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Mosquito Devices

Young People's views on the use of Mosquito anti-loitering devices in Scotland



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Introduction

The 'Mosquito device' is an electronic device capable of emitting a high frequency sound which is generally only audible to young people aged 25 years old and below.

These devices are installed in various public and private locations (such as in transport stations, and outside shops and houses) with the aim to deter young people from loitering and/or becoming involved in anti-social behaviour.

There is a lack of robust data available on their prevalence in Scotland and the rest of the UK, but anecdotal evidence suggests that these devices are quite commonplace.

Various concerns have been expressed about these devices. These relate broadly to the negative health effects these devices are associated with, and their discriminatory nature.

These devices have been the subject of recent and increased political and media attention, and various organisations such as Children in Scotland and the Scottish Youth Parliament have criticised their use.

While there a range of complex legal and constitutional considerations associated with both the restriction and ban of these devices, the Scottish government continues to not support their use.

The Scottish government is committed to helping to develop understanding of the impact of these devices on young people. To contribute to this understanding, the Scottish government commissioned Young Scot and the Scottish Youth Parliament, to conduct a short survey of young people's experiences and views of these devices.

Summary of findings

- » **Most of the young people surveyed had not heard of Mosquito devices** prior to undertaking the survey. 15% of them had encountered one personally, and 85% had not encountered one.
- » These **devices appear to be found across Scotland** and a wide range of locations. There were also some reports of devices in other parts of the UK and abroad.
- » **41% of respondents experienced health effects** or discomfort from encountering a device.
- » **85% of respondents found the devices to be annoying.**
- » The devices have a **limited impact** in preventing respondents from gathering in a particular area. Respondents did not perceive the devices to be effective in deterring other young people from loitering.
- » Respondents expressed a **wide range of views** about these devices, in addition to those mentioned already. Not all respondents were sure about how the devices made them feel or about their personal views on them. Some were positive, believing the devices made them safer through deterring anti-social behaviour. Others were negative- for example, some expressed that these devices are discriminatory and made them feel unwelcome in their communities.

Considerations

While the sample for this survey (a total 725 respondents) provides some indicative findings and helpful insights, because a convenience sample was used, it is not possible to generalise these findings to young people as a group in Scotland.

Moreover, 15% of respondents had directly encountered a device, whilst 85% of young people have not. This means that for some of the subsequent questions in the survey that asked about young people's direct experiences of these devices, the sample size was substantially reduced.

However, the survey provides a 'snapshot' insight into young people's views and experiences and contributes to developing understanding of the overall impact of Mosquito devices.

For more information on the sample and methodology please see Appendices 2, 3 and 4.

Background

The 'Mosquito device' is an electronic device capable of emitting a high frequency sound. They can generally only be heard by young people aged below 25 years old. Devices are installed with the aim of influencing (and limiting) young people's movements in the locations in which they are found, and relatedly in tackling anti-social behaviour.

The Mosquito device is therefore an anti-loitering device that targets young people. The terms 'Mosquito device' and 'anti-loitering device' are used interchangeably in this report.

Where are they used?

In Scotland, as in the rest of the UK, these devices are found in both public and private spaces.

Common locations include bus and rail stations, and outside shops and houses. It is not known when these devices started to be used in Scotland and wider UK, but data from 2006-2008 show that in the UK over this period, 3,500 devices were purchased.

Mosquito devices are a commercial product and are freely available for purchase by any individual.

The statistic from 2006-08 is the only available data that gives an indication of prevalence; robust and more up to date statistics on prevalence are therefore not available. However, anecdotal evidence suggests that these are commonplace, and a range of campaigners, including Young Scot and the Scottish Youth Parliament (SYP) support this view.

What are the concerns?

Mosquito devices have been the subject of recent and increased media and political attention, in part prompted by the Chair of the SYP experiencing one at a railway station in the summer of 2017 and reporting on this negative experience.

Health

Campaigners have expressed particular concern at the various adverse physical and mental health impacts that are associated with these devices. These effects include headaches and migraines, ear issues such as earache and tinnitus, and panic and anxiety.

Discrimination

Campaigners have also argued that these devices unfairly discriminate against young people as a group, and (unfairly) impact *all* young people irrespective of whether they are engaged in anti-social behaviour.

