Abstract

Background

The reporting of climate change issues through social media can influence young people's mental health and engagement. However, there has been little research undertaken directly with young people in relation to social and digital media's reporting of climate change, and how this is experienced by young people.

Method

This study aimed to explore the interface between climate change and social media reporting for young people. A two-stage iterative approach to recruitment and data collection included an initial qualitative stage (N=28), consisting of open-ended questions about social media's reporting of climate change issues. The second stage (N=23) included further open-ended questions and 10 Likert-Scale questions. Overall, 51 young people 16-25-years-old opted to take part (M=11; F=40). Descriptive statistics and an inductive data-driven content analysis are reported.

Results

Overall, 95% of participants reported they had the personal skills to cope with climate change reporting on social media. Most participants stated that coverage on the climate increased 'climate change anxiety' but not their overall mental health difficulties. A four-stage experiential process of observing social media's reporting of climate change, feeling emotionally affected by the reporting, critically apprising the content, and feeling motivated to engage in climate change activism emerged from the content analysis. Participants discussed experiences of digital media, rather than solely social media, in their accounts.

Conclusions

Participants recommended changes to climate change reporting and increasing access to education about climate change issues to reduce anxiety and enhance motivation for positive personal engagement. Involving young people in conversations and education about climate change were seen as protective factors for mental health and enablers for motivation. Motivation, agency and pathways for positive change were associated with hopefulness.

Keywords: Climate Change; Social Media; Climate Anxiety

What is known?

- Young people have been at the forefront of climate change activism but have been largely excluded from research.
- Young people's preferred social media platforms are mostly absent from the academic literature marginalising young people's perspectives on climate change.

What is new?

- Within our sample, young people reported to be relatively well equipped to cope with social media's reporting of climate change.
- We present a four-stage experiential engagement process that provides insights into *how* digital media's reporting of climate change affects young people and how they may respond to specific stimuli, such as imagery.

What is significant for clinical practice?

- Reducing blame, anxiety, feelings of helplessness and hopelessness were cited as important in making climate change coverage on digital media more effective.
- Positive stories and practical small things individuals could do were recognised as helpful.
- Providing young people with the skills to develop critical and evaluative thinking in relation to reporting can support perspective taking and meaning-focused coping.
- Nurturing agency and supporting young people in their chosen pathways for improving climate outcomes can foster hopefulness, mediating distress.

Young People's Engagement with Climate Change Issues Through Digital Media: A Content Analysis

Climate change issues are frequently reported through a range of media platforms. Terms such as 'climate anxiety' and 'eco-anxiety' are employed across Western cultures (American Psychological Association, 2020), with 'uncertainty, unpredictability, and uncontrollability' key factors underpinning distress (Panu, 2020). A recent YouGov poll commissioned by Friends of the Earth (2020) reported 70% of 18-24-year-olds are increasingly worried about climate change and current crises cause rational anxieties (Wang, Leviston, Hurlstone, Lawrence, & Walker, 2018) and drive a desire to connect with other like-minded people online.

Digital media is content published online, which can include websites, blogs, and social media that host a variety of multimedia content; including text, pictures, videography, audio, and microblogs. Social media provides a digital space where people can create, share and actively engage with content within social networks. Social media provides platforms for rapid and far-reaching information sharing, mobilisation, support and retort opportunities (Anderson, 2017). Limited empirical literature exists to inform our knowledge of how adolescents perceive social media and their experiences of engaging with it, even though most do (O'Reilly, et al., 2018). Up to 97% of adolescents use social media regularly (Woods & Scott, 2016), and social media is a powerful tool for forming social networks in youth (Lenhart, Smith, & Anderson, 2015). However, research with adolescents in the US has indicated young people with multiple social media accounts present with higher rates of depression and anxiety (Barry, et al., 2017). A recent systematic review connecting young people's mental health and social media identified links between social media use and depression, anxiety and wider psychological distress; concluding further qualitive and longitudinal research was needed (Keles, McCrae & Grealish, 2020) although much more research is needed in relation to the connection between mental health and social media use, especially amongst younger age groups.

