

“It’s *cool* to feel sad”: A thematic analysis of the social media experiences of university students who have self-harmed

Katalin Hajdú

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University College London

UCL Doctorate in Clinical Psychology

Thesis declaration form

I confirm that the work presented in this thesis is my own. Where information has been derived from other sources, I confirm that this has been indicated in the thesis.

Signature:



Name: Katalin Hajdu

Date: 1st July 2022

Overview

Content warning: this thesis discusses self-harm, suicide and mental health experiences that readers may find upsetting or triggering.

Social media is increasingly part of young people's lives, often playing an integral role in their social and self-identity. This three-part thesis explores recent findings relating to the impact of encountering self-harm and suicide-related content online and the social media experiences of university students who have self-harmed.

Part one – Literature review

A systematic review of the literature was conducted on the impact of viewing and sharing self-harm and suicide-related content online. Findings of 19 studies were narratively synthesised to explore the different ways platforms and types of engagement may impact users and to inform future research. Sharing content was associated with more negative outcomes, including increased lifetime suicidality, with studies painting a complex picture of engagement. Significant methodological shortcomings indicate the need for more robustly designed experimental research.

Part two – Empirical paper

The empirical research project qualitatively explored the impact of social media on university students aged 21 and under who have self-harmed. This was a joint project with Appendix C outlining the contributions of the co-researcher. The analysis provided a developmental overview of the impact and evolving engagement patterns of students with online content. Students began their journeys comparing themselves to unrealistic portrayals, often getting caught up in adopting harmful behaviours they learned about online. This was followed by a realisation of the extremities of social media, leading to reflection on experiences and the eventual development of rules and habits to get the most out of social media.

Part three – Critical appraisal

The critical appraisal describes reflections on the research process, including the choice of research topic, immersion in social media, methodological considerations, as well as the 'researcher identity'.

Impact statement

Social media is a rapidly evolving part of young people's lives, with most research focusing on screentime, rather than the developmental impact of online activities. With increasing efforts to regulate the online world and social media, thoughtful solutions need to be psychologically informed to safeguard children and young people from online harms.

The account of the evolution of university students' online habits and the impact of their engagement with social media identified in the empirical paper reveals how subjective experience in relation to self-harm may be conditioned by social media from a developmental perspective. Whilst research is emerging on links between social media and identity development, the current paper provides a unique, developmental overview of students' construction of online identities and key processes involved in this. The academic implications of this are numerous, including the need for the evaluation of effective ways to moderate high-risk content online and the exploration of the efficacy of social media delivered interventions to improve young people's mental health.

The systematic review presented in this thesis suggests that whilst rapidly expanding, research on the impact of viewing and sharing of self-harm and suicide-related content online is hindered by methodological issues and unable to keep up with the quickly changing online landscape. These findings highlight the need for more thoughtful study designs with robust methodology, including unity in definitions, the development of validated, standardised measures for social media, as well as more focus on longitudinal studies to elucidate the impact of social media on young people's development.

The thesis also has important implications for policy and practice. Both quantitative and qualitative findings highlighted the need for professionals to be educated and gain skills in exploring the impact of social media and advise young people on 'digital hygiene' to promote safe usage. It is crucial to involve young people in this process to help enrich the knowledge base and develop sensitive ways to ask about social media in a variety of contexts whilst respecting young people's digital identities. Furthermore, there is a need for social media platforms to adopt a more transparent approach for the use of engagement-promotion tools and take more responsibility to protect young users from potentially harmful materials. There is a need to move from risk-by-design to safety-by-design for social media platforms.

It is hoped that the findings of this thesis will be published in a relevant journal and disseminated via the PsychUP group to the wider UK university network.