Concerns have also been expressed about specific sub-groups of young people who may be particularly affected by these devices; these are young people who may be unable to move or be unable to communicate the need to move. These include those with disabilities and very young children.

What does the Scottish Government think?

While there are a range of complex legal and constitutional considerations associated with both restricting and banning the use of these devices, the Scottish government continues to not support their use.

The Scottish government is also committed to improving understanding of the impact of these devices on young people. To help develop this understanding further, the Scottish government commissioned Young Scot and the Scottish Youth Parliament to conduct a short online survey of young people's experiences and views of these devices.

Methodology

There were 725 responses to the survey in total. 84% of responses were fully completed; young people had the opportunity to opt out of answering any question they wished not to answer.

Partially completed responses were included in the analysis and are included in this discussion of findings.

This survey does not purport to be representative of all young people in Scotland but aims to provide a useful 'snapshot' into young people's views and experiences of Mosquito devices. This report presents and discusses the emerging and indicative findings from this survey.

For more information on the sample and methodology please see Appendices 2, 3 and 4.

Key Findings

Awareness and sources of information

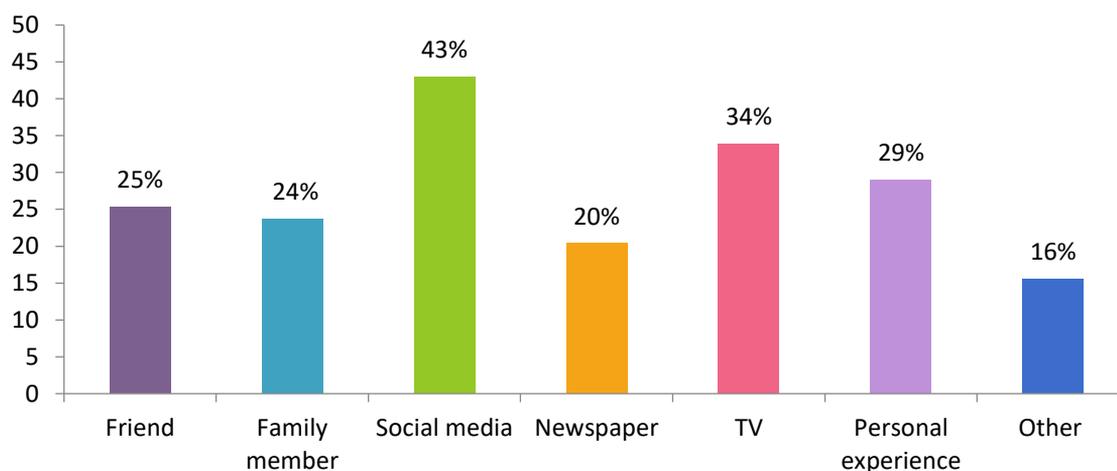
Most respondents (67%) had not heard of a Mosquito device prior to taking part in the survey – around a third of respondents (33%) had.

As is demonstrated below, young people are informed about these devices through a wide range of sources, including social media, newspapers, and TV, and via friends and family.

43% of respondents had heard about these devices through social media (though it is important to point out that respondents were invited to select more than one source in response to this question).

A small number of respondents indicated they had learned about the device in school (this made up the majority of the 29 respondents whose responses were in the ‘other’ category).

Question: Where have you heard about the devices? (Respondents were able to select more than one option)



The final question in the survey was ‘Do you have anything else you would like to add about the Mosquito devices?’ In response to this open text question, some respondents expressed that they would like to know more about these devices, and some suggested that they should be taught about them in school.

Encountering Devices

Respondents were asked if they had ever encountered a Mosquito anti-loitering device.

While most respondents (85%), reported having never encountered one, 15% of respondents had at least one encounter.

Analysis of those who had encountered a device shows that young people from a wide range of geographic areas across Scotland (25 of the 32 local authorities).

Therefore, it is likely that these devices are not limited to particular areas of Scotland.

