

ORIGINAL ARTICLE

Adolescent co-researchers identified the central role of social media for young people during the pandemic

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Abstract**Aim:** To test the method of engaging co-researcher adolescents in data collection and explore stated motives for their selection of social media material related to COVID-19.**Methods:** Twenty-three adolescents, 13–19-years old, in Sweden participated as co-researchers collecting material from their social media related to COVID-19. Specifically, they motivated their selection of social media material in field notes. Their motives were explored using content analysis.**Results:** Adolescent co-researchers understood and performed the task well, providing insight into the social media exchanges of adolescents during the pandemic. An overarching theme for the motivation for their selection emerged: Social media is an important tool for adolescents' communication and information exchange during COVID-19. Four categories were identified: Keeping track of the talk of the town; Recognition of personally relevant topics; Adolescents as information consumers; Social media as a means for expressing feelings, advice and existential reflections. Co-researchers reported challenges relating to the quality of pandemic-related information available to adolescents.**Conclusion:** Including young people as co-researchers on matters relevant to them was successful. This study also underlines the need to consider the role of social media in information exchange during crises and to co-produce health communication with adolescents to meet their specific needs.**KEYWORDS**

COVID-19, online health communication, pandemic, participatory research, young people

1 | INTRODUCTION

There is a growing interest and consensus regarding the importance of involving children and adolescents in research, and different models of adolescent participation have been documented in the past.^{1,2} The involvement of adolescents in research, addressing topics

related to them adds quality in terms of unique knowledge based on their experiences. Despite this, only 1% of studies was found to have reported using adolescents' advice during their research.³ While there is a growing body of literature on how to involve adolescents effectively in co-developing services and interventions,⁴ involving adolescents in research is still an area under development. Studies

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that do involve adolescents in research projects often do so in the co-production of research design or dissemination activities and much less so in the actual data collection.³ Therefore, further methodological guidance and empirical studies are needed to provide researchers with tools to use when they wish to involve adolescents in the production of knowledge pertinent to them. The voices of children and young people during COVID-19 have been investigated in a critical review of methods.⁵ This review highlighted the need for innovative recruitment and data collection strategies and the need for an ethical and reflexive approach during the entire research process. There are three main reasons for involving adolescents in research and knowledge production. One is the belief that there is knowledge that can only be achieved by co-creating it with those whom it concerns.⁶ The second reason is to take on a children's rights perspective. The Convention on the Rights of the Child aims to provide all children, regardless of background, age and gender, the right to participate and have their voices heard in all matters affecting them.⁷ The third reason is that involvement can have beneficial effects on the adolescents themselves. Examples include increased empowerment, self-esteem and confidence, enhanced knowledge, increased awareness of health services, greater responsibility and independence.^{8,9}

During the pandemic, social media played a key role in people seeking health information.¹⁰ Information related to COVID-19 was made available via social media to empower and encourage people to take preventive actions.¹¹ Ngien and Jiang found in their study that the use of social media is particularly important for young people, in overcoming the sense of social isolation, offering opportunities to seek advice and information.¹⁰ However, excessive social media exposure to health information during a societal crisis can also increase negative health outcomes, such as depression and anxiety.¹¹

Several studies show that social media use has increased dramatically during the pandemic,¹² a phenomenon that is also observed globally.¹³ The pandemic was a global societal crisis and disrupted adolescents' lives worldwide. Acquiring knowledge concerning its effect on the adolescent population requires their active participation. Therefore, the current paper sets out to co-produce our understanding of the salience and motives for social media use regarding COVID-19 during the second wave of the pandemic.

Specifically, the aim of the current study was to test the method of engaging co-researcher adolescents in data collection and explore stated motives for their selection of social media material related to COVID-19.

