# JCOM

# Engaging young people in science communication about mental health during COVID-19

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**Abstract**    Many young people struggle with their mental health and the COVID-19 pandemic compounded these challenges. However, young people are rarely involved in research and communication about causes and coping strategies. We used an online game as a conversation starter and co-created a list of coping strategies with young people to apply the dialogue model of science communication and facilitate social conversation about mental health during COVID-19. The young people found the involvement was valuable as it led to self-reflection, social reflection with peers and an experience of recognition and contribution. We discuss challenges and urge researchers to explore ways for open dialogue and co-creation as strategic and contributing parts of the research process.

**Introduction**    Many young people suffered mental health problems during the COVID-19 pandemic lockdowns as their daily lives were radically changed [Singh et al., 2020]. They had to stay at home and were excluded from normal social activities. Danish media coverage and the public debate focused intensely on the behavior and wellbeing of young people during the pandemic. Initially, coverage was negative and emphasized the poor and irresponsible behavior of young people who did not comply with the official COVID-19 regulations. Later, coverage shifted to the increase in mental health issues among young people during the lockdown [Katznelson, 2021].

To some extent, the COVID-19 pandemic reinforced existing challenges related to child and adolescent mental health and wellbeing. Prior to COVID-19, existing literature found high levels of mental health challenges such as self-reported

loneliness, stress, negative emotions, insufficient sleep, headaches, stomachaches, and an increase in psychiatric diagnoses [Jeppesen et al., 2020; Rasmussen et al., 2019]. Reasons for this accumulation of challenges are complex, but some explanations include increasing performance culture, a demanding education system, use of social media [Krogh, 2023], digitalization [Ottosen & Andreasen, 2020], and individualization [Niclasen, Lund & Obel, 2016]. Despite having first-hand experience with mental health challenges, young people are often excluded from actively contributing to research aimed at finding solutions for their own issues. However, there is a pressing need to involve young people in research projects through direct engagement and co-creation of knowledge, specifically focused on their mental health challenges and potential solutions to improve their mental health.

The field of science communication has traditionally been concerned with the dissemination of scientific knowledge. The widespread models for science communication, the transmission model [Shannon, 1948] and the deficit model [Akin, 2017], are based on an understanding of communication as a one-way transmission of information from scientific experts to the public. It is often associated with the goal of improving public knowledge of scientific facts and changing attitudes toward science [Allum, Sturgis, Tabourazi & Brunton-Smith, 2008]. The model has been criticized for being too simple, ignoring the complex nature of communication, and excluding important factors such as context and culture [Blue, 2019; Carey, 2009]. People rarely make decisions or change their behavior based solely on scientific information; they are usually influenced by the narratives of others and their own goals, needs, knowledge, skills, values, and beliefs [Morris et al., 2019]. Consequently, researchers have advocated for more dialogue and engagement of the public in science communication and emphasize the need for other models to complement the deficit model [Bucchi & Trench, 2021; Campos, 2022; Carr, Grand & Sullivan, 2017; National Academies of Sciences, Engineering, and Medicine, 2017]. New models such as the "dialogue model" and "participation model" [Giardullo et al., 2023; Metcalfe, 2019; Trench, 2008] propose different approaches to engage the public more actively in research and science communication. Among these are models of co-creation and co-production focusing on joint knowledge production between citizens and researchers trying to achieve more equal and in-depth public participation [de Koning, Crul & Wever, 2016; Greenhalgh, Jackson, Shaw & Janamian, 2016; Rock, McGuire & Rogers, 2018; Senabre Hidalgo et al., 2021]. Also, in the area of science communication co-creation approaches are being used to co-create research but also co-create science communication itself [Achiam, Kupper & Roche, 2022].

However, despite the increased focus on more integrative research methods, the deficit model continues to dominate science communication practice due to its simplicity, intuitiveness, and ease of use [National Academies of Sciences, Engineering, and Medicine, 2017; Seethaler, Evans, Gere & Rajagopalan, 2019; Simis, Madden, Cacciatore & Yeo, 2016]. Additionally, the dialogue and participation models involves challenges of developing equal power relations between researchers and citizens [Dewa et al., 2021; Fløtten, Guerreiro, Simonelli, Solevåg & Aujoulat, 2021; Rock et al., 2018], balancing the degree and quality of participation in relation to outcome [Shirk et al., 2012] and using extra time for planning and following up [Fløtten et al., 2021].

