackets.

'Our supporter base has two big boulders one is people in their early 30s and through to their 40s and the other is 60 to 75s' DWT.

Income had a moderate negative correlation with donating time (r_s -0.3) and with the amount of research (r_s -0.26), but no other significant relationships were found. These findings oppose those found in the BEIS 2021 public attitude tracker that argued that those with higher incomes were more likely to feel they had the ability to make change.

To check if there were any relationships between gender and the engagement factors, X^2 statistical tests were carried out, and they indicated that the impact that gender had

on these factors appeared to be low. All except donating time had no significant effect ($p > 0.05$). The lack of correlations contradicts the findings from the BEIS 2021 public attitude tracker and the findings from the Office of national statistics (2021) finding that women were more likely to be concerned about climate change. However, there was a significant association between gender and donating time, $X^2(12, N = 130) = 26.19, p = 0.04$. Both men and women most chosen categories were 'never' and 'rarely' however, more men selected the two categories overall by 14%. This difference is because more women selected the higher levels with 18.5% donating their time yearly compared to just 9.4% of men. However, the percentage of men donating their time monthly (15.6%) was higher than that of women (13.4%). Nevertheless, it must be considered that the sample of women (97 individuals) was much higher than the sample of men (32 individuals) and thus may not be representative.

Factors of disengagement

Issue fatigue was mentioned by interviewees and was cited highly as a reason for disengagement by the DWT stating that 'there needs to be some light with the shade' when presenting environmental issues to the public. However, only 33.1% of participants selected category 4 (agree) and 5 (strongly agree) for issue fatigue in the survey (see Table 2). The category with the highest proportions in category 4 and 5 was 'feel it is down to big companies to make changes'. 'Busy with personal issues' and 'lack of impact on daily life', had much lower proportions in categories 4 and 5 both in the region of 30%, 'difficult to understand' which was slightly lower at 24.2% (see Table.2).

The number of individuals that felt it was more of a political issue was relatively low with only 31% selecting category 4 and 5 and 56% choosing category 1 and 2. Given that previous research has cited the issue highly as a reason for disengagement (European Investment Bank, 2022; Office of National Statistics, 2021), these findings show it to be comparatively low. However, all five interviewees argued that the government held a large responsibility in making environmental changes:

'In order for progress to be made it has to be government led, because there are going to be things we don't want to do' interviewee 1.

Furthermore, the DWT discussed the responsibility and power of the government. They often have to lobby for long periods of time to effect policy changes to be made which the government could change easily now, such as one of their current campaigns to ban the use of peat. Aligning with previous research that politicians have to consider political capital when pushing for environmental progress (Ockwell, Whitmarsh and O'Neil, 2009), one interviewee stated:

'The government don't bother to encourage insulation of homes because it's not a vote winner' interviewee 5.

Table 2: Summary of the extent to which individuals agree/disagree that the following issues are factors in their degree of engagement, shown as distribution of counts for levels of agreement 1= strongly disagree and 5 = strongly agree.

Issues	Level of agreement/ disagreement counts (%)					Total (n)
	1	2	3	4	5	
Issue fatigue	21 (16.2)	33 (25.4)	33 (25.4)	26 (20)	17 (13)	130
Lack of direct impact on daily life	16 (12.1)	34 (25.8)	36 (27.3)	35 (26.5)	11 (8.3)	132
Busy with personal issues	9 (6.9)	37 (28.2)	35 (26.7)	32 (24.4)	18 (13.7)	131
Feel it is more of a political issue than individual issue	32 (24.2)	42 (31.8)	17 (12.9)	28 (21.2)	13 (9.8)	132
Feel it is down to big companies to make changes	13 (9.9)	13 (9.9)	24 (18.3)	45 (34.4)	36 (27.5)	131
Difficult to understand the extent of the issue	35 (26.5)	37 (28)	28 (21.2)	28 (21.2)	4 (3)	132

Participants were also offered the opportunity to write in any other issues that they felt contributed to their disengagement, there were 15 responses. From the responses, four common themes were found (see Table 3). The themes found were analogous to the responses that the interviewees gave. In particular cost was cited by 3 of the 5 interviewees:

‘I don’t consciously go out of my way to buy things that I know, are more environmentally friendly, purely because of the price’ (interviewee 4)

‘It probably is the price of alternatives will be my main thing’ (interviewee 3)

‘I know I could do better buying food. But then you think, okay, but it’s twice the price.’ (Interviewee 1).