2 | MATERIALS AND METHODS

Researchers adopted a snowball sampling method, where written information on the opportunity to work for 5 hours was presented in the author's professional and private networks, including social media. Three hours were estimated for searching social media forums, and 2 hours for summarising the findings. Adolescents who were interested in working on the project were asked to send an

Key Notes

- Involving adolescents as co-researchers facilitated the inclusion of rich data, allowing for a deeper understanding of the role of social media during the pandemic.
- Adolescents' field notes illustrated social media's salience in their sensemaking, addressing their health communication needs during a societal crisis.
- Adolescents requested trustworthy information and should be involved in tailoring information regarding, for example, vaccinations, societal restrictions and education delivery.

email to the authors. The recruitment took place during December 2020.

The recruitment process was successful. In only a few days, 24 adolescents had reached out to the researchers, stating that they wanted to work on the project. One person dropped out during the process. The final group of co-researcher adolescents was 13–19-year-old and included members attending both vocational and theoretical high school programmes and represented five Swedish regions.

2.1 | Instructions to adolescents

An informational meeting was held online. During the meeting, the authors presented the overall study and relayed information verbally and visually by screen sharing on how to collect and report the data and take detailed field notes. Before the meeting, the co-researchers were given written information, including pictorial support, on how to use the project's digital meeting software. During the digital information meeting, they could ask questions. It was important to allow for questions to be posed through the chat function, as some co-researchers felt socially anxious about speaking up in front of a large group.

After the deadline to submit material, the researchers arranged a follow-up meeting as agreed with the adolescents at the initial informational meeting. All co-researchers were invited to join and share reflections on the method used. The academic researchers also presented examples of data that had been submitted. A written certificate was provided to all the co-researchers, stating the content of the work performed and the time for which they were reimbursed.

2.2 | Data collection by adolescents

The co-researchers were asked to use social media forums they usually visited and with which they felt comfortable. In collecting the data, they were asked to report on the date, source from which the data had been extracted, the text, conversation or meme addressing

the adolescents' opinions on COVID-19 and comment on why the specific content was chosen. These comments were considered as field notes and formed the basis for the analysis in this study. The co-researchers were instructed to submit only fully anonymised material, covering up all potential personal identifying information regarding the person posting. The focus of this study was co-researchers' motives, whereas the qualitative analysis of the social media content retrieved will be described elsewhere. Examples of sources from which data were extracted include Facebook, Twitter, Instagram, TikTok, SnapChat, YouTube and Reddit, but adolescents were free to select any social media they used. A time frame of 2 weeks was given when the co-researchers should explore their social media for content between October and December 2020 and collect the information required for the study.

2.3 | Analysis

Manifest content analysis was used to code the motives for the material chosen, as described by Graneheim and Lundman.¹⁴ The field notes from the co-researcher adolescents were read repeatedly to get an overview of the entire material. Thereafter, the motives were divided into meaning units. Codes were then assigned to the meaning units, capturing the motive for the social media material chosen. Codes were then compared and sorted based on similarities and grouped into categories and sub-categories. All three authors discussed and revised the categories and sub-categories. The latent content was then formulated into one overall theme. Thereafter, two of the authors (FL and MT) coded approximately 50 codes to reach a consensus. All three authors were involved in the discussion to develop the codes, categories and sub-categories.

2.4 | Assent and consent procedures and research ethics

The adolescents who carried out the data collection in this study were considered co-researchers and not study subjects, and no sensitive personal information about them was collected. The fact that the co-researchers were not study participants means their work in the study does not fall under the Swedish Ethical Review Act. However, an ethics application was prepared and approved for accessing data posted by adolescents on Internet forums and social media, in general, during the pandemic [Dr 2020-05096]. Sweden has specific regulations regarding youth participation in the workforce. These regulations were complied with as follows: Written information on the co-researcher role was developed for adolescents aged 13–19. An information letter about the project, work tasks, safety issues, timeframe and remuneration was sent to caregivers for adolescents <18 by e-mail. Adolescents aged 15 or younger were also asked to provide written permission from both caregivers to enable their workforce participation, in accordance with Swedish law. Informed consent from the adolescents who were hired as

co-researchers was not collected since they were not study subjects. However, the researchers asked them to confirm they were willing to take part as co-researchers in the study. Each adolescent also had a designated contact person among the authors, as stipulated by workforce regulations.