In this study, we present our experience with engaging young people in science communication about mental health during the COVID-19 lockdown. The aim was to apply the dialogue model by using an online game, group discussions and a co-creation activity in a workshop and to explore the opportunities and challenges.

## Procedure and participants

### The workshop

On February 10th, 2021, we organized a three-hour online dialogue and co-creation workshop. The workshop program was divided in three parts: 1) playing the online game 'Corona Minister' and using it as a conversation starter, 2) discussing consequences of the lockdown for young people's wellbeing and 3) co-creating a list of coping strategies for young people to deal with a pandemic lockdown. The workshop began with one-hour presentations by researchers on mental health during the COVID-19 pandemic, computer modeling, and online research games, as well as an introduction to the online research game 'Corona Minister'.[1] The game was chosen as a conversation starter as it illustrates the development of a corona pandemic. We wanted to address the topic of the COVID-19 in a less personal way to get the dialogue started and hereafter to focus on participants own experiences and suggestions for coping strategies.
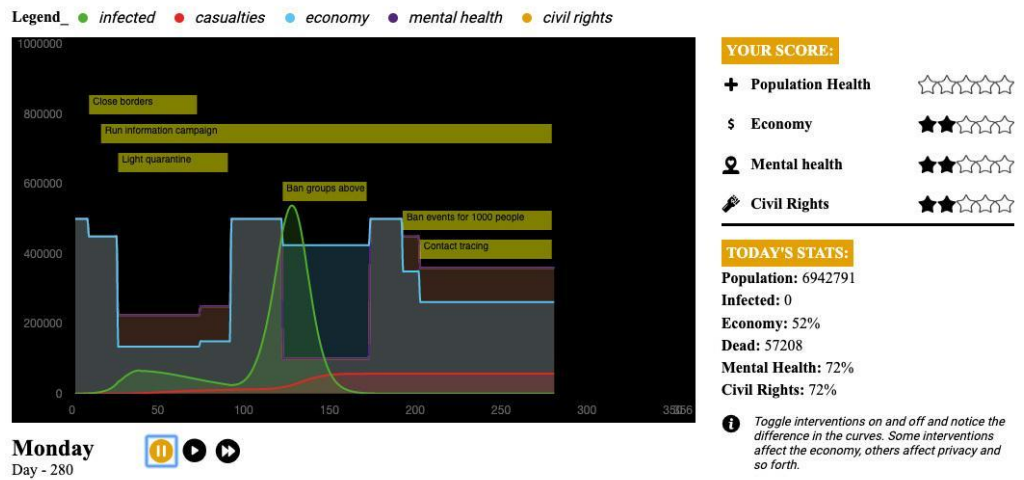
The 'Corona Minister' game illustrates the consequences of a pandemic on health, mental health, economy, and civil rights restrictions on the population (Figure 1). Players must choose one of these four aspects and optimize their game strategy to implement the restrictions in order to score the most points for their chosen priority. The game was developed by researchers at Aarhus University with the aim to initiate conversations and learning about the development of a pandemic as well as to collect big data and explore possibilities of supporting digital democracy. Participants had 30 minutes to play the game and were then asked to discuss their experiences and reflections.

The final part of the workshop focused on discussing the challenges posed by COVID-19 pandemic lockdown to young people themselves and co-create a list of coping strategies to inspire young people to deal with these challenges. Participants were divided in groups and had to document their input in a Miro board — an online collaborative whiteboard. To support a safe dialogue about the sensitive topic the groups were kept small (5–6 participants) and facilitated by a young facilitator who should secure open and equal discussions in the groups and help the dialogue get started. Adult researchers were not allowed to participate in the groups to prevent influencing or inhibiting the dialogue.

Prior to the group discussions, five themes were presented by the researchers regarding the changes that young people experienced during the first COVID-19 lockdowns. The themes were based on a previous survey of 150 young people from the Danish Academy of Talented Youth during the first lockdown in May 2020. The five themes identified were:

- *Social contact*: no ability to physically meet with friends and classmates, participate in larger communities or attend parties — but also less social pressure.