Most young people have been exposed to climate change reporting through social media, although the more insidious effects of climate change may be less visible and tangible in day-to-day life for many young people currently. Social media can be a helpful tool to bring the abstract concept of climate change closer to individuals who have not yet been directly affected through 'personalizing and concretizing' (Anderson, 2017). Further, increasing psychological proximity between the concept and individual can enhance engagement with climate change issues (Spence, Poortinga, & Pidgeon, 2012). However, a closer and more personal connection to climate change issues can intensify the emotional reaction to climate change reporting because our emotions influence our cognitive processing. This is especially the case for "perception, attention, learning, memory, reasoning, and problem solving" (Tyng, Amin, Saad & Malik, 2017, p.1454). Social behaviours and commentaries on posts online also partially shape people's perceptions of content as comments on posts accumulate to gradually influence the social consensus (Lewandowsky, Cook, Fay, & Gignac, 2019). Consequently, social media platforms can create an environment where the abstract becomes personal and knowledge sharing becomes action motivating.

In the United Kingdom (UK) and many other countries around the world, young people have led social movements to prioritise climate change issues in policy (Marris, 2019; Han & Ahn, 2020), although they have been largely side-lined at political and policy levels (Ojala, 2015; Han & Ahn, 2020). A recent study exploring youth activism and strike action with young people on social media found that while information was spread widely, relatively little Tweet and microblog content focused on mobilisation (Boulianne, Lalancette & Ilkiw, 2020). A more effective approach to mobilisation appears to be sharing pictures of events, which can curate a visual document of discontent, instigating calls to action. Interestingly, the Twitter platform recently provided an opportunity for young people to tag world leaders in policy request communications worldwide, breaking down hierarchical and geographical barriers, and connecting young people to figures who have power to bring about change at policy level (Boulianne, et al., 2020).

Psychologists are well placed to recognise the psychosocial factors associated with climate change for young people and thus have a responsibility to be involved in solutions to arising issues (Clayton, 2020). A comprehensive review on social media communication on climate change (Pearce, Niederer, Özkula, & Sánchez, 2019) states we need more qualitative research and identifies that young people are currently excluded from the existing knowledge base because there are no studies that report on their preferred social media platforms, such as Instagram and Snapchat. Research from the Pew Research Centre indicates adolescents use YouTube (85%), Instagram (72%) and Snapchat (69%) the most, followed by Facebook (51%; 2018). The current study aimed to explore the interface between climate change and social media reporting for young people to inform understanding of young people's experiences to digital reporting of the issue.

Methods

Design

A survey design was adopted, which is commonly used and acceptable for young people (Parry, Djabaeva, & Varese, 2018; Stern, 2004). A predominantly qualitative design was employed to gather insights from young people to address the recognised gap in qualitative research with young people regarding climate change, mental health and digital media (Keles, McCrae & Grealish, 2020). To complement a qualitative data-driven content analysis, demographic and scaling data were collected over a two-stage process. Due to our interest in engagement with, rather than only observation of coverage, we focused on platforms with a microblogging function.

During stage one, open-ended qualitative questions were put to a self-selecting sample of young people (Supplementary file). Questions enquired as to the participants' experiences, thoughts and perceptions of social media reporting of climate change. SM and SP conducted separate preliminary analyses of this data, which informed the questions asked in the second stage. The second set of open-ended questions were developed, in addition to 10 Likert scale questions, to form an iterative process of inquiry led by the data due to the lack of qualitative research in this area previously. Participants for both stages were recruited

through university accounts on Twitter, which advertised the study and tweets were shared across university and external accounts. Participants then self-referred to the online study platform. The online survey was hosted by Qualtrics. Qualitative data from both stages of data collection were analysed using content analysis, with SP and JC conducting the analysis on stage two data. Ethical approval for the study was gained through a university Research Ethics Committee. Stage one took place April to August 2020, and stage two took place between December 2020 and January 2021.