3 | RESULTS

In total, 23 adolescents from five different regions, including Southern, Central and Northern Sweden, were hired as co-researchers. Data were collected from 11 different social media platforms (Table 1). Results from the content analysis of co-researchers' field notes regarding their selection motives revealed four categories with eight sub-categories and an overarching theme, summarised in Table 2 and described in detail below.

3.1 | Keeping track of the 'Talk of the Town'

This category describes motives relating to choosing text or images based on what adolescents perceived as commonly occurring topics in their social media flow. The two sub-categories were Opinions and reactions, along with Debate and discussion.

3.1.1 | Opinions and reactions

The co-researchers stated that there have been many opinions and reactions in social media related to COVID-19, and they wanted to raise awareness among adults that adolescents have an opinion that they want to share. This related to topics such as distance learning, pandemic restrictions and their consequences, whether to trust the vaccine, and how to handle scepticism regarding to COVID-19.

TABLE 1 Illustration of the social media from which the co-researchers collected the material

Social media platform	Number of co-researchers who collected material from the social media platform
TikTok	15
Instagram	14
Snapchat	12
YouTube	9
Twitter	2
Discord	2
Facebook	2
8 Pages (in Swedish: 8 pages)	2
Reddit	1
Tellonym	1
BRIS	1

TABLE 2 Overview of the theme, categories and sub-categories for adolescents' reasons to select material from their social media platforms for the purposes of this study

Social media is an important tool for adolescent's communication and information exchange during COVID-19				
Category	1. Talk of the town	2. Recognition of personally relevant topics	3. Adolescents as information consumers	4. Social media as a means for expressing feelings, advice and concerns
Sub-categories	Opinions and reactions Debate and discussion	Recognition and agreement Calling attention to a specific topic	The need for trustworthy information Information can be both too little and too much	Concerns regarding the future Showing support to others
Codes	Opinions on travelling Opinions on distance schooling Debate regarding the Swedish Corona-strategy Discussions on whether to take the vaccine or not	Recognising the need for socialising with friends and family Recognition of the need for daily routines Calling attention to the fact that it is common to feel sad and long for normal life again Addressing that people have stopped hugging and changed their social behaviour	Children also care about Corona Adolescents require trustworthy knowledge about the virus Complicated about what to believe Lack of information generates stress	Concerns about the future; no one knows when things will be ok again Celebrities who demonstrate responsible judgement and behaviour are appreciated Healthcare staff are struggling and should earn more

The co-researchers also selected messages where adolescents demonstrated strong reactions to non-compliance with COVID-19 regulations.

Adolescents react when others do not follow restrictions: it just messes everything up for everyone else.

3.1.2 | Debate and discussion

The motives for the chosen material demonstrated that social media is used frequently as a forum for debate and discussion. Results also illustrated the ambiguity among adolescents, in relation to the control measures for COVID-19.

Adolescents do take responsibility, but some do not follow restrictions.

3.2 | Recognition of personally relevant topics

This category described the co-researchers' motives relating to choosing text or images based on subjects that relate to their own feelings and experiences. The category had two sub-categories: *Recognition and agreement* and *Calling attention to a specific topic*.

3.2.1 | Recognition and agreement

The co-researchers stated they recognised specific topics that related to their feelings and experiences. They did not necessarily have an opinion or share the sentiment but thought the subjects themselves were of interest to them personally. A major topic that echoed among the adolescents was the fear and worry that a close family member or relative could get sick from COVID-19 or lose their employment. Other examples could be recognising the uncertainty related to whether the vaccine has an actual effect, feelings of shock related to the fast spread of the virus and consequences of distance learning.

This is what the entire class talks about, really! Many think that it would be ok to have distance learning, but I think it is important to be aware that it can be very hard on your mental health; many people don't understand that.

A recurrent motive for the chosen material was the role of influencers on social media.

Several people (influencers) have a substantial impact on the younger generation and are not well up to date on the COVID-19 situation and hence, do not follow the restrictions, which can be problematic.

3.2.2 | Calling attention to a specific topic

This sub-category refers to the co-researchers' motives to call attention to specific COVID-19 related topics, which they think should be addressed in the ongoing debate in Sweden.