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[1]The online research game Corona Minister: https://www.scienceathome.org/games/corona-minister-game.
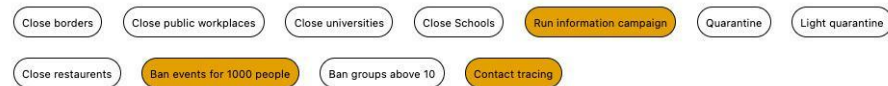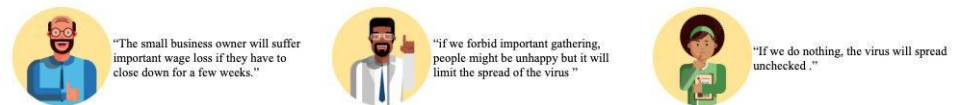
**Figure 1**. Visual illustration of the Corona Minister Game.

– *Online education*: attending school from home with challenges in communicating with teachers, classmates, motivation, and academic skills — but also with more freedom and independence.

– *Structure in daily life*: transitioning from a hectic life to one in which they spend most of their time alone at home was challenging for many — but also resulted in less stress.

– *Mental health*: negative emotions such as depression, loneliness, stress, isolation, and claustrophobia — but also being able to shift gears and get more sleep.

– *Leisure and hobbies*: more time to read books, be creative, nature walking, think about your life, and be with family.

### Participants

We included seventy young people aged 17–22, all current or former students from the Academy of Talented Youth (ATY), a two-year extracurricular academic program developed for talented high school students in Denmark. Participants

were recruited primarily by advertising the event on the ATY Facebook group and website. The Southern Denmark ATY unit also invited their cooperating high schools to share the event with their students.

### Young co-researchers and workshop facilitators

Five former ATY students, aged 18–20, volunteered to participate in the project as citizen co-researchers and contributed to workshop planning and implementation, data collection, data analysis, communication products for young people, publication writing, and dissemination of results. Co-researchers were recruited through the ATY director, who invited them to participate via email. Along with three student employees from Aarhus University and two student employees from ATY, they acted as facilitators of the group discussions during the workshop. All ten participated in facilitating and supporting open and safe dialogue in each group. In addition, their role was to observe, take notes, and write on a digital Miro board. The facilitators were convened for an introductory meeting a few days before the workshop and received written instructions as well. The importance of facilitating an open and safe dialogue in the breakout groups were stressed. Two weeks after the workshop, facilitators met with the researchers to evaluate the workshop.

## Data collection

### Observations

Observations were conducted by ten facilitators and one researcher. The goal was to study the interactions between participants. A semi-structured observation guide was developed for the observations, that focused on content, learning outcomes, topics discussed, and the overall involvement process. In addition, facilitators documented observations in an online Miro board as the groups developed their list of challenges and coping strategies. All participants were encouraged to use the post-it notes in the Miro board in the group sessions. Each facilitator was responsible for writing the groups responses in the Miro board to secure a joint output for all the groups. After the workshop the facilitators were encouraged to make notes in the observation guide or in the Miro board about how they had experienced the group sessions.

### Questionnaires

Following the workshop, participants ($n = 70$) were emailed an online questionnaire. Three follow-up reminders were sent to non-respondents after one week ($n = 60$), two weeks ($n = 49$), and three weeks ($n = 42$). The goal was to obtain feedback about the workshop and the participation process. The questionnaire contained 32 open-ended and closed-ended questions. 37 answered the entire questionnaire, and 46 participants answered some of the questions.

### Interviews

We conducted 12 online interviews with participants ($n = 6$), facilitators ($n = 4$), and researchers ($n = 2$). The interviews were based on a semi-structured interview

guide, that targeted each of the informant groups, and aimed to gain a deeper understanding of the workshop experience and learning outcomes. The participants were recruited through the ATY leader, and facilitators and researchers were contacted directly by the young co-researchers.