Participants

Participants were invited to take part if they regularly used social media and were aged 16-25-years-old. Participants were required to read an information page about the research and complete a consent form prior to entering the study.

Qualitative Analytic Approach

Data-driven content analysis remains 'close to' to participants' communications (Allen, 2017), synthesising their messages to form the final analysis developed from coding and interpreting latent characteristics (Dieronitou, 2014). The data-driven content analysis required drawing codes inductively from the data (Kuckartz, 2019; Schreier, 2012), before interpreting the codes into categories. The six steps of this approach involved cleaning and preparing the qualitative data into an excel spreadsheet, undertaking an initial coding process and cross-checking codes across quotes, and developing categories from the codes (Figure 1). Final codes and resulting categories incorporated concepts from across the two stages of data collection. Through a process of developing text passages from the categories, emerging analytic themes were formed as critically discussed inductive subcategories. These data-driven categories, or analytic themes, were then finalized through discussion by the authors and tabulating codes, categories and analytic themes before being consolidated for reporting, guided by the principles in the trustworthiness checklist for qualitative content analysis (Elo, et al., 2014).

<Insert Figure 1. *Code and Category Mapping within Content Analysis>*

Results

Across both stages of data collection, 51 young people opted to take part (M=11; F=40; Table One), 28 in stage one and 23 in stage two; 52% (N=27) of participants reported they used social media for two-three hours per day and 48% (N=24) used social media for four or more hours per day. Participants in stage two in the age groups 16-18 and 19-22 reported using Snapchat most often, and those aged 22-25 used Instagram most frequently. Social Media was reported to be the most used method for accessing the news in general.

<Insert Table 1. *Demographic Characteristics of Participants>*

<**Insert Table 2.** *Ranking Table for Social Media Usage*>

Descriptive statistics analysed the Likert Scale data (Table 3). Overall, 95% of participants (N=22) reported they had the personal skills to cope well with what they saw about climate change on social media. Only 13% (N=3) stated social media coverage of climate change negatively affected their mental health. Conversely, 78% (N=18) reported an increase in climate change anxiety specifically in response to social media coverage.

<Insert Table 3. *Descriptive Statistics of Likert Scale Data>*

Due to the two time periods of data collection falling during the first and third UK lockdowns, COVID-19 was reflected on by participants. Participants highlighted that coverage on social media *"affects people mental health when it could be or is already weakened by anxiety [during COVID-19]"* (Lozzak); *"I think COVID-19 has impacted on individual's mental health, reporting on climate change adds to the increasing pressures"* (Sophie); and that coverage had also reduced during the UK's third winter lockdown: *"I have seen less reporting on climate change during COVID 19, which could be helpful as there is a lot going on in the world already so that could make people feel worse"* (hat). Further, participants reported how coverage *"makes them feel worse as they are trapped indoors and can't do anything about it"* (Steve) during lockdowns and that coverage *"also need to hold big businesses to account rather than blaming individual people (young people especially) as they are the biggest factor, which we have seen as a result of COVID-19"* (Amber Lou). Only 26% of participants (N=6) stated important climate change issues had been suitably reported on social media since the outbreak of COVID-19.

Content Analysis

Although young people were asked about *social media* coverage specifically, participants appeared to interpret this broadly, discussing their experiences of *digital media*, which may reflect how commonplace and indistinguishable social and other digital media has become for young people. The four-stage experiential process described cumulatively by the participants is presented through the four analytic categorical themes that emerged from the data-driven content analysis: 'observing', 'feeling', 'appraising', and 'engaging' (Figure Two). Participants' qualitative data is presented verbatim to preserve authenticity.