I and many others with me want to aim for good grades. Feels hard to get lower grades because of distance learning, and that there is nothing you can do about it!

Results also illustrate the frustration that the adult community or opinions in media convey about adolescents, in general, not complying with current pandemic restrictions.

There is this talk that no one does what they should, even though there are people who actually follow the given recommendations. All adolescents are put under one roof.

3.3 | Adolescents as information consumers

This category describes the co-researchers' motives relating to text or images that describe adolescents' information needs and related challenges. The category has two sub-categories: *The need for trustworthy information* and *Information can be both too little and too much*.

3.3.1 | The need for trustworthy information

Co-researchers wanted to highlight the need for knowledge that can be trusted. Confusion around what information, regarding, for example, societal restrictions, can be considered reliable, created worry and frustration. The co-researchers described the adolescents' need for adequate information in their motives.

The Internet is filled with opinions and advice that are affected by ignorance, which leads to uncertainty in young people who instead choose to distance themselves and thus live in uncertainty.

Disparate information regarding school closures also caused confusion, and students' concerns and information needs regarding decisions about online or onsite learning were highlighted.

3.3.2 | Information can be both too little and too much

Lack of adequate information was described as causing stress, confusion and fear exacerbated by disinformation or 'fake news' that flourishes on social media platforms.

We teenagers think a lot about consequences. There are many consequences related to a virus, and if we don't get sufficient knowledge, we tend to overthink things.

Results illustrated uncertainties related to the vaccine and a struggle to understand what information was relevant and trustworthy enough on which to base decisions.

Co-researchers illustrated that adolescents tend to be accused of not being up to date with information regarding COVID-19, but that, in fact, it might be difficult to find the information that adults want them to have.

Many think that we teenagers know too little, but when do we get information? How do we get this information? This causes confusion and stress since we don't have the information, and adults at school can't provide us with answers. This causes stress in all of us in one way or another.

3.3.3 | Social media as a means of expressing feelings, advice and concerns

Motives for the chosen social media material illustrated that social media platforms are frequently used to express feelings and advice related to COVID-19. This category is divided into the sub-categories: *Concerns regarding the future* and *Showing support to others*.

3.3.4 | Concerns regarding the future

Social media was used as a forum for expressing concerns related to the pandemic. The co-researchers attributed their choice of such material to the relevance of this kind of content in the minds of many adolescents during the pandemic.

Another common motive was to illustrate more specifically that worrying about the future is common, especially among high school graduates.

When you are at the age of 17–18, you think a lot about the future, but what will it be like after the pandemic? A lot of worry is related to education and work experience; for example, it is more difficult to get a job now – which makes it even harder to find a job later, when you lack work experience.

3.3.5 | Showing support for others

Genuine empathy for the people working hard within the health- and welfare system, caring for those affected by COVID-19, was evident in the results. Co-researchers selected content that revealed,

for example, how hospital staff and their entire family had been affected when family members had to work extra hours due to the workload caused by COVID-19. Another aspect of support was illustrated by the motive of paying attention to the financial situation for hospital staff.

I want to highlight that I have seen many who think that hospital staff have way too low salaries, given the extra hard work they are doing during the pandemic.

In addition, co-researchers stressed that it was wrong to attend parties when healthcare services could barely cope with the high number of sick people in Intensive Care Units.

Showing support for others was also apparent in selecting content relating to feelings of guilt for spreading the virus, for example, within one's own family.

Many people have family or close family members who are at risk, and if one spreads the virus to this person, one would feel guilty. However, I don't think that you should be blamed for this.

In motivating their selection of material, co-researchers also emphasised the need to show support to adolescents who themselves have been affected by Covid-19.

I chose the text, since I think it is very important to recognise those adolescents who have tested positive and have a family member or person close to them who they care about.

4 | DISCUSSION

This study aimed to test the method for engaging co-researcher adolescents in data collection and explore stated motives for their selection of social media material related to COVID-19. The co-researchers understood and performed the task of data collection well, providing insight into the social media exchanges of adolescents during the pandemic. An overarching theme for the motive of selection was: Social media is an important tool for adolescents' communication and information exchange during COVID-19.