Local authorities in which devices were reported

Local authority area	Percentage	Number of reports
Aberdeenshire	14%	13
Aberdeen, City of	10%	10
Glasgow, City of	9%	9
Edinburgh, City of	8%	8
Renfrewshire	6%	6
Angus	4%	4
Dumfries and Galloway	4%	4
East Lothian	4%	4
East Renfrewshire	4%	4
Fife	4%	4
North Lanarkshire	4%	4
South Lanarkshire	4%	4
North Ayrshire	3%	3
Argyll and Bute	2%	2
Dundee, City of	2%	2
Moray	2%	2
Perth and Kinross	2%	2
Scottish Borders	2%	2
South Ayrshire	2%	2
West Lothian	2%	2
East Ayrshire	1%	1
East Dunbartonshire	1%	1
Falkirk	1%	1
Highland	1%	1
Inverclyde	1%	1

Location of devices

Young people who had encountered the device were asked where exactly it was located.

Responses included in train and bus stations, outside shops, in town centres, outside schools, and outside private residences.

Specific frequently mentioned locations included Hamilton, Aberdeen and Helensburgh.

Some respondents also noted that they had encountered these devices while on holiday elsewhere in the UK or abroad. The majority (55%) reported that the device they had encountered was still there, to their knowledge; 38% were not sure.

*The Mosquito device is located outside a classroom window at my school
and it is very annoying and disruptive to my learning*

How often do you encounter a Mosquito device?

Of those 105 respondents who had encountered a device (15% of respondents), the majority had seen or heard a Mosquito device multiple times (83%). A minority (22%) reported having seen or heard one only once.

For those respondents who said that they had encountered a device, the survey asked a follow up question to determine how many times they had encountered it. 51% reported seeing the device a few times (1-5 times), 27% reported seeing the device many times (6+ times), and 22% of respondents had only seen the device once.

Time since last encounter

Young people who had encountered the mosquito device were asked how recently they had encountered a one. Just under three-quarters (71%) had experience of these in the last few months. A further 28% said they had encountered one over a year ago. 40% had encountered the device in the past few days or weeks.

Impacts on health and well-being

As discussed, Mosquito devices are associated with various negative physical and mental health effects.

41% of respondents experienced health effects or discomfort from these devices (58% had not experienced these).

These respondents were then asked to describe what these effects were in an open text response. The impacts that were reported cover both physical and mental health and can be broadly grouped into the following categories:

- » Headaches/migraine
- » Ear problems including tinnitus
- » Dizziness or nausea
- » Anxiety/panic.

Question: Responses to the free text question 'If yes, please describe these (for example sore head or other impacts)'

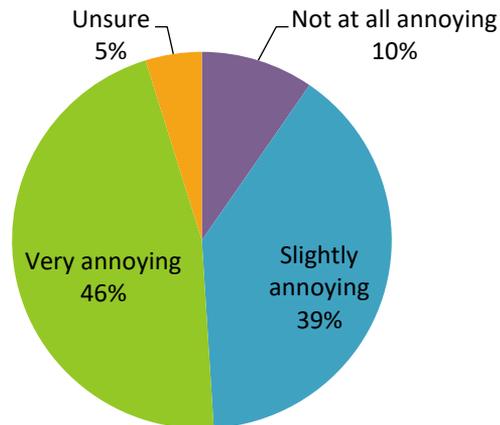
Health effects	Percentage	Number of mentions
Headaches/migraine	68%	27
Tinnitus/Hearing/Earache	48%	19
Dizziness/Nausea	20%	8
Anxiety/Panic	5%	2
	Total	56

These generally refer to short term rather than long term effects. Other responses referred to a more general unpleasantness or discomfort. Respondents were also provided with a short series of statements which they were invited to note their level of agreement or disagreement with.

One statement was: 'I am worried about the effect the Mosquito device has on my health'. In response to this, 31% said that they agreed with this statement, 24% disagreed and a further 46% were unsure.

Respondents were also asked to describe how annoying they found these devices to be. 85% found it annoying to some degree.

Question: Mosquito anti-loitering devices are advertised as being annoying to children and young people. How would you describe its effect?



Qualitative responses

Lastly, when respondents were invited to provide additional comments on the devices at the end of the survey, some expressed concern about the potential and specific health effects for those on the autistic spectrum, or who have epilepsy.

It is important to note that most respondents did not report experiencing any discomfort or negative health effects, but the effects that *were* reported are effects that the devices are associated with.