<Insert Figure 2: *Content Analysis Thematic Process Summary of Experience>*

1. Observing - "Social media has made information and knowledge about climate change more accessible and simplified it down for everyone to understand" (Lyra)

A position young people took was that of the 'observer'; observing how digital media reported on climate change as an outsider looking in. Participants identified how online media facilitated *"sharing more stories of people making a difference"* (MA), although recognised shortcomings in coverage: *"I have not seen anything on climate change during the pandemic"* (Lucy). Within this theme were several observations as to what was working well to enhance understanding, simplify information and increase awareness through people who were seen

as credible voices, as Sophie explains: *"David Attenborough documentaries have been really good at increasing awareness, it gets constant exposure by being shared all over social media platforms. Perhaps encouraging celebrities/or people who are admired it would increase coverage".* Overall, there seemed to be a consensus that digital media could do more to bring the 'observers' into conversations to bring about change: *"The media needs to find ways to discuss and highlight the importance of climate change"* (Amber Lou):

> *I think reports of climate change during COVID-19 are beneficial because we have more time indoors to really reflect on ways we can make changes to help save the environment, and properly educate children and young people to be aware of the importance of climate change*
>
> Cat

2. Feeling - "it makes me feel quite helpless and sad" (Pigeon)

A clear theme within both stages of the study was the emotional connection young people had to climate change. For some young people, media reporting evoked strong feelings of helplessness, sadness, anxiety guilt and shame: *"in some way (I'm) ashamed to be human, looking at what we're doing to our planet"* (Amber). Other's expressed frustration at how little the reporting was instigating action: *"why aren't people taking this more seriously? (...) what's the point?"* (JWMer). There was also a concern as to whether enough change could come about in time, as Gary highlights *"good that it seems like more people are treating it with the seriousness it deserves but concerned it may be too late"*.

Despite the strong emotions digital reporting elicited, participants were clearly able to identify how content was designed to be emotive and reflected upon the impact of hyperbole: *"a lot of the advice now is very extreme, and almost feels like guilt tripping people for eating meat for instance or using a car etc."* (Penguin06); *"the media tends to exaggerate, to make spread fear"* (Drew). Further, participants identified key mechanisms that could reduce anxieties whilst still conveying the urgency of the situation: *"people will feel less anxious if they feel there is something they can do about it"* (Bella); *"I used to think it was good when the blame was put on me but I now think that this is making many people upset and having 'climate change depression'"* (Grace); *"In social media reports it may help lessen anxiety if the reports ended with some positive news, solutions or ways for the person reading to help with that issue"* (hat). Reducing blame, anxiety, feelings of helplessness and hopelessness were all cited as important in making climate change coverage on social media more effective. Positive stories and practical small things individuals could do were also recognised as helpful.

> *Young people have been almost villainised in regards to climate change, with "celebrities" and news sites on social media trying to play the blame game with young people trying to bring it to light, such as Greta Thunberg*
>
> Amber Lou

3. Appraising – "A lot of scaremongering, and too much emphasis placed on each individual person rather than a collective whole" (JWMer)

Participants described critical appraisals of content in the context of their own knowledge base, for example *"From what I have seen, climate change is not reported with enough depth of accuracy or wealth of information on social media"* (Olivia). Others suggested greater impact could be derived from highlighting the global nature of climate change: *"More coverage in general and of the different ways that climate change will affect people all over the world, and when it is likely to do so"* (Connor Range). One participant, Johanna, also appraised that coverage does not take into account geographical inequalities and political drivers, explaining social media platforms *"do not report on the connection between climate change and social justice, and how lower income communities are often harmed more than higher income communities*", demonstrating how individual knowledge lenses can inform interpretations and sense-making.

Throughout the appraisal and meaning making process, participants described being critical observers with a developing sense of agency in relation to the content they viewed. They described their recommendations for how reporting could be improved to convey important messages. For example, messages saturated by negativity were generally critiqued as unhelpful: *"I think most of the reports are very negative and are talking about problems and issues concerning the climate or environment"* (Pigeon); *"I think that it is mostly pessimistic or written in a way to shock people awake"* (Johnny Boy). Reporting the facts and urgency without disaffecting viewers through emotional dissociation to a point where they felt overwhelmed was encouraged: "*I'd like to see facts instead of emotion and ways to combat climate change instead of just trying to convince people that it's real"* (Elessa)

Participants reported there was a generational imbalance between older generations having platforms and 'voice', and younger people worried for their futures: *"there needs to be the realisation that young people are doing lots more than other, older people"* (Amber Lou). This category within the analysis was linked to codes around credibility and 'informed communicators', with suggestions that people informed about climate change or those with a commitment to bring about change were not always afforded an opportunity to communicate. Additionally, it was suggested that informed older people with power could be particularly influential: *"If young people see the [older] generations, particularly this in politics, putting forward ideas to help reduce climate change"* (Lyra).

> *if it's an older person rambling around a topic, but not taking it seriously and not doing anything to change things (or suggest feasible actions), you cannot take it seriously at all. If it's someone that knows what happens … I think it makes it more credible and relatable*
>
> Paloma

4. Engaging - "By having clear steps and actions that can be taken, young people may feel more motivated" (Amber Lou)

Engagement, motivation and agency for change was the final theme within the process that inductively emerged from the data: *"I thought that it was about time more people got involved and informed on the subject and social media -when used correctly- can be a great platform to raise awareness"* (Elessa). Whether directly or indirectly, participants discussed intrinsic and extrinsic motivators to influence positive change: *"(have) a couple of*

friends who are active on this topic… I also read some articles myself but I think it's hard to find good articles about the reality and what is happening" (Karolina); *"I wanted to do something about it"* (Britney)*; "I also have become even more motivated to come into action and help reduce the amount of CO2 into the atmosphere*." (Felicity).

Participants discussed the importance of education and finding reliable sources of information: *"Teach them how they can effectively manage the amount of pollution and waste they make in their everyday life"* (Lucy); *"I am majoring in Sustainable Parks and Recreation as well as minoring in Environmental and Sustainability studies"* (Johanna); *"I think it also could be taught in schools and universities how to identify where information is coming from, and how to judge the reputability of different sources"* (Amber Lou).

Communities and organisations can also cause change through 'steps for change'. Showing people small achievable steps could catalyse motivation. For example, *"…show small things that young people can do to make a difference"* (Lily); *"more reasonable and achievable tips on how young people can help the climate themselves"* (Penguin06); *"By having clear steps and actions that can be taken, young people may feel more motivated"* (Amber); *"Wider or more repeated coverage of the different issues with links or explanations of how people can get more involved if they wish"* (Connor Range). Access to reliable information and the means through which to increase their agency by 'getting involved' were important enablers to meaningfully engaging in the topic of climate change, seemingly mitigating a negative impact upon mental health, allaying associated anxieties and feelings of helplessness.

Discussion

This study aimed to explore the interface between climate change and social media reporting for young people to inform understanding of young people's experiences and contribute their perspectives to an under-researched field through a two-stage iterative online inquiry. Participants interpreted the term 'social media' broadly. Participants discussed their experiences of engaging with social media and wider forms of digital media, which is a helpful reminder that young people stream and access multimedia content through various online platforms and devices, so the unique space that social media once occupied may have been diluted for the younger generations.

In summary, developing skills to critically appraise information and feeling as though one has skills to cope with distressing content were protective factors against distress, highlighting the need for education, skills training and critical thinking. It was found that small steps for action could enhance motivation and allay associated anxieties. Reducing blame, anxiety, feelings of helplessness and hopelessness were all cited as important in making climate change coverage through digital media more effective and motivating. These nuanced findings explain why some research has found climate change anxiety can cause 'eco-paralysis' for some (Albrecht, 2011), whilst anxiety is seen as a helpful motivator in other research (Reser et al., 2012). The findings of the current study indicate that a degree of anxiety can be helpful for motivation but needs to be supported by ideas for small practical steps one

can take. The absence of practical steps can lead to becoming overwhelmed by feelings of helplessness and despair; as one participant stated, "*what's the point?"* (JWMer).