Table 3: Main themes found for disengagement from write in section

Reason for disengagement	n (%)	%
Feeling overwhelmed or anxious	3	20
Cost	4	26.7
Misinformation/ lack of information	4	26.7
Level of impact an individual can have	3	20

Source of information and trust levels

Documentaries were the most chosen source of information about environmental issues (see Table 4) with 67.4% and are largely trusted with 77.1% choosing either level 4 (agree) or 5 (strongly agree) for how much they trust them as a source of information with 0 choosing level 1 (strongly disagree) and only 6.1% choosing level 2 (disagree).

In contrast, the second most chosen source of information with 62.9% was social media. Despite having a relatively similar percentage as documentaries for those that chose it as one of their top sources, it had much higher levels of distrust with only 8.4% selecting levels 4 or 5 and 58.8% selecting level 1 or 2. Despite this lack of trust, when interviewees were asked how environmental organisations could improve engagement, interviewee 3 and 4 both cited a bigger presence on social media. Both of these interviewees were in the 18-24 age bracket. This is consistent with the findings from the survey in which the individuals that showed a preference for social media were from the younger three categories (18-24, 25-34, and 35-44), with 80.6% selecting it as one of their main sources of information. In contrast, only 39% of the older three categories (45-54, 55-64 and 65-74) chose this option. However, it must be noted that there was a higher proportion of participants in the younger than in the older categories.

Table 4: Top sources of information about environmental issues and the level of trust the public has in them when asked to what extent they agree they can trust the source of information, 1= strongly disagree and 5= strongly agree

Source	Counts (%)	Level of trust (%)				
		1	2	3	4	5
Documentaries	89 (67.4)	0	6.1	16.8	52.7	24.4
Social Media	83 (62.9)	26.7	32.1	32.8	7.6	0.8
TV News	65 (49.2)	3.1	17.6	29	45	5.3
Conversations with friends	65 (47.7)	6.2	23.8	53.1	15.4	1.5
Google	63 (22.7)	3.1	23.7	49.6	22.9	0.8
Scientific Journals	30 (22.7)	0	0	1.5	28	70.5
Books	13 (9.8)	0.8	0	24.4	51.9	22.9
Newspapers	29 (22)					
Radio	23 (20.5)					
Podcasts	23 (17.5)					

Notes:¹ participants were asked to select their top three sources of information however 31 individuals selected more than three. Despite this the data still shows which sources were most selected.

² Newspapers, radio, and podcasts were also selected but individuals were not asked about their level of trust for them.

Table 5: Main themes for distrusting a source of information found in write in question from 117 responses. More than one of the theme was mentioned by some, resulting in percentages that add to more than 100%.

Reason for distrusting a source of information	Counts (%)
Bias	63 (53.8)
Lack of evidence and references	28 (23.9)
Author and/or source	25 (21.4)
Fake news and exaggerated information	24 (20.5)

The most trusted source was scientific journals with 98.5% selecting categories 4 and 5. Despite this, it was not selected by many participants with just 22.7% choosing it as one of their main sources of information. These results are comparable to the findings from the BEIS 2021 public attitude tracker in which scientific sources were the most trusted, documentaries were highly trusted and trust for social media was the lowest.

Participants were also given the opportunity to write in reasons why they would not trust a source of information. From the 117 responses, four key themes were identified (see Table 5). Bias was a key concern and in particular political and organisational biases were cited with one participant stating ‘the political viewpoint and vested interests’ and another stating they wouldn’t trust a source that was ‘owned by a company who has ulterior motives’. There was a concern over fake news and exaggerated information and in sources that were unable to validate their evidence and references. Furthermore, when asked how confident they would be in distinguishing between a factual article and one which is spreading false information, 56.1% selected categories 4 and 5 indicating they felt confident or very confident in their ability to do so.

Levels of trust in governmental response – COP26

Despite 87.1 % of participants having heard of COP26, only 32.2% felt they had understood the information distributed about the summit (see Table 6). There was also a certain level of distrust that COP26 would fulfil what it had set out to achieve with only 15.8% thinking that the agreements made will make a difference and only 0.9% trusting that the agreements would be stuck to.