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Part 1: Literature review

The impact of the viewing and sharing of suicide and self-harm related content online: a systematic review

Abstract

Background: Suicide and self-harm are public mental health concerns and little is known about the potential influence of online activities as risk or protective factors. **Objective:** The aim of this paper is to systematically review evidence since Marchant et al's (2021) review, related to the impact of the viewing and sharing of suicide and self-harm content and examine how this content is viewed and shared across platforms. **Methods:** PsychINFO, MEDLINE and Embase databases were searched from February 2019 to January 2022. Search terms were related to internet use, social media, self-harm and suicide. Screening against pre-specified criteria and data extraction was followed by a quality assessment of eligible articles. The findings were narratively synthesised. **Results:** 19 studies met inclusion criteria. Eight focused on various platforms, five included Twitter, three included Instagram, two examined formal support websites and one study focused on Pinterest and Sina Weibo respectively. Ten studies employed quantitative, seven qualitative and two mixed methods, with 14 studies examining both viewing and sharing of materials and four studies focusing on viewing content. In one study, it was not possible to determine the nature of interaction with self-harm content due to the lack of available details. Sharing content was generally associated with more negative outcomes including increased lifetime suicidality whilst viewers also reported finding out about new methods to end their lives as well feeling triggered with lacklustre formal sources of support. **Conclusions:** The current review identified a number of concerns relating to the viewing and sharing of self-harm and suicide related content, however, the included studies painted a complex picture of people's engagement with these materials. Researchers and clinicians should turn their focus to utilising online spaces to meet the needs of users as well as promote online safety practices.

Introduction

Suicide is a public mental health concern (Ferrey et al., 2016) and a leading cause of death worldwide (WHO, 2019). Suicidal ideation and attempts as well as non-suicidal self-injury are significant predictors of death by suicide (DeVillie et al., 2020; Franklin et al., 2017; Ribeiro et al., 2016). Consequently, researchers have attempted to conceptualise protective and risk factors that contribute to this phenomenon to avoid potentially preventable deaths.

Joiner's (2005) interpersonal theoretical framework suggests that people who attempt suicide are frequently exposed to repeated instances of violent and painful experiences, such as self-injurious behaviours often in the context of childhood trauma and abuse (Serafini et al., 2017), beginning to experience a desire for suicide and developing the capability to act on this. Further evidence for this theory comes from findings that self-harm is one of the main predictors of attempted and completed suicide, with the length of time, number of methods and severity of injury corresponding to greater suicide risk (Klonsky et al., 2013; Olfson et al., 2017; Turner et al., 2013; Victor & Klonsky, 2014). Consequently, understanding both self-harm and suicidal behaviours and their associated risk and protective factors is key in preventing the escalation of self-harm into suicide.

Research into risk and protective factors for self-harm and suicide is wide-ranging, however, few studies have considered the role of the internet and social media in this complex issue, despite the average UK adult spending nearly seven hours a day on the internet (Datareportal, 2022), with 70% of people accessing social media platforms multiple times a day (Rideout & Robb, 2018). Definitions of social media differ across studies, however, for the current study, it is considered to refer to websites and applications that allow for social interactions, often in the form of user-generated content (Nesi et al., 2021). The internet and social media have become a safe haven for those wishing to escape the stigma of offline discussions around self-harm and suicidality (Gargiulo & Margherita, 2019). It has increasingly been found that people prefer to discuss high-risk thoughts and behaviours online, leading to rising reliance on these platforms to share their distress (Marchant et al., 2017; Wang et al., 2017). Such patterns have caused concerns amongst researchers, as those in vulnerable groups are more likely to have harmful experiences online (Dyson et al., 2016), engaging in more harmful online activities which may lead to engagement in self-harming behaviours or increased suicidality (George, 2019).

The impact of online activities

Recent research has progressively found that online activities can have a direct influence on overall wellbeing (Berryman et al., 2018; Heffer et al., 2019; Orben & Przybylski, 2019), with emerging links to sleep problems, depression and self-harm in addition to self-image related issues (Viner et al., 2019) as well as substandard academic performance and social relationships (Boer et al., 2020). A greater investment in social media activities has been shown to be associated with poorer emotional functioning (Rideout & Fox, 2018). Users often use social media to meet their social and emotional needs, becoming more sensitive to the negative experiences that occur in the context of social media, potentially leading to negative outcomes such as self-harm (Rideout & Fox, 2018) and increased suicidality (George, 2019).

Recent reviews suggest that that exposure to and posting about self-harm on social media was associated with the normalisation of self-harm behaviours, increasing the risk of future self-harm (Dyson et al., 2016; Marchant et al., 2017) and highlighting the need for further investigation of this rapidly developing phenomenon.

The positive power of the internet

Interventions and efforts to capitalise on the reach of the internet and social media have been sparse, despite findings suggesting an array of potentially positive effects (Dodemaide et al., 2019). For example, online activities can have helpful implications for users, such as the Papageno effect (Niederkrötenhaler et al., 2010), which refers to positive media stories with emphasis on recovery and capability having positive influence on vulnerable people, potentially aiding suicide prevention and increased access to mental health services. Such spread of positive messages of mental health and services available and evidence-based support however remains largely unexplored (Rice et al., 2016; Robinson et al., 2016). Furthermore, specific social media use has also been associated with higher academic achievement (Tibber, Wang & Zheng, 2022), with emerging guidance on the incorporation of people's online lives into clinical interventions (Tibber & Silver, 2022). Moreover, accessing digital and traditional therapeutic resources and crisis support has been shown to increase users' sense of community, acceptance, and belonging which may counteract the potential negative impact of online activities (Daine et al., 2013; Rice et al., 2016; Robinson et al., 2016). **Self-harm and suicide content online**

The 'spread' of suicidal and self-harm behaviours has been conceptualised as a social process, with theories suggesting it occurs via direct social ties (Christakis & Fowler, 2009) and research indicating the transfer of emotions in a similar manner (Coviello et al., 2014). This process is also known in the literature as 'contagion', a debated term due to its negative connotations (Cheng et al.,

2014). Whilst research has previously focused on this phenomenon occurring via direct social ties, there is increasing evidence suggesting it may also occur via indirect contact such as the media (Hawton et al., 2020). Most notably, the 'spread' of suicidal behaviour via media has been termed the Werther effect (Phillips, 1974), where media depictions of suicide can lead to 'contagion' with consumers imitating the depicted behaviour. Such harmful effects have not only been implicated in media coverage of high-profile events but amongst everyday content and communication on the internet and social media (Lupariello et al., 2019). For example, exposure to self-harm and suicidal content on popular social media website Instagram has been suggested to have a triggering effect, potentially leading to an increase in self-harm and suicidal behaviour in young people (Arendt et al., 2019; Brown et al., 2018). Similarly, research focusing on Twitter found that encountering high-risk content on the platform may perpetuate and normalise the behaviour by increasing the user's sense of community, relatedness and understanding generated by the support other users provide (Hilton, 2017).

Recent systematic reviews (Biernesser et al., 2020; Memon et al., 2018) showed a similar pattern of engagement, with young people using social media to connect with peers with similar experiences and seek support. However, this also contributed to increased exposure to and engagement in self-harming behaviours with users adopting self-harm techniques they learned from others' posts (Brown et al., 2020). These behaviours are further reinforced by encouragement from online peers, leading to the 'normalisation' of self-harming behaviour (Hilton, 2017; Memon et al., 2018). Young people may be especially vulnerable to adopting these behaviours due to increased susceptibility to peer pressure and having a reduced capacity for inhibition and self-regulation (Berthelsen et al., 2017; Maciejewski et al., 2019). This issue is exacerbated by the fact that social media websites often fail to warn users of explicit content (Moreno et al., 2016) about self-harm and mental health, while there's also a lack of information about resources or professional support available (Arendt, 2018). Such uncensored content may 'normalise' self-harm, potentially prompting users to 'imitate' the behaviour and perpetuate their suicidality (Arendt, 2018; Seko et al., 2015).

The systematic review

A recent systematic review by Marchant and colleagues (2021) provided an overview of the impact of image-based depictions of self-harm and suicidality on the self-harm and suicidal behaviour of those viewing the images between 1990-2019. They found that there has been an increase in the presence of graphic self-harm imagery over time across platforms with little moderation or

restrictions. Studies in the review reported empathy, solidarity and providing support as positives in contrast with normalisation, adoