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# BMJ Paediatrics Open

## Study Of Covid-19 Information AccessibiLity for young people in North Staffordshire (SOCIAL)

Journal:	<i>BMJ Paediatrics Open</i>
Manuscript ID	bmjpo-2020-000942
Article Type:	Original research
Date Submitted by the Author:	10-Nov-2020
Complete List of Authors:	Lawton, Oliver Lawton, Sarah; Keele University Faculty of Humanities and Social Science, Keele CTU Dikomitis, Lisa; Keele University Faculty of Humanities and Social Science, School of Medicine Protheroe, Joanne; Keele University Faculty of Humanities and Social Science, School of Medicine Smith, Joanne; Keele University Faculty of Humanities and Social Science, Keele CTU Mallen, Christian; Keele University Faculty of Humanities and Social Science, School of Medicine
Keywords:	Adolescent Health, Data Collection, Technology

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# Study Of Covid-19 Information Accessibility for young people in North Staffordshire (SOCIAL)

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**Key words:** COVID-19, young people, education, health literacy, information provision, social media

**Word Count:** Abstract: 249 words; Main Document: 1,825 words; Total: 2,074 words

# Abstract

## Background:

Whilst the risk associated with COVID-19 appears to be less severe for young people, the pandemic has still had a significant impact on their lives. Accurate information on COVID-19 is critical, yet to date, little is known about what sources of information young people use and how they access it.

## Method:

A cross-sectional survey of pupils (aged 11 – 16 years) was conducted in North Staffordshire, UK. Approvals were obtained from participating schools and Keele University School of Medicine Ethics Committee. Pupils attending 2 secondary schools were sent an email which explained the study and contained a link URL to an anonymous online questionnaire.

## Findings:

408 pupils (23.3% of those invited) completed the survey, 65.7% of these were female. Descriptive statistics were used to summarise the data.

91.2% of pupils reported having daily access to the internet on a personal electronic device. Social media played a significant role in the provision of COVID-19 information, with at least one social media medium being accessed by 68.1% of pupils. Only 6.2% of pupils reported receiving any information from their teachers and 88.7% of pupils felt that to some degree COVID-19 had negatively affected their education.

## Interpretations:

SOCIAL demonstrates a gap in the provision of information on COVID-19 for young people, particularly on regulations and keeping safe, global updates, and what personal impact pupils can expect in terms of their education. Results from this study could be used to guide information campaigns by the Department of Education, the NHS and the media.

## Background

The Coronavirus disease (COVID-19) was characterised as pandemic on the 11<sup>th</sup> March 2020 by the World Health Organisation (WHO). In response to COVID-19, 107 countries implemented nation-wide school closures by 18<sup>th</sup> March 2020 as a mechanism to contain the virus and reduce spread<sup>1</sup>.

Wang *et al* report the impact that the lockdown, associated with the coronavirus pandemic, has had on children and adolescents. Stressors identified included: prolonged duration, fears of infection, frustration and boredom, inadequate information and lack of in-person contact with classmates, friends, and teachers<sup>2</sup>. Many of these stressors may be heightened by an inadequate provision of accurate information or a lack of knowledge about the pandemic and how it might affect the futures of young people<sup>3</sup>.

With exception of the biological risk that COVID-19 poses on adolescents, there is currently limited information available on the impact COVID-19 is having on young people. Buzzi *et al*<sup>4</sup> published data from adolescents in Italy. Their aim was to detect the psychosocial impact induced by the spread of COVID-19 and the measures put in place by national and local public authorities to control it. They investigated four specific areas: concerns and fears, information on the pandemic, provisions of public authorities (e.g., lockdown), and the impact on everyday life. The degree of adolescents' personal concerns and that of their families was explored, with 51.7% reporting a 'moderate' level of concern. The change in communication between friendships was also examined, with 69.6% of participants reporting that they communicated via social media as opposed to meeting with friends. This study also found that almost 40 percent of adolescents felt there would be 'a lot' of consequences to their education.

Throughout the development of the pandemic, there has been extensive media attention relating to COVID-19. A variety of different news sources provided regular updates on a wide

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3 range of COVID-19 related topics including; the number of deaths, severity of cases, the 'R'  
4 number, specific risk factors and global updates. Mainstream media (news) was one provider  
5 of information for the majority, however 49% of the population in the United Kingdom (UK)  
6 now use social media to keep up with the latest news<sup>5</sup>.  
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13 83% of 12-15 year olds in the UK have smart phones and 99 percent are online<sup>6</sup>. As such,  
14 social media could be a major source of information for updates on COVID-19. The aim of the  
15 SOCIAL study (**Study Of Covid-19 Information AccessibiLity** for young people in North  
16 Staffordshire) was to investigate whether pupils had access to reliable information on COVID-  
17 19, how they accessed this information and to what extent pupils perceived that COVID-19  
18 will impact their education.  
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## 29 **Methods**

### 30 **Study design**

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32 A cross-sectional survey was developed and administered to secondary school pupils (aged  
33 11-16 years) via an email with a link URL to an online form. 7 secondary schools in North  
34 Staffordshire (UK) were approached to participate, with 2 agreeing to take part.  
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### 42 **Recruitment and consent procedures**

43 Schools agreeing to participate sent (from the headteacher or representative) an ethics  
44 committee approved email to pupils on 13<sup>th</sup> July 2020, providing an introduction to the study  
45 and a link URL to an online anonymous questionnaire.  
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50 Consent from pupils to participate in this study were obtained, in line with the definition outlined  
51 in Article 4(11) of the GDPR guidance, "any freely given, specific, informed and unambiguous  
52 indication of the data subject's wishes by which he or she, by a statement or by a clear  
53 affirmative action, signifies agreement to the processing of personal data relating to him or  
54 her"<sup>7</sup>. Consent to participate was therefore implied by the online submission of the  
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3 anonymously completed questionnaire. The Ethics Committee of the Faculty of Medicine and  
4 Health Sciences at Keele University provided approvals for the study (Ref: MH-200137, 13<sup>th</sup>  
5 July 2020). Data were collected from the online anonymous questionnaire titled: “**Study Of**  
6  
7 **Covid-19 Information AccessibiLity** for young people in North Staffordshire (SOCIAL)”.  
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11 The survey was available to access from a link URL contained within the content of an  
12 invitation email sent to pupils, by their school. The survey took approximately 5 minutes to  
13 complete, which pupils were able to do at their convenience, in their own time. The survey  
14 was hosted on an open access, online platform (Lime Survey) adapted for use by Keele  
15 University (Keele Health Survey) and was GDPR compliant with secure data-transfer to  
16 University servers.  
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### 26 **Patient and Public Involvement**

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28 The research questions were conceived as a result of the lead researcher’s first-hand  
29 exposure to the sample populations’ experiences. The survey was drafted and then piloted on  
30 a group of 5 pupils aged 12-16 years. Feedback was incorporated into the final, approved  
31 survey. Results will be disseminated to the participating schools.  
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### 39 **Survey content**

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41 The content of the survey included questions around the following topics: (1) the frequency  
42 with which pupils update themselves on COVID-19 specific information and the sources of  
43 information they accessed, (2) how pupils assess the trustworthiness and understanding of  
44 information; (3) an understanding of whether pupils believe COVID-19 has affected their  
45 education, and (4) the kind of information pupils feel schools should provide on COVID-19.  
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### 54 **Analysis**

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56 Descriptive analyses were used to determine frequencies and percentages of responses to  
57 the research questions, stratified by age and gender.  
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## Results

408 responses were obtained (23.3%). 65.7% of participants were female, with the proportion of females participating increased incrementally with age (from 55.6% at aged 11 to 73.8% of responders aged 16). 47.8% of responses were from pupils aged 13 and 14 years old. Participants had a mean age of 13.9 years (standard deviation = 1.4) and 87.7% were either of White or Asian ethnicity, see Tables 1 and 2.

91.1% (n=375) of participants reported having daily access to the internet on a device of their own. When asked to reflect on **how often** they kept themselves updated on the COVID-19 pandemic 'when schools closed' (in March 2020), 45.9% of participants reported keeping themselves updated on a 'daily' basis. This trend however, did not continue. When asked this same question at the point of survey completion (July 2020), 'daily' updates were only reported by 10.1% of participants, see Table 3. This data also evidenced that the older the pupil the more frequently they kept themselves updated on COVID-19 developments, with 66.2% of 16 year olds updating themselves 'daily' compared to only 22.2% of 11 year olds.

Participants reported accessing multiple sources of information, for updates on the development of the COVID-19 pandemic. 'Television news' was the most frequently accessed (71.6%) and was the most trusted source of information (59.8%). However, it was 'best understood' by only 25.9% of participants. Whilst parents had a strong role in aiding the participant's understanding of the pandemic developments, teachers and healthcare professionals have held a very small role in the provision of information, see Table 4. Further stratification by age and gender did not alter the findings.

Social media is a significant source for the provision of information to young people, with at least one social media medium being accessed by 68.1% of participants. Participants did, however, display some awareness that what they may be accessing may not be entirely

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3 trustworthy. TikTok was a social media medium accessed by 36.5% of participants for COVID  
4 information, with 36% of participants expressing distrust towards information from this source.  
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6 Around 13% of the participants reported TikTok as a source of information they understood  
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8 best.  
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13 Concerning their education, 88.7% of pupils felt that to some degree COVID-19 had negatively  
14 affected their education (see Table 5). Despite the feeling that COVID-19 had negatively  
15 affected their education, only half of responders felt that schools should be providing  
16 information to pupils on COVID-19.  
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24 When asked what information participants would like to receive, 76.4% provided additional  
25 comments, which were categorised into broad themes. 30.2% of participants reported wanting  
26 to receive information on COVID-19 rules, government regulations and how best keep safe.  
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28 24.5% wanted to be more informed about the wider impact of COVID-19 and global news, and  
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30 21.4% requested information in order to understand plans to return pupils to the classroom.  
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32 12.5% of participants wanted individualised updates on how their education was affected by  
33 COVID-19 and how they were personally impacted.  
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## 41 Discussion

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44 68.1% of pupils responding to this survey accessed at least one source of social media to  
45 keep themselves updated on developments of COVID-19, however only 7.9% reported these,  
46 as most trusted sources of information. Television news and internet news were accessed by  
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48 71.4% and 63.7% of responders respectively, however they were then only reported as being  
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50 best understood by 26% and 10.9% respectively. Only 6.2% of responders had received  
51 information from their teachers on COVID-19.  
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3 Whilst there is limited existing data, on sources providing information to young people on  
4 COVID-19, some comparison with literature can be made. The majority (88.7%) of pupils  
5 participating in this research, especially those in the years preceding public exams, felt that to  
6 some degree, COVID-19 had negatively affected their education. This concurs with the  
7 findings from Buzzi *et al*<sup>4</sup> who found that 68.6% of study participants were concerned about a  
8 negative consequence on their education due to COVID-19.  
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18 This study has a number of limitations. Our research is focused on a single geographical area  
19 of North Staffordshire, formerly an industrial conurbation and now a centre for service  
20 industries and distribution centres. Only two secondary schools participated in this research  
21 which may reflect our recruitment that took place at the end of the academic year, a particularly  
22 busy time for schools, preparing for a future intake and making adaptations for COVID-19  
23 compliance. At that time of year, pupils may not have been looking at their school email  
24 account, which would have reduced participation. Had teachers been asked to introduce the  
25 study to the pupils and provide them with time to complete their responses during school time,  
26 we may have expected response rates of over 60%, similar to those of Gobina *et al* who  
27 administered questionnaires within the classroom<sup>8</sup>. Email invitations were sent from the  
28 headteacher rather than national bodies, such as the NHS, Public Health England or the  
29 university institution, which may have encouraged participation. Despite this, we received  
30 replies from more than 400 participants, a response rate which could be considered  
31 'acceptable'<sup>9</sup>.  
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50 Our findings demonstrate a gap in the provision of information on COVID-19 for young people.  
51 Social media is a highly frequented source of information for young people, there is potential  
52 therefore, that if trustworthy, clearly written, accessible information could be provided via these  
53 mediums, understanding would increase, as would health literacy (ability to access,  
54 understand and use information)<sup>10</sup>. With 'fake news' widely in circulation it is essential that  
55 information is of a high-quality and trustworthy. Mainstream media need to work with a younger  
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3 audience to ensure material is understandable and schools and health providers need to be  
4 more proactively reaching out to younger people. Detailed guidance was provided to schools<sup>11</sup>  
5 which focused on operational guidance and did not consider specific information needs of  
6 pupils. With schools re-opening across the world, now is the time to address this deficit.  
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**“What is already known on this topic”**

- Whilst the risk associated with COVID-19 appears to be less severe for young people, the pandemic has still had a significant impact on their lives.
- There is limited information available on the impact COVID-19 is having on young people.
- There is evidence to suggest that adolescents feel that due to COVID-19, there are consequences to their education.

**“What this study adds”**

- Evidence that social media plays a significant role in the provision of COVID-19 information, for young people.
- Evidence of a gap in the provision of information on COVID-19 for young people.
- A guide for future media campaigns on COVID-19 information, for young people.

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**Table 1** Age and gender of participants

Age	n (%)		Female	
	n	(%)	n	(%)
11	9	2.2%	5	55.6%
12	59	14.5%	35	59.3%
13	108	26.5%	69	63.9%
14	87	21.3%	55	63.2%
15	80	19.6%	56	70.0%
16	65	15.9%	48	73.8%
<b>Total</b>	<b>408</b>	<b>100%</b>	<b>268</b>	<b>65.7%</b>

**Table 2** Ethnicity of participants

Ethnicity	n (%)
White, White British, White Other	257 63.1%
Asian or Asian British	100 24.6%
Black, African, Black British or Caribbean	27 6.6%
Mixed or multiple ethnic groups	12 2.9%
Prefer not to say	6 1.5%
Another ethnic group	5 1.3%
<b>Total</b>	<b>407* 100%</b>

\*In 1 case there was missing data.

**Table 3** Frequency of accessing COVID-19 developments

	Frequency of update			
	When schools closed (March 2020)		July 2020	
	n	(%)	n	(%)
Hourly	13	3.2%	1	0.2%
Daily	187	45.9%	41	10.1%
2-3 times a week	103	25.2%	119	29.3%
Once a week	67	16.4%	117	28.9%
Less than once a week	27	6.6%	104	25.6%
Never	11	2.7%	24	5.9%
<b>Total</b>	<b>408</b>	<b>100%</b>	<b>406*</b>	<b>100%</b>

\*In 2 cases there were missing data.



**Table 4 Sources of COVID-19 development updates participants accessed with sources trusted most and least, and understood best**

	Accessed		Trust most		Trust least		Understood	
	n	(%)	n	(%)	n	(%)	n	(%)
Television news	292	71.6%	244	59.8%	13	3.2%	105	25.9%
Discussion with parents	283	69.4%	44	10.8%	3	0.7%	103	25.4%
Internet news	262	64.2%	45	11.0%	35	8.6%	46	11.4%
Discussion with friends	177	43.4%	2	0.5%	32	7.9%	8	2.0%
Instagram	168	41.2%	2	0.5%	57	14.1%	19	4.7%
TikTok	149	36.5%	6	1.5%	146	36.0%	52	12.8%
YouTube	130	31.9%	12	2.9%	11	2.7%	21	5.2%
Radio	124	30.4%	15	3.7%	1	0.2%	6	1.5%
Snapchat	107	26.2%	2	0.5%	42	10.4%	10	2.5%
Twitter	46	11.3%	8	2.0%	14	3.5%	16	4.0%
Newspapers/Magazines	41	10.0%	4	1.0%	17	4.2%	6	1.5%
Facebook	37	9.1%	2	0.5%	29	7.2%	2	0.5%
Discussion with teachers	26	6.4%	-	-	1	0.2%	1	0.2%
Discussion with HCPs	16	3.9%	21	5.1%	-	-	9	2.2%
Other	-	-	1	0.2%	1	1.0%	1	0.2%
<b>Total</b>	<b>408</b>	<b>100%</b>	<b>408</b>	<b>100%</b>	<b>405*</b>	<b>100%</b>	<b>405*</b>	<b>3.2%</b>

\*In 3 cases there were missing data.

**Table 5 Negative affect participants felt COVID-19 has had on their education**

Age	A lot		A bit		Not at all		Don't know	
	n	(%)	n	(%)	n	(%)	n	(%)
11	3	33.3%	4	44.4%	2	22.2%	-	-
12	21	35.6%	33	55.9%	3	5.1%	2	3.4%
13	27	25.0%	66	61.1%	10	9.3%	5	4.6%
14	24	27.6%	50	57.5%	10	11.5%	3	3.4%
15	44	55.0%	33	41.3%	2	2.5%	1	1.3%
16	19	29.2%	36	55.4%	7	10.8%	3	4.6%
<b>Total</b>	<b>138</b>	<b>32.5%</b>	<b>222</b>	<b>56.2%</b>	<b>34</b>	<b>8.2%</b>	<b>14</b>	<b>3.1%</b>

## Abbreviations

COVID-19	Coronavirus disease 2019
GDPR	General Data Protection Regulations
NHS	National Health Service
SOCIAL	Study Of Covid-19 Information AccessibiLity for young people in North Staffordshire
UK	United Kingdom
URL	Uniform Resource Locator
WHO	World Health Organisation

## Acknowledgements

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## Authors' contributions

This study was a collaboration between all authors. OGPL and SAL had full access to the data and take responsibility for data integrity and accuracy of data analysis. CDM was the chief investigator. OGPL produced the first draft of the manuscript. JS and SAL led the administrative, technical, and material support. All authors contributed to the drafting and approval of the final manuscript.