Further, if young people feel overwhelmed, they can feel hopeless and disengage. Negative reporting and imagery has been found to disengage adult audiences also (Nerlich, Koteyko, & Brown, 2010). Conversely, positive stories and practical small things individuals could do were recognised as helpful in this study. Participants reported climate change coverage could lead to an increase in climate change anxiety but not a universal adverse impact upon their mental health.

The critical appraisal process identified in theme three shares similarities with meaning-focused coping, as opposed to problem-focused or emotion-focused coping, that was apparent among the children studied by Ojala (2012). As described by the participants of the current study, it is the formulation of meaning that nurtures perspective, a sense of control over the information in context, and presents new options for how the young person chooses to engage with the content. This process appears helpful in mitigating distress. It may also be that it is the shared cause and connection with like-minded individuals on social networks that is part of what nurtures the ability to develop meaning-focused coping skills, as well as relative wellbeing and resilience (Bamberg et al., 2018). In terms of talking therapies, psychoeducation and support for meaning making could be powerful tools for helping young people manage climate-related distress.

Limitations

Across both stages of data collection, females provided almost 80% of the data due to their over-representation within the sample. Although it is not clear at this early stage why the gender balance was such and what impact this may have had on our analysis, this feature of our study should be considered for interpretation. All the authors are female, although adverts were re-shared across Twitter by other organisations, which should have reduced the role of author-gender bias. In a recent narrative review of published studies, most studies did not state the gender divide, although where this information was present, there seems little differentiation in samples (Lee, Gjersoe, O'Neill & Barnett, 2020).

Due to our self-selecting sample of young people through social media, it is reasonable to assume they are especially connected to the topic of climate change and active on social media. Additionally, the majority of the sample were in education in their late teens and early to mid-twenties, which may have also influenced their perspectives and contribution. Therefore, our sample may not be truly representative of young people in general. Nevertheless, their insightful and thoughtful contributions offer a novel dataset and perspectives on how some young people are currently managing the interface between digital media and climate change. Another limitation of the current exploratory study is that we did not ask participants about their ethnicity and all participants were English-speaking, so while we have developed interpretations from data from under-represented young people, we cannot hypothesise as to how young people from a range of ethnicities and countries may perceive social media and digital reporting of climate change globally.

Recommendations for Future Research

Overall, this study contributes first person accounts from young people about digital media's reporting on climate change across a range of platforms to enhance understanding around the issue. A review of climate change reporting on social media so far found no studies that included Instagram (Pearce, Niederer, Özkula, & Sánchez, 2019), which we found to be the most commonly used platform by young adults, whilst Snapchat was more popular for adolescents. Therefore, this seems an important area for future research, especially as Instagram is a largely visual platform and visuals have been found to be an effective communicative tool for climate change reporting online (van der Linden, Leiserowitz, Feinberg, & Maibach, 2014). Similarly, with the recent uptake of Tiktok for young people during the pandemic, this seems to be an important platform for further research, especially due to its highly visual content.

Important mechanisms for wellbeing appeared to be motivation and agency to take small steps, which protected against feelings of helplessness and hopelessness. The importance of small steps for making a positive change to the climate crisis in one's own life, personal agency, and pathways for action seem closely aligned to the ingredients for hope in Snyder's hope theory (1994). Consequently, this seems a useful lens for future research to explore therapeutically beneficial approaches to support young people experiencing climate change anxiety, individually and systemically.

Conclusion

Participants indicated digital media platforms could do more in terms of accurately reporting on climate change issues. Providing additional platforms for *credible* and *informed* communicators could also raise awareness and serve to educate people on small things they can do to tackle climate change. Participants recognised the potential reach and influence of social and digital media, although expressed their concerns around the hyperbole and inaccuracy of much for the reporting they and others were exposed to. Some participants described actively seeking coverage of climate change that was hopeful or inspired hope. Finally, platforms that combine microblogging and visual stimuli may be particularly impactful, and worthy of further study to understand more about enhancing young people's agency.

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Table 1. *Demographic Characteristics of Participants*

Stage One			
		N	**%**
Gender	Male	7	25
	Female	21	75
Age (years)	Mean	22.34	
	Standard Deviation	2.23	
	Range	8 (17 – 25)	
Education Status	Currently in education	16	55
	Currently not in education	10	34
	Other	3	10
Location	UK	15	52
	Netherlands	6	21
	Other[1]	8	28
Stage 2			
		N	**%**
Gender	Male	4	17
	Female	19	83
Age (years)	Mean	20.65	
	Standard Deviation	3.19	
	Range	9 (16 - 25)	
Education Status	Currently in education	20	87
	Not in education	3	13
Location	UK[2]	23	100%
	Other	0	0%

[1] United State of America N=4; Mexico N=1; Germany N=1; Greece N=1; Denmark N=1

[2] North England N=12; Midlands N=4; South England N=7

Table 2. *Ranking Table for Social Media Usage (Stage One and Two)*

Social Media Platform	Rank
Instagram	1 (most used)
Snapchat	2
Facebook	3
Twitter	4
Pinterest	5
Reddit	6
Tumblr	7 (least used)

Table 3. Stage 2 *Descriptive Statistics of Likert Scale Data* (*N*=23)

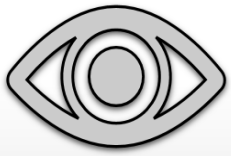
Reflective Statement	Mean	SD	Range	Strongly agree	Agree	Neither A/D	Somewhat Disagree	Disagree
Social media's reporting of climate change reflects the important issues for young people's futures	3.78	1.24	4	30%	43%	9%	9%	9%
The ways in which social media reports issues of climate change empowers young people	3.43	0.84	3	0%	61%	26%	9%	4%
Social media platforms do not represent important climate change issues	3.17	1.23	4	13%	35%	17%	26%	9%
Since the outbreak of COVID-19 (coronavirus), social media has continued to represent important climate change issues	2.61	1.27	4	9%	17%	22%	30%	22%
It is hard to know what is real and true in social media's reporting of climate change	3.96	1.22	4	43%	30%	9%	13%	4%
I feel confident in evaluating what is accurate in terms of social media reporting of climate change	3.65	0.93	3	13%	57%	13%	17%	0%
The information I see on social media about climate change makes me more anxious about the impact of climate change	3.96	1.02	4	30%	48%	13%	4%	4%
Overall, I find most of the information about climate change on social media helpful	4	0.85	3	30%	43%	22%	4%	0%
Overall, coverage of climate change on social media negatively affects my mental health (makes me feel worse)	2.30	1.06	3	0%	13%	35%	22%	30%
Overall, I think I have the personal skills to cope well with what I see about climate change on social media	4.40	0.58	2	43%	52%	4%	0%	0%

Likert Scale coding - 1 = strongly disagree, 2 = somewhat disagree, 3 = neither agree nor disagree, 4 = somewhat agree, 5 = strongly agree

Figure 1 : *Code and Category Mapping within Content Analysis*

Figure 2: *Content Analysis Thematic Process Summary of Experience*

Observing



- **"Social media has made information and knowledge about climate change more accessible and simplified it down for everyone to understand"**
- Accessibility and relatedness
- Visibility
  - (Lack of) Visibility
  - (Improve) Visibility
- Involved and educated

Feeling

- **"It makes me feel quite helpless and sad"**
- Emotional impact
- Trust
- Lack of reporting during COVID, additional strain of COVID – increase in worry related distress
- Emotional strain of mixed messaging and reporting

Appraising

- **"A lot of scaremongering, and too much emphasis placed on each individual person rather than a collective whole"**
- Nature of reporting - purpose of coverage
- Accuracy of facts
- Informers with influence and credibility

Engaging

- **"By having clear steps and actions that can be taken, young people may feel more motivated"**
- Empower – make a difference
- Intrinsic and extrinsic motivations and responsibility
- Motivation for change
- What is needed for change?
- Steps for change