### Analytical procedure

All written material was analyzed using the qualitative data analysis strategy of meaning condensation, with the goal of identifying meaningful units to detect trends and phenomena in the data [Kvale & Brinkmann, 2015]. We used NVivo Release 1.5 qualitative data analysis software to systematize and code the data and structure them into the identified units and themes (Supplementary materials). For example, the code "Involvement of young people" referred to all the descriptions of how the informants experienced the involvement of the young people in the workshop and how they influenced the dialogue and co-creation activities. Based on the participants descriptions of their experiences with the engagement at the workshop it was possible to identify three trends of value creation: self-reflection, social reflection and recognition and contribution.

### Ethical considerations

As the students were all enrolled in the academic talent development program, they agreed to engage with written consent in several research projects. For minors under the age of 18, their parents agreed with written consent. Oral consent was secured prior to the interviews as we asked for permission to record, transcribe, and use the interviews. All data were treated anonymously.

### Communication products and evaluation

As a result of the workshop a final list of advice for young people was aggregated by the young citizen co-researchers from the input in the Miro board (Appendix 3). Based on this a video with animations was developed as well and a dialogue tool with advice and questions for discussion targeted at schools (Figure 4). The dialogue tool and video were tested in two high school classes and written feedback was given by the teacher. We had planned to test the communication products in a larger population but due to the reopening of Danish society, this was postponed and eventually cancelled as no further lockdowns were implemented.

## Results

### The Corona Minister game: a fun and simple conversation starter

The use of the online game 'Corona Minister' was described by the participants as a fun and interesting activity at the workshop. According to interviews and questionnaire the participants found that the game provided them with new insights to difficulties and dilemmas of decision-making during a pandemic and served well as a conversion starter as the game facilitated dialogue in the group sessions after the participants had played the game. Participants described it as positive that the game focused not only on the health-related numbers of infections and deaths but also depicted the impact on public mental health, the economy, and civil rights.

"Topics of conversations arise that wouldn't normally arise." (I5, interview)

"You get the feeling that you are sitting in the engine room if it makes sense. Well because there are so many decisions that we are not aware of, and their consequences. So, I think that it was rather interesting to see, to get a little taste of how it could be, or how they calculate these things with models. I thought that was really interesting." (I2, interview)

The level of entertainment of the game was emphasized as important by the participants. The young people thought it was interesting to watch the visual representation of the development of the pandemic, to play with possible restrictions and decision-making, and to feel part of the political "engine room". Feedback from the questionnaire suggest that games for science communication is attractive for young people especially due to the entertainment value, interactivity and usability (Figure 2). This was elaborated on in interviews, as games were suggested to make research and science communication more appetizing and interactive. In the interviews with researchers, they emphasized the potential of using games for engagement of young people in research, support digital democracy as well as a new way to collect large amounts of data in a more interesting way for participants than questionnaires or lab studies.
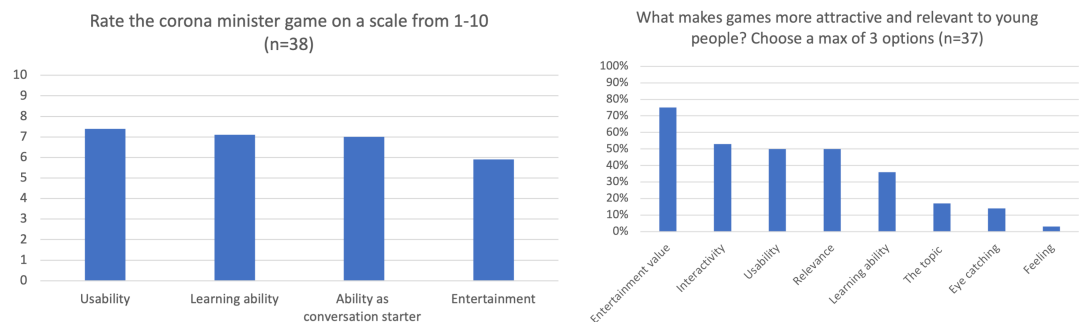


**Figure 2**. Questionnaire survey asking the participants to give feedback on the Corona Minister game and games in general for science communication.

The young people suggested several improvements to make the Corona Minister game more entertaining. They would have liked more nuances as the participants found it simple, unrealistic and fairly easy to play. They suggested including more complex variables such as seasons, a second wave of the pandemic, mutations, and the ability of the population to adhere to restrictions over time, as well as more transparency about the assumptions the game was based on. Additionally, they thought a more specific focus on a human perspective and the influence on real people's lives could improve the experience of playing the game.

### The workshop dialogue: a safe space for reflection, recognition and contribution

The young participants found the topic of mental health during the COVID-19 pandemic relevant for their lives and appreciated the opportunity to participate in the workshop. According to the questionnaire the participants could relate to the five themes (social contact, online education, the structure of daily life, mental health, and leisure and hobbies) in their own life. Nearly all (36 of 37) of the respondents replied that they could relate to the themes "to a high degree"

(13 respondents) or "to some degree" (23 respondents). This was confirmed and further elaborated on in the open-ended replies in the questionnaire and interviews.

> "I think that I have experienced a lot of the same challenges and positive changes, among others to get more time for self-reflection but also clearly to miss social interactions." (I41, questionnaire)

Based on the descriptions of the participants experiences with the involvement at the workshop we identified three main themes of value creation:

- *Self-reflection*: the workshop provided the young people with an opportunity to reflect on their own lives during the COVID-19 pandemic lockdowns and how they could make changes in their lives to improve their wellbeing and mental health.

  > "It has occurred to me how much just a little structure possibly can do in one's everyday life, to make you feel better. In addition, I have also become more aware that you may lack a break during your day, where you just get a break from school and other things." (I27, questionnaire)

- *Social reflection*: the participants highlighted the value of sharing their experiences with peers at the workshop and learn about other young people's experiences with the lockdown as well. They described a sense of relief when they realized that other young people had feelings similar to their own. Additionally, they were inspired by coping strategies shared or co-created in the workshop by and with peers.

  > "It was a relief that it's not just something that goes on in your own head, and that you are not just yourself, who's not quite right and feels right." (I4, interview)

  One participant described the workshop in an interview as a "safe forum" for communication where they could contribute and have an open discussion.

  > "It was also a setting, where there was safety to contribute with all that you had to say, even though it was a little different from what others said. It was a very safe forum." (I5, interview)

  At the same time some participants and facilitators noted, that a few participants were more dominant than others and stressed the importance of letting everyone have their say. At the feedback workshop for the facilitators they emphasized that their preparation for this could have been better. This should include more time for discussions among the facilitators about how to support a safe and open dialogue in group session.

- *Recognition and contribution*: the young people experienced a feeling of being heard in contrast to being "talked to" or "talked about" at the workshop. Additionally, they felt that their perspective on youth was unique and that they could contribute with something else than the adult researchers.

  > "I think that there are few things which we young people have an influence on. It is as if grown-ups can make decisions, they will do it even if it concerns us young people and really is only about us. That is why I think this was a really good and fantastic opportunity." (I61, questionnaire)

"Well, it's like there are a lot of people who are busy talking about young people breaking rules, instead of talking about why they do it, or talking to them about it. In reality I think there are very few who actually break the rules. So, you get a little annoyed at the headlines about how many young people are doing this now. In that way, I actually think it was really nice that it became like 'now we talk to you, about your experiences' and not 'we talk to you, about how we have experienced this'. I think it's really important that research in the youth field continues to do that, or even perhaps begins to do so". (I1, interview)

The empirical material showed that participants appreciated the opportunity to be part of the dialogue and emphasized the importance of involving young people both in the discussion and formulation of coping strategies. Most participants (44 of 46) responded that young people should be involved in such research, 30 replied "to a high degree" and 14 "to some degree" in the questionnaire. In interviews they explained that young people are more likely to see eye-to-eye with other young people and therefore have a better understanding about young people's challenges.

"Someone from the outside can easily see our troubles and can be like this: 'Here is the solution for that', but you are more able to take it into account when it is other young people who have it like this, and we know the problems better, so we know what it is about." (I5, interview).

*Participants' experience of co-creating coping strategies*

From the young people's responses to the workshop is was evident that is was both exciting and difficult for them to co-create the list of advice for coping strategies for peers (Figure 3). This was in line with the facilitator's descriptions of the event in interviews. They noted that the participants encountered challenges in transitioning from personal accounts of their own experiences and coping mechanisms during the lockdown period to developing broader, more generalized coping strategies that could be shared with others. Participants explained in the interviews that they felt unsure if what worked for them would work for others. In addition, they highlighted that they did not feel representative of all Danish youth emphasizing that ATY students are a special group of young people who have additional resources and academic skills compared to average youth.
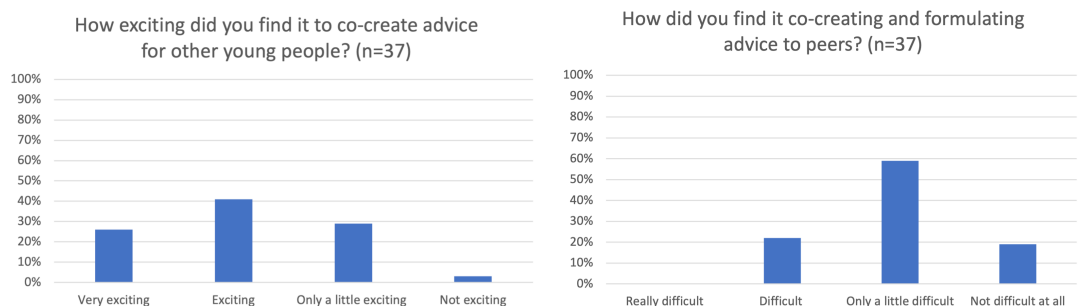


**Figure 3**. Questionnaire survey asking the participants about their experience of the co-creation activity at the workshop creating a list of coping-strategies for dealing with a lock-down.

"(. . .) you really use your own personal coping strategies and that will of course work for others as well, but sometimes it is difficult to presume, that what works for me, will for sure work for others as well." (I6, interview)

*Communication products and evaluation*

How to communicate the list of advice to peers was also discussed in the group sessions and documented in the Miro board, the questionnaire and interviews. This resulted in the production of video with animations and a dialogue tool for school classes centered on the list of young people's advice (Figure 4). Participants expressed that they felt that the discussion with peers was more important than the final list of advice. Therefore, they suggested that it was crucial to activate and engage young people in discussions about the coping strategies in their own lives rather than just communicating a list for one-way dissemination through various media.

"I think that the discussion is the one where you get the bigger outcome. Where you get to say something, instead of just being told. Even though the advice is good and useful too, I don't think it sticks as well." (I2, interview)
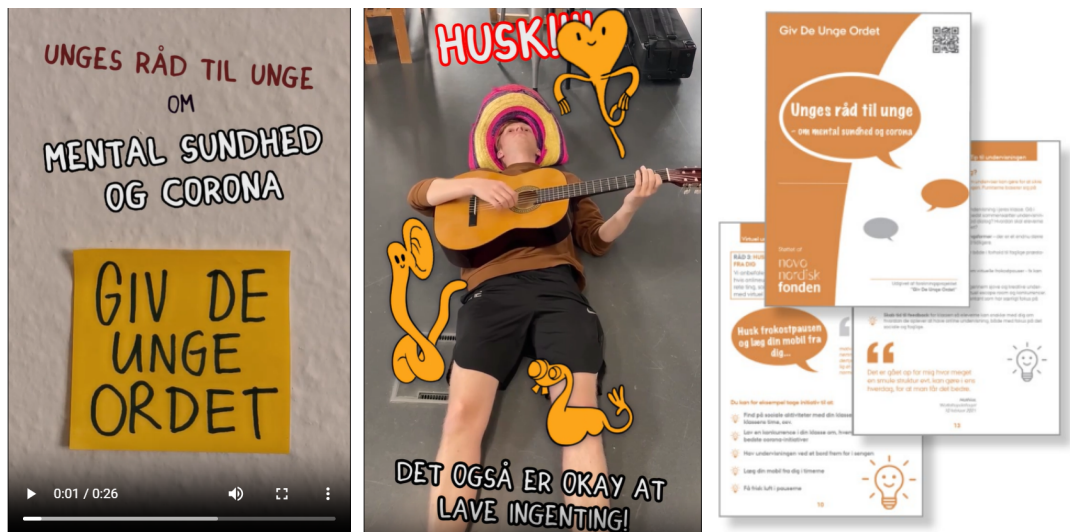


**Figure 4**. Video with animation and dialogue tool for schools (in Danish) developed after the workshop based on the list of coping strategies and other input from participants. Products were developed in collaboration with the young citizen co-researchers.