## Ethical approval

Ethical approval was obtained by Keele University Faculty of Medicine and Health Sciences Research Ethics Committee on 13<sup>th</sup> July 2020, ref MH-200137.

## Data sharing statement

Keele University is a member of the UK Reproducibility Network and committed to the principles of the UK Concordat on Open Research Data. The School of Medicine and Keele Clinical Trials Unit have a longstanding commitment to sharing data from our studies to improve research reproducibility and to maximise benefits for patients, the wider public, and

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3 the health and care system. Data requests and enquiries should be directed to  
4 spcsc.datasharing@keele.ac.uk.  
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## 8 **Funding statement**

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10 Christian Mallen is funded by the National Institute for Health Research (NIHR) Applied  
11 Research Collaboration West Midlands, the National Institute for Health Research (NIHR)  
12 School for Primary Care Research and a National Institute for Health Research (NIHR)  
13 Research Professorship in General Practice (NIHR-RP-2014-04-026) for this research project.  
14  
15 All authors had full access to the full data in the study and accept responsibility to submit for  
16 publication. The views expressed are those of the author(s) and not necessarily those of the  
17 NIHR or the Department of Health and Social Care.  
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# BMJ Paediatrics Open

## Survey of young people in one region of the UK on accessing Covid-19 information (SOCIAL)

Journal:	<i>BMJ Paediatrics Open</i>
Manuscript ID	bmjpo-2020-000942.R1
Article Type:	Original research letter
Date Submitted by the Author:	29-Dec-2020
Complete List of Authors:	Lawton, Oliver Lawton, Sarah; Keele University Faculty of Humanities and Social Science, Keele CTU Dikomitis, Lisa; Keele University Faculty of Humanities and Social Science, School of Medicine Protheroe, Joanne; Keele University Faculty of Humanities and Social Science, School of Medicine Smith, Joanne; Keele University Faculty of Humanities and Social Science, Keele CTU Mallen, Christian; Keele University Faculty of Humanities and Social Science, School of Medicine
Keywords:	Adolescent Health, Data Collection, Technology

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# Survey of young people in one region of the UK on accessing Covid-19 information (SOCIAL)

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**Key words:** COVID-19, young people, education, health literacy, information provision, social media

**Word Count:** Abstract: 96 words; Main Document: 598 words; Total: 694 words

## Abstract

COVID-19 has significantly impacted young people's lives yet little is known about the COVID-19 related sources of information they access. We performed a cross-sectional survey of pupils (11–16 years) in North Staffordshire, UK. 408 (23%) pupils responded to an online survey emailed to them by their school. Descriptive statistics were used to summarise the data. Social media, accessed by 68%, played a significant role in the provision of information, despite it not being considered trustworthy. 89% felt that COVID-19 had negatively affected their education. Gaps in the provision of information on COVID-19 have been identified.

## Background

The Coronavirus disease (COVID-19) was characterised as pandemic in March 2020 by the World Health Organisation (WHO). There is limited information available, on the impact COVID-19 is having on young people. Buzzi *et al*<sup>1</sup> report that almost 40 percent of adolescents felt there would be 'a lot' of consequences to their education. Data on COVID-19 information sources accessed by young people is currently lacking.

The aim of the **SOCIAL** study (**Study Of Covid-19 Information AccessibiLity** for young people in North Staffordshire) was to investigate whether young people aged 11-16 years had access to reliable information on COVID-19, how they accessed this information and the perception of COVID-19 impact on their education.

## Method

A cross-sectional survey was administered to secondary school pupils (11-16 years) via email. 7 secondary schools in North Staffordshire (UK) were approached to participate, with 2 agreeing to. Schools sent pupils an email (Keele University Ethics: MH-200137) providing an introduction to the study and an online anonymous questionnaire link. The survey was hosted on an open access online platform, with Data Protection Act 2018 compliance.

Research questions were generated by the lead author based on personal experience. The survey was piloted on 5 young people and feedback incorporated. The survey included questions on: frequency with which pupils update themselves on COVID-19 information and sources they access; source trustworthiness and understanding; effect of COVID-19 on education; and information pupils want from schools on COVID-19. Descriptive analyses were used to summarise results.



## Results

408 (23%) responses were obtained. The proportion of females participating increased incrementally with age (56% aged 11 to 74% aged 16). The mean age of respondents was 13.9 years and 88% identified their ethnicity as either White or Asian.

92% of participants have daily access to the internet on a personal device. When asked *how often* they updated themselves on COVID-19 at the start of the pandemic, 46% responded on a 'daily' basis. When asked the same question at the point of survey completion (July 2020), 'daily' updates were only reported by 10% of pupils (Table 1). Older respondents updated more frequently (66% of 16-year-olds updating 'daily', compared to 22% of 11-year-olds). Responders accessed multiple information sources (Table 2). 'Television news' (72%) was the most trusted source (60%), although only 'best understood' by 26%. Social media was an information source accessed by 68% of pupils, although this was not considered as trustworthy.

89% of pupils felt that 'to some degree' COVID-19 had negatively affected their education. Respondents felt that schools should be providing more information, including information on: COVID-19 rules, government regulations and how best to keep safe (30%); the wider impact of COVID-19 and global news (25%); and plans to return to the classroom (21%).

## Conclusions

Pupils were concerned about the impact of COVID-19 on their education; findings which have also been reported in published studies elsewhere<sup>1</sup>. A variety of information sources were accessed, often on a frequent basis, despite acknowledgement that the information may not have been accurate.

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3 This research is limited by including a single geographical region and by recruiting at the end  
4 of the academic year, when pupils may not have been accessing their school email accounts.  
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7 Teacher facilitated questionnaire completion may have increased response rates<sup>2</sup>. Email  
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9 invitations were administered by teachers rather than recognised national bodies, that may  
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11 have encouraged participation.  
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15 Findings demonstrate gaps in the provision of information on COVID-19 for young people,  
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17 who would like schools to take a more prominent role in the provision of information. With  
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19 internet use widespread, it is important that young people have clear, accurate information  
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21 available to them, to increase understanding<sup>3</sup>.  
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**Table 1** Frequency of accessing COVID-19 developments

	Frequency of update			
	When schools closed (March 2020) n (%)		July 2020 n (%)	
Hourly	13	3.2%	1	0.2%
Daily	187	45.9%	41	10.1%
2-3 times a week	103	25.2%	119	29.3%
Once a week	67	16.4%	117	28.9%
Less than once a week	27	6.6%	104	25.6%
Never	11	2.7%	24	5.9%
<b>Total</b>	<b>408</b>	<b>100%</b>	<b>406*</b>	<b>100%</b>

\*In 2 cases there were missing data.

**Table 2** Sources of COVID-19 development updates participants accessed with sources trusted most and least, and understood best

	Accessed		Trust most		Trust least		Understood	
	n	(%)	n	(%)	n	(%)	n	(%)
Television news	292	71.6%	244	59.8%	13	3.2%	105	25.9%
Discussion with parents	283	69.4%	44	10.8%	3	0.7%	103	25.4%
Internet news	262	64.2%	45	11.0%	35	8.6%	46	11.4%
Discussion with friends	177	43.4%	2	0.5%	32	7.9%	8	2.0%
Instagram	168	41.2%	2	0.5%	57	14.1%	19	4.7%
TikTok	149	36.5%	6	1.5%	146	36.0%	52	12.8%
YouTube	130	31.9%	12	2.9%	11	2.7%	21	5.2%
Radio	124	30.4%	15	3.7%	1	0.2%	6	1.5%
Snapchat	107	26.2%	2	0.5%	42	10.4%	10	2.5%
Twitter	46	11.3%	8	2.0%	14	3.5%	16	4.0%
Newspapers/Magazines	41	10.0%	4	1.0%	17	4.2%	6	1.5%
Facebook	37	9.1%	2	0.5%	29	7.2%	2	0.5%
Discussion with teachers	26	6.4%	-	-	1	0.2%	1	0.2%
Discussion with HCPs	16	3.9%	21	5.1%	-	-	9	2.2%
Other	-	-	1	0.2%	1	1.0%	1	0.2%
<b>Total</b>	<b>408</b>	<b>100%</b>	<b>408</b>	<b>100%</b>	<b>405*</b>	<b>100%</b>	<b>405*</b>	<b>3.2%</b>

\*In 3 cases there were missing data.

## Abbreviations

COVID-19	Coronavirus disease 2019
UK	United Kingdom
WHO	World Health Organisation

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