4.1 | The salience of social media for adolescents in times of crises

Adolescents' field notes illustrated social media's salience in adolescents' sensemaking and addressing their health communication needs during times of societal crises. This is in accordance with the 2021 report from the Swedish Internet Foundation, stating that 95% of all Internet users 8 years of age and older use social media.¹⁵

Social media was an important way for adolescents to keep up to date with the "talk of the town", on what was being debated

and discussed. Based on this, co-researchers chose topics personally relevant to them and selected ongoing online discussions as a way to keep informed on what goes on, without necessarily agreeing with one or the other side, thus maintaining their roles as impartial co-researchers. Despite their essentially unlimited access to information online, results from this study highlighted adolescents' need for information that was clear and trustworthy, as well as access to relevant facts about their local circumstances. Interestingly, several co-researchers pointed out the importance of 'influencers' and their responsibility, given they have many young followers, to convey adequate information and help prevent disinformation.

Information overload was just as much of a problem as too little information; co-researchers cited adolescents describing the anxiety and worry that too much, inadequate, or skewed information could provoke. This is congruent with a recent review, showing that news consumption through social media was associated with worse mental health of adolescents during the pandemic, more so than news from traditional media sources.¹⁶

As previously observed in the literature, social media can be an important source of social support and identity formation, especially for marginalised adolescents,¹⁷ even if many adverse effects on mental health have also been highlighted when intense social media use develops into problematic use.¹⁸ Co-researcher's motives for selecting certain content revealed the purposes of expressing feelings, concerns and social support to others, such as healthcare staff or peers affected by COVID-19. A salient topic discussed in terms of identity was the perception that adults falsely accused young people of disrespecting restrictions and acting selfishly. This was strongly rejected, and co-researchers selected a number of social media posts proving the contrary, namely that adolescents were indeed concerned, compliant and condemned peers for not obeying restriction rules. Co-researchers expressed a wish for more understanding and consideration of the heterogeneity of adolescents' attitudes and compliance by adults.

In sum, the co-researchers shed light on the ongoing discourse on and salience of social media for young people during the pandemic. Their guidance helped us understand what adolescents discuss; specifically, it shed light on their motives for and expectations of social media in times of crises.

4.2 | Co-producing knowledge with adolescents

In a modern society, it is important that all sorts of knowledge be considered valid; therefore, specific efforts need to be made by the research community to bring forward voices otherwise unheard.⁶ In addition, adolescents should be consulted when addressing matters of importance to them in line with the Convention on the Rights of the Child.⁷ Listening to adolescents' voices during a societal crisis is necessary to tailor and communicate local and national health information and related recommendations or regulations. Our results show the need to consider

social media as a central and salient venue to reach adolescents with health information.

4.3 | Methodological considerations

The selection of co-researchers included adolescents with various backgrounds, providing access to potentially different social media practices and different motives for the choice of social media material. This could be considered as a major strength of the study, along with the participatory design. However, some limitations should be considered. The adolescents who participated in collecting data cannot be assumed to be representative of adolescents in general. We did not collect any sensitive personal data on their health/potential disabilities, ethnicity or parental educational background. Thus, we cannot draw any conclusions in terms of their representativeness or how their circumstances might have influenced their social media routines and motives for choosing material. Adolescent co-researchers were generally well motivated and eager to engage in data collection. They also required access to a computer or mobile phone and Internet connection, which could pose challenges to highly marginalised groups.

5 | CONCLUSION

Including adolescents as co-researchers was successful and is a promising model for data collection, particularly in research that relates to matters of interest for adolescents themselves. Social media was important for adolescents to stay up-to-date with the ongoing societal debate at the time and provided social support. Trustworthy and relevant information was requested to avoid both lack, and overload, of information. Social media should be considered an important tool in reaching out to adolescents during a societal crisis. Furthermore, adolescents should be involved in tailoring crisis information and related decrees for their target group. Social media outlets for such information should also support and encourage expressions of social support.

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CONFLICT OF INTEREST

The authors have no conflicts of interest to declare.

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