In line with previous research (Kitt, et al., 2021; Kulin and Ingemar, 2021), this indicates a lack of trust in governmental competency to enact the changes that have been agreed to, a sentiment echoed by an interviewee stating:

‘We don’t have enough intellectual capacity in government’ interviewee 5.

Table 6: Analysis of the responses to questions asked about COP26

Questions asked about COP26	Counts (%)
Have you heard of the COP26 summit?	
Yes	115 (87.1)
No	17 (12.9)
From what you have heard from COP26 did you understand the information distributed?	
Yes	37 (32.2)
No	10 (8.7)
Some	68 (59.1)
Do you trust that the agreements made will be stuck to?	
Yes	1 (0.9)
No	62 (53.9)
Partially	52 (45.2)
Do you think that the agreements made will make a difference?	
Yes	18 (15.8)
No	20 (17.5)
Partially	76 (66.7)

ENGOS and environmental movements impact on engagement and awareness

Fridays for Future and FOE have much higher percentages in category 1 (see Table 7), this is likely due to people selecting this category if they had not heard of them before. It is clear that not only is Greenpeace the most recognised organisation or movement from the list but also the one that has raised the most awareness with 65.6% of participants choosing category 4 or 5 indicating they agree or strongly agree.

Extinction rebellion (ER) was the second most recognised with 89.3%, however, had slightly lower levels of raising awareness with 56.5% selecting category 4 or 5. Furthermore, when comparing category 1 between Greenpeace (0.8%) and ER (13%) there is a much higher proportion of participants that strongly disagreed that the organisation/ movement had raised their awareness when it came to ER. The higher levels in category 1 for ER may be due to them being 8.4% less recognised and thus individuals who had not heard of them would select category 1. DWT suggested the rise of movements such as ER were a result of individuals wanting to take personal action due to feeling 'disengaged and disenchanted with formal politics'. They argued that this increase in action has improved their engagement and stated that it was a 'direct reaction to things like extinction rebellion' however, they also stated the potential negative implications of ER such as alienating certain sections of their diverse membership.

There is an indication (see Table.8) that ER does have more negative associations with 37.5% of the 80 responses mentioning ER and always mentioning their actions when asked 'What would you say are your reasons for their tactics discouraging you from engaging'. For example, 'Extinction rebellion are a very extreme movement'. Whereas only one individual (1.25%) mentions Greenpeace in which they wrote 'I've been to a couple of Greenpeace meets, and they often say doing this could lead to being arrested' so is not necessarily saying anything negative about the organisation.

Participants were also asked 'would you argue some of the tactics used by the previously mentioned movements/ organisations has discouraged you from engaging in environmental issues' to which 65.7% selected 'yes' or 'sometimes' and 34.4% selected 'no'. Revealing that more individuals have some level of negative association with the tactics used by the movements/ organisations. However, there is still a large proportion of individuals who do not think the tactics are counterproductive. This was also reflected in the public interviews in which 4 of the 5 interviewees felt to some extent that the tactics may discourage engagement. However, interviewee 2 argued that the tactics were beneficial in spreading awareness.

'...people could be put off those causes by the mechanisms that they adopt to push their agendas' (interviewee 5).

'It gets a lot of people talking not just people who are already interested' (interviewee 3).

These results indicate that it may be the actions of environmental movements like ER are responsible for the negative associations and not ENGOS.

Table 7: Distribution of degree to which certain ENGOS and environmental movements were heard of and to what extent participants felt they have raised their awareness of environmental issues. 1= strongly disagree and 5 = strongly agree.

Movement/ organisation	n (%)	Level of awareness raised				
		1	2	3	4	5
Greenpeace	127 (97.7)	0.8	9.9	23.7	42.7	22.9
Extinction Rebellion	117 (89.3)	13	8.4	22.1	32.8	23.7
Fridays for Future (Greta Thunberg)	89 (67.9)	21.4	4.6	14.5	25.2	34.4
Friends of the Earth	82 (62.6)	24.8	17.1	28.7	22.5	7

Table 8: Summary of key factors cited for tactics discouraging them and what movement/ organisation participants were referring to.

Discouraging organisations and reasons	Counts	(%)
Organisation/ movement mentioned		
Extinction Rebellion	30	(37.5)
Insulate Britain	5	(6.3)
Greenpeace	1	(1.3)
Reason for discouraging them		
Disruptive Behaviour	47	(58.8)
Detracting from the message	27	(33.8)

Discussion

The results indicate that the majority of participants were relatively engaged and felt a sense of responsibility to make changes in order to have a more positive impact on the environment. The number of behavioural changes participants were making is reflective of this and was in line with the findings from the BEIS 2021 public attitude tracker with the majority making at least three behavioural changes. These changes were predominantly focused on reducing their consumption which Thøgersen (2021) argued were the most beneficial changes the public could make. Furthermore, the findings show an increased level of individuals who were reducing their meat and dairy consumption compared to the BEIS 2021 public attitude tracker. This high number of participants reducing their consumption of meat and dairy is encouraging due to the significant impact that the industry has on the planet (Weibela et al., 2019).

However, aligning with Thøgersen (2021), some interviewees still felt they had difficulty in identifying what the most beneficial changes were, often citing cost as a discouraging factor in making the more environmentally friendly choice. Despite these concerns of cost, income appeared to have no positive effect on the engagement and activities individuals carried out. In fact, moderate negative correlations with donating time and the amount of research carried out were found, contradicting the findings of the BEIS 2021 public attitude tracker. Considering previous research (BEIS, 2021;Thøgersen, 2021) and understanding the importance of encouraging those in higher income brackets to make more environmentally friendly decisions due to having a higher carbon footprint (Thøgersen, 2021), it may have been expected that income would have been a more influential factor. Perhaps indicating a need for more encouragement and emphasis on those in higher income brackets to make more environmentally friendly choices.

Even though levels of feeling engaged and responsible were relatively high, suggesting an awareness of the issue and the need for personal action, it did not carry through to actions that would benefit ENGOs like donating time and money, further substantiating the value action gap (Whitmarsh, Seyfang and O'Neil, 2011). Furthermore, it could be

argued that the changes being made would not disrupt the lives or finances of participants, indeed some changes may have been saving them money. This may be a factor that contributes to the existence of the value-action gap. Interviewee 5 argued that 'all of us in the western world live a life of convenience and comfort' and that 'we make environmental choices, but very seldom to the point where it actually causes us discomfort'. Therefore, concurring with Thøgersen (2021) that the environmentally friendly choice must appear to be the easier option to consumer. This raises the interesting question as to what extent individuals are willing to sacrifice their own comfort and convenience in order to decrease their carbon footprint and support a move into a more environmentally friendly world. Therefore, it would be beneficial to investigate this relationship as it may be that interviewee 1's response of a need to be pushed by the government to make environmentally friendly decisions is correct. It is also in agreement with previous research (Kitt, et al., 2021; Kulin and Ingemar, 2021) that there must be trust in governmental competency if the public are to follow potential policy changes.

The influence of demographic variables appeared to be relatively minor, with most having only a few weak to moderate correlations with the other factors. The weak positive correlations found between education and only two of the factors (engagement and donating money) suggests that education may not be a significant factor in engagement, contradicting Meyer (2015). The findings also suggest that gender was not an influencing factor. Despite a relationship between gender and donating time, suggesting that women were more likely to do so than men, the frequency of donating time in both genders were relatively low, predominantly choosing the two lowest categories. Furthermore, gender appeared to have no significant relationship with other factors, thus contradicting previous findings (BEIS, 2021; Office of National Statistics, 2021).

However, interesting relationships were found between age and donating time and money. The findings showed that younger participants were more likely to donate time, but older participants were more likely to donate money. This is corroborated by the DWT whereby they say the majority of their patrons were in older age brackets. Age also had an impact on what source of information participants were using. Though social media was the least trusted source by the majority of participants it was the second most cited for where information on environmental issues was obtained, particularly by younger participants. This lack of trust could consequently lead to important messages being missed. However, participants said that they would trust a source of information if it came from a trusted organisation and had reputable references. This highlights not only the need for ENGOs to have a strong social media presence in order to reach younger generations but also the need to ensure that the information they distribute is appropriately referenced and accessible. Ahmed et al., (2019) argued that the use of social media knowledge sharing was an increasingly useful tool for organisations but with it came a multitude of potential challenges. These findings not only corroborate this rise in the need for social media use by organisations but also where challenges may lie due to being a source which is less trusted. These findings could help to inform ENGOs on how different age groups are likely to interact with them and where they are likely to hear about them from, allowing them to target the right audience for future projects.