To disseminate information, participants had multiple suggestions such as videos, social media, dialogue with peers and teachers at school, and formal digital channels (Figure 5). Notes in Miro indicated that communication should be fun, brief, and easy to understand and that it was important for young people to communicate with peers. To some degree there were conflicting opinions about the use of social media. Some felt that communication via social media and mass emails in school were neglected because of the "information fatigue" about the COVID-19 pandemic. Others thought that social media was an easy way to communicate information.

**How do you think the various advice for young people is best communicated? Choose a Max of 2 options (n=41)**

**Where would you personally most like to hear/read about advice from young people to young people? Choose a Max of 3 options (n=41)**
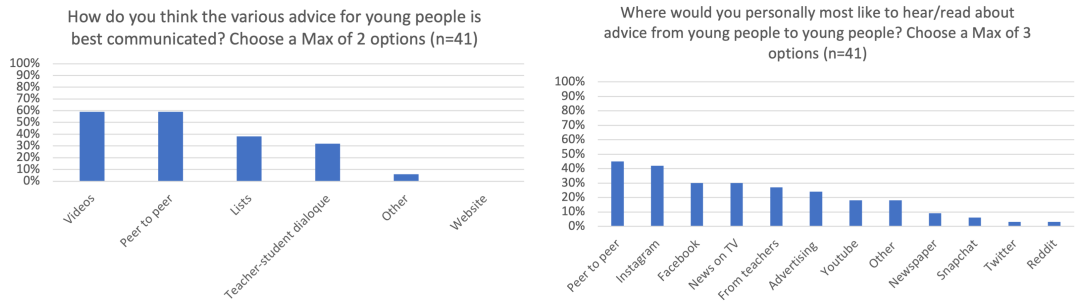
**Figure 5**. Questionnaire survey asking the participants about where a list of advice for young people should be communicated.

The pilot-test of the dialogue tool and video in two high school classes indicated that the students found the themes and advice recognizable and relevant. The teacher added that for many of her students it was in fact the first time that they had the opportunity to reflect and discuss how the lockdowns influenced their lives.

## Discussion

Our study showed that engaging young people in two-way science communication and a co-creation acitivity involves possibilities and challenges for both young participants and researchers. We found that an online research game can be used as a fun and easy tool to initiate communication and apply the dialogue model of science communication with young people. Gamification has increasingly been used within the education community to combine education with entertainment [Karagiorgas & Niemann, 2017] or in 'serious games' for serious purposes such as mental health intervations [Fleming et al., 2017]. Our study of using the Corona Minister game as a conversation starter indicates a potential for using gamification in science communication underlining the importance of entertainment although this needs further investigation.

The social setting at the workshop was highlighted by the young people as positive for their experiences and central to their suggestions for communicating with peers. This aligns with what Bucchi and Trench [2021] described as the potential of science communication as a "social conversation around science". They pointed to the growing movement of science communication initiatives that focus not only on presenting and disseminating the established knowledge of science to the public but also on developing new knowledge and meaning through social conversations. In this matter Standerfer, Loker and Lochmann [2022] emphasize science communication as being acknowledging and valuing of the knowledge being created by participants. Feedback from some of the participants and facilitators highlight that it is important to be very aware about how to support an open and safe dialogue and prevent that some participants dominate the dialogue too much. The facilitators would have liked better instructions for facilitating the dialogue and a possibility to discuss it before the workshop to align expectations. Additionally, they emphasized that they would have like more time for the group sessions at the workshop as it takes time to get the dialogue started.