“It triggered my Tinnitus, making the ringing almost unbearable for a short period of time.”

“Incredibly unpleasant, like a buzzing inside my head.”

Impact on movement and loitering

In terms of the perceived impact on behaviour (asked of all respondents), most respondents (75%) expressed that the devices do not prevent them from going where they want to.

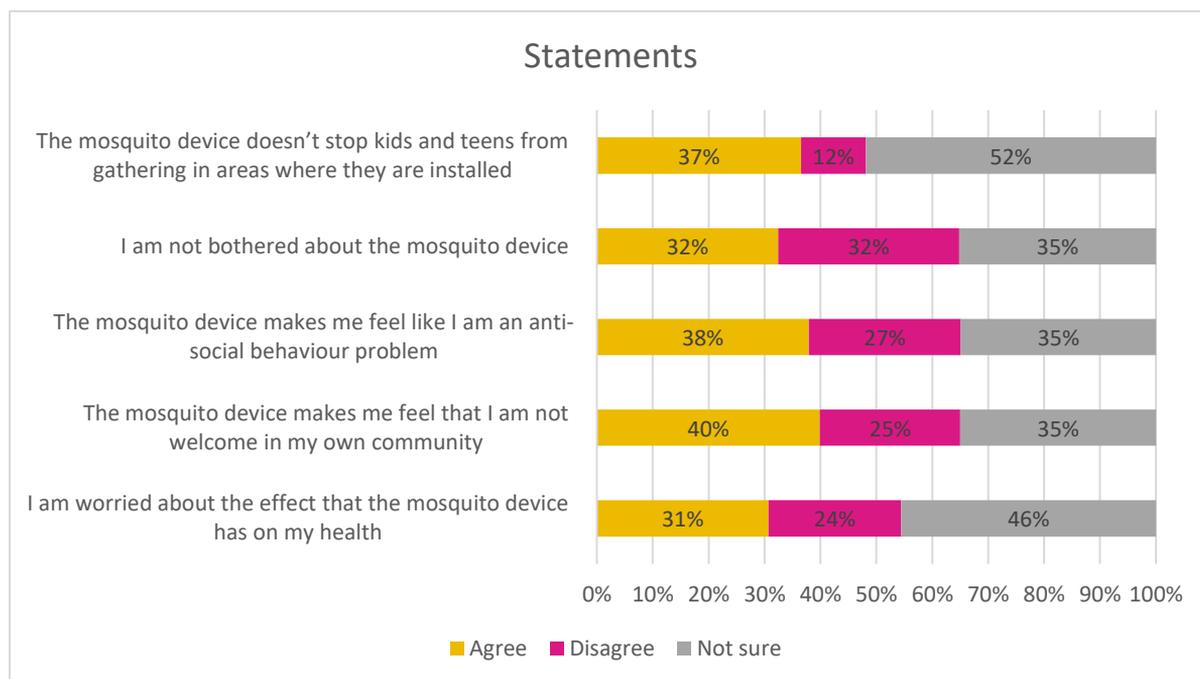
A quarter (25%) said they try to avoid areas where these devices are used. In response to the statement 'the mosquito device doesn't stop kids and teens from gathering in areas where they are installed', 12% disagreed with this, but the majority either agreed (37%) or were unsure (52%).

These responses imply that these devices may not be successfully deterring young people, or enough young people, from loitering.



Attitudes towards Mosquito Devices

The survey asked respondents to state their level of agreement with a series of statements, which sought to gauge their attitude to these devices. Leaving aside those that have already been discussed:



- » 38% reported that the device made them feel like they were an anti-social behaviour problem.
- » 40% reported that the device made them feel they were not welcome in their own community.
- » Equal proportions agreed and disagreed that they were bothered about the Mosquito device (32%) and a further 35% were not sure.

Qualitative responses

In terms of the additional open text comments that were invited at the end of the survey, the majority were negative or expressed some concerns (68%).

In addition to the health and lack of deterrent effects already discussed, concerns were expressed that the devices were discriminatory against young people both in terms of being ageist, and in affecting all young people irrespective of their involvement in anti-social behaviour.

Concerns were also expressed that these devices were divisive, creating divisions and tensions between young people and older generations. Some of these comments are provided below.

“I think they're horrible. Thankfully there are none where I live but I find the whole idea ageist and discriminatory. It's terrible.”

“Mosquito devices do not create a sense of community but instead divide different generations?”

“What about the teens hanging around places like train stations without causing trouble? The ones waiting for trains or relatives or friends from the train.”

“It's a public walk way the mall so when shops are closed it's open to the public to cross the river, so I'm not loitering or conducting anti-social behaviour by walking to the bus home!”

18% of the open text comments showed a different perspective, including recognition that although these devices affected all young people, they were aimed at reducing certain types of behaviour and a view that they generally achieve this. For example:

“The device is not put in place for me, but for the usual guys who hang about drinking and causing bother. The police are never about so it is good they are moved as I avoid shops and stations they meet at.”

In summary, the responses to the series of statements and the open text comments demonstrate the breadth of views and attitudes the respondents had about these devices.

Not all respondents were sure about how their views on the devices or about how they made them feel, and some respondents were positive about them. However, there were also several concerns voiced about these devices, and a range of negative views expressed. Some respondents reported experiencing negative health effects and discomfort from experiencing the devices.

Some expressed doubt about the effectiveness of these devices in reducing loitering and anti-social behaviour. Lastly, some respondents reported that these devices made them feel discriminated against as young person in general, unfairly targeted as a young person not involved in any anti-social behaviour, and unwelcome in their community.



Appendix 1: About the partners

Young Scot Co-Design Approach

Young Scot plays a key role in supporting partners to engage and consult young people across Scotland, helping them to influence the design and delivery of policy and services. Our co-design service involves young people systematically co-creating, co-producing, co-designing, and co-delivering solutions.

One aspect of the co-design process is the Explore phase. This involves uncovering issues through gathering insights and lived experiences from young people themselves. This survey was conducted as part of this Explore phase, reflecting Young Scot's broader commitment to a Co-Design approach.

The Scottish Youth Parliament

The Scottish Youth Parliament is the democratically elected voice of Scotland's young people. Elections are held every two years, in which young people from all across Scotland stand as candidates to become Members of the Scottish Youth Parliament (MSYPs).

MSYPs range in age from 14 to 25 and represent constituencies in all 32 local authorities throughout the country, and several national voluntary organisations. SYP was established on 30 June 1999, making us one day older than the Scottish Parliament.

Our democratically elected members listen to and recognise the issues that are most important to young people, ensuring that their voices are heard by decision-makers. We exist to provide a national platform for young people to discuss the issues that are important to them, and campaign to effect the change they wish to see.

The Scottish Youth Parliament has a great track record of engaging with young people to translate high level policy or consultations and make them relatable to young people. We do this through running SYP Discussion Days on a range of topics for Scottish Government and other key stakeholders.

Appendix 2: Dissemination and promotion

The Mosquito Devices Survey was published on the Young Scot web-site. There are 674, 101 registered Young Scot cardholders in Scotland, which translates to 71% of the eligible population.

The survey was promoted via range of channels: through the Young Scot Rewards platform; through the Young Scot and Scottish Youth Parliament web pages and social media channels; and via direct emails.

The Young Scot Rewards platform is open to all Young Scot card holders, but Rewards card holders tend to be younger than Young Scot cardholders in general.¹ 15% of Young Scot card-holders are registered Rewards users (103, 358).

93% of respondents found the survey through Young Scot Rewards. Young Scot Rewards users were incentivised to participate by being offered 50 points in exchange for completion of the survey (see the screenshot below).

Young Scot Rewards provides young people with a range of online and offline opportunities (which aim to be of interest and value to them). These also offer young people the opportunity to collect points. These opportunities include volunteering in local communities, being more active and learning a new skill. Points can then be exchanged for kit, educational items, and unique experiences.²

¹ This is because the Rewards programme has only been in existence for 5 years and 'older' young people are less likely to be aware of it.

² All information from Young Scot web-site.

ACTIVITY

COMPLETE: MOSQUITO DEVICES SURVEY



THIS ACTIVITY HAS FINISHED. YOU CAN NO LONGER EARN POINTS FOR COMPLETING THIS ACTIVITY.

The mosquito device is an electronic device used to deter loitering or hanging around by young people in certain areas, by emitting a sound at high frequency. This sound can be heard mostly by younger people.

Young Scot and the [Scottish Youth Parliament](#) are running a survey on behalf of [The Scottish Government](#) to understand if you have had any experiences of mosquito devices and if so, how they made you feel. The information you share will be used to inform future policy and legislation.

Complete the survey and collect **50 points!**

If you have any questions about this survey please contact CoDesign@youngscot

Across these channels, the survey was promoted in a neutral way: young people were invited to share their experiences of the device, as well as their opinions and views. Individual social media users who shared the survey on Facebook and Twitter (or via other platforms) may have indicated their opinions when sharing.

Appendix 3: Parameters of survey

This survey builds on a previous survey conducted by the SYP in early 2017 which also sought young people's views and experiences of Mosquito devices. While this survey had a similar focus, it had a limited number of responses.

This follow up survey, conducted by Young Scot and the SYP, aimed to have a significantly larger sample, with the overall aim of generating more robust data on young people's views and experiences of Mosquito devices.

This survey used a convenience sample; this involves selecting respondents based on their accessibility and proximity to the researcher or organisation conducting the survey. The sample for this survey (a total 725 respondents) therefore provides some indicative findings and helpful insights about young people as a group in Scotland.

As only 15% of respondents had directly encountered a mosquito device, the sample size was reduced for some of the subsequent questions in the survey that asked about young people's direct experiences of these devices.

As noted, the survey was an online survey - respondents completed it online and it was also promoted online through various channels. There are a range of benefits and limitations associated with online surveys. Some benefits include that it is relatively low cost; it attracts a faster response rate when compared with other approaches (such as postal surveys); and it tends to have a wide geographical reach. However, some limitations include that as responses are restricted to the online population- they therefore exclude those who do not have internet access or who have limited access to the internet. As it was available through Young Scot Rewards, this did however help to restrict access only to individuals aged between 11 and 25 years old.

Appendix 4: Demographic characteristics of respondents

Respondents were free not to disclose information about their demographic characteristics. For those who chose to disclose, the following information was collected:

- » 90% of respondents were at school, university, or college. A further 4% reported working full or part-time. A small minority reported being unemployed (3%) or working on a voluntary basis (1%).
- » 66% of respondents self-identified as female, 31% as male, 1% as non-binary, and 3% preferred not to say. This survey is therefore likely to significantly under-represent the views of young men. In contrast, Young Scot membership is evenly split across males and females.
- » 86% of respondents were from a White British or Scottish ethnic minority background. 12.5% were from other ethnic minority backgrounds.
- » 56% of respondents were aged between 11-15, 37% were aged between 16-20, and 7% aged between 21-25. 108 respondents chose not to disclose their age.
- » There were respondents from every local authority in Scotland, as set out in the table overleaf.

Local Authority Breakdown of Respondents

Local authority	Percentage of respondents	Number of respondents
Glasgow, City of	9%	56
Edinburgh, City of	8%	52
Aberdeenshire	6%	38
Fife	6%	38
North Lanarkshire	6%	37
South Lanarkshire	6%	35
East Renfrewshire	5%	31
Renfrewshire	5%	29
Aberdeen, City of	5%	28
Perth and Kinross	4%	27
West Lothian	4%	23
South Ayrshire	4%	22
Scottish Borders	3%	21
East Lothian	3%	16
North Ayrshire	3%	16
Angus	2%	14
Moray	2%	14
Dundee, City of	2%	13
Highland	2%	13
Stirling	2%	13
Dumfries and Galloway	2%	11
Falkirk	2%	11
Inverclyde	2%	11
East Ayrshire	2%	9
Midlothian	2%	9
Argyll and Bute	1%	8
East Dunbartonshire	1%	8
West Dunbartonshire	1%	7
Clackmannanshire	1%	3
Shetland Islands	0.3%	2
Orkney Islands	0.2%	1
Western Isles	0.2%	1
	Totals	617

As detailed above, the young people who completed the survey are a distinct group of young people and can help shed some light on young people's views and experiences of Mosquito devices and contribute to develop an understanding of the overall impact of these devices.



Get in touch.....



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Or pop in for a cuppa and a hobnob...

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Rosebery House,
9 Haymarket Terrace,
Edinburgh, EH12 5EZ