The category that was cited the highest as a reason for disengagement in environmental issues was a feeling 'that it was down to big companies to make changes'. This is understandable due to the small number of corporations and state producing entities that are responsible for over half of the global industrial emissions since human induced climate change (Griffin, 2017). However, it is often governmental policies that push large companies to make changes through policy change and incentives (DEFRA, 2011) and thus it may have been expected that governmental responsibility would have been cited as high or higher than the responsibility of big companies. Instead, it appeared to be relatively low on the participants concerns.

In contrast, when participants were asked about their trust that the government would carry out the agreements made at COP26, the trust levels were low with just 15.8% thinking that the agreements made will make a difference and only 0.9% trusting they would stick to them. This suggests that it may not be governmental responsibility but rather a lack of trust in government that is a significant factor in engagement. These findings indicate a severe lack in trust of governmental competency to reach climate goals (British High Commission Islamabad, 2021) and suggests that the trust deficit stated by the UN Secretary General (Perry, 2021) is accurate and thus could have considerable repercussion to environmental progress. These findings highlight the urgent need to improve the trust in political institutions as public engagement and action is required to reach climate goals (Steffen et al., 2018; Thøgersen, 2021).

The relationship between the public and ENGOs and environmental movements appears to be complex with many differing opinions. However, there were clear negative associations with some of the tactics used by certain movements, in particular those carried out by ER, suggesting that it is likely the environmental movements that are damaging engagement rather than ENGOs. Through the public interviews and the findings from the survey it was clear that participants felt that they understood and often agreed with the message being pushed by these movements but that tactics used were causing them to oppose the movement and even discourage them from engaging in environmental issues. Despite these negative connotations with ER, it had raised over half of the participants awareness of environmental issues and DWT argued that the emergence of such movements had led to a rise in desire from the public to have a more hands on approach to environmental solutions and consequently had helped them in their progress. This raises the question of to what extent these environmental movements are helping or hindering progress in public engagement. However, in this study, only four of the questions in the survey and one in the public interviews relate to this issue. Further studies, therefore, may help in not only uncovering the reasons for the differing opinions regarding the tactics used but also the severity of its impact on engagement whether that be positive or negative.

These findings give a clear indication of where issues in public engagement may be emerging. However, due to being a relatively small sample size, a larger scale study using a less biased sampling method would need to be conducted in order for the findings to be representative of public opinion. Furthermore, by only interviewing one ENGO it was not representative of the opinions and relationships with the public for all ENGOs. Nevertheless, it provided anecdotal evidence of the DWT's experience offering an indication of the current state of public engagement with ENGOs. The small sample

size and sampling method were a product of both the time and budget available to this study. Sharing the survey on social media enabled the survey to be seen by a number of potential participants in a relatively short time frame. However, it may have resulted in a sampling bias that led to disproportionalities in gender and age demographics. If the study was to be carried out again, it may benefit from distributing the survey in person in order to provide greater demographic variation and overcome the previously mentioned limitation. Another sampling bias that may have occurred is that the people willing to take the time to do the survey may have an interest in the topic. As the survey was open to all UK residents the sample size is relatively small and thus will not be representative of engagement of the UK public as whole. Nevertheless, the findings still give insight into areas of disengagement such as the impact of governmental trust, ENGOs and environmental movements and highlights demographic influences which could improve engagement for ENGOs if they had insight into what demographics respond best to different campaigns.

Conclusions

Based on the findings two previously overlooked factors of discouragement were identified: a lack in trust in governmental competency to fulfil global climate agreements and conflicting attitudes over environmental movements and their tactics. Both of these would benefit from further research to understand the extent of their impact on engagement. Though most demographic variables were for the most part insignificant, the relationship between age and donating both time and money and its influence over information may assist ENGOs in their communication with the public by knowing who to target for different projects and how to reach them. Low levels of both donating time and money were found, substantiating the value-action gap, and suggesting that the environmentally friendly decision should be made to be the easiest option for the public. Despite these barriers to engagement, participants showed high levels of both engagement and responsibility and were carrying out a number of behaviour changes, suggesting that they were eager to be involved in environmental solutions. Therefore, if further research is conducted and solutions to some of these barriers can be found, then public engagement with environmental issues could improve not only with the trust in governmental policy but with ENGOs too.

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