For the researchers the communication with young people provided data on youth mental health research during COVID-19, input for communication products

aimed at young people, and feedback on the Corona Minister game as a conversation starter. We faced several challenges related to participant diversity, evaluation, and developing an engagement strategy. The need for diversity among participants was emphasized by the young participants themselves, who indicated that it was difficult to develop the list of coping strategies because they did not feel representative of Danish youth. They were recruited through the ATY network and thus represented a special group of young people with additional resources and academic skills. This likely influenced both the motivation of the participants and the outcomes of the co-creation workshop. The lack of diversity among participants in public engagement activities is a well-known challenge [Akin, 2017; Scheufele, 2011]. Still, there can be important lessons to be learned from a group of high achieving students as they represent some of the Danish youth and might have good experiences with finding positive coping strategies to deal with the lockdown. Especially if it followed up by test and evaluation on a larger population for validation. We planned to test the knowledge and products in a larger population after the workshop but due to the reopening of the Danish society, this was not possible, except for a smaller group of students in high school.

The power imbalance between researchers and young people [Dewa et al., 2021; Fløtten et al., 2021] and the degree and quality of participation [Shirk et al., 2012] are important as well when trying to apply dialogue and participation models in research and science communication. We tried to address the power imbalance in the group session by using young facilitators and provide them with a private room for dialogue and the co-creation activity. Still, we (the researchers) arranged the workshop, defined the activities and invited the young people to be part of our event. Additionally, we used themes from a former survey to guide the dialogue and co-creation of a list of coping strategies as we thought it would help guide the dialogue. But this might as well have locked the dialogue and creativity of the activity. Moreover, the co-creation activity was a standalone activity and was challenged by the online setting and it being an after school-event in the late afternoon. For more equal dialogue and co-creation, we could have invited a group of young people to help us design the engagement activity and arrange more follow-up events.

Our experience with involving young people in our research demonstrated that the process can be time-consuming, particularly when working within the constraints of lockdowns. The extensive time required to engage citizens in research must be taken into account when considering this approach [Dewa et al., 2021; Fløtten et al., 2021; Pavarini, Lorimer, Manzini, Goundrey-Smith & Singh, 2019; Campos, 2022]. Researchers need to be clear about how they facilitate and contribute to social discourse, while also being prepared to consider public perspective and use it in their research [Giardullo et al., 2023; Fischhoff & Scheufele, 2013]. Despite promising results with engagement activities such as science cafés [Mayhew & Hall, 2012] and consensus conferences [Mejlgaard, 2009], traditional formats aligning with deficit model-style communication represent a simpler approach to communicating science [Akin, 2017].

Nevertheless, we urge researchers to make strategic and deliberate choices about the engagement of young people in science communication. This also involves not considering two-way communication or participation as a goal in itself or an "add-on" but as a means to specific objectives closely connected to the aim of the

research project or science communication [Besley, Dudo, Yuan & Abi Ghannam, 2016].

**Implications for future practice**

Based on our experiences from this study, we compiled a list of recommendations to support future:

- Make a setting for social conversations among young people and provide them with new input for self-reflection and reflections with their peers (e.g., workshop, science café, exhibition, theater, or other events).

- Conversation starters like games or other media can be a simple way to initiate the discussion on a less personal level if a guide for discussion is provided.

- Use young people as facilitators to support a safe and equal dialogue. This includes a training workshop with instructions as well as discussions among facilitators about how to facilitate group dialogue.

- Co-creation activities can engage and provide young people with the opportunity to contribute to research and deliver concrete outputs.

- Diversity among the participants is important for the dialogue as well as the final results.

- Visual, short, and funny communication seems to be helpful when trying to reach young people.

- Prepare to use extra time to facilitate participant involvement, and document and implement the input in your research project and science communication.

**Conclusion**

The communication with young people about their mental health during the COVID-19 pandemic lockdowns resulted in value creation for both the young participants as well as the research project. We identified several challenges to be aware of when engaging and communicating with young people, including it being a time-consuming process, preparing facilitators to support an open and safe dialogue, needing focus on the evaluation of impact and securing diversity among participants. We offer some recommendations and hope that more researchers will join us in the venture of developing deliberate strategies and methods for applying the dialogue or participation model of science communication.

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**Supplementary material**    Available at https://doi.org/10.22323/2.23010801
Appendix 1: Qualitative codes from analysis of observations, questionnaire and interviews with workshop participants, facilitators, and researchers
Appendix 2: Observation guide and interview guide from interviews with workshop participants
Appendix 3: The list of advice co-created with the young people at the workshop focusing on how to cope with the COVID-19 pandemic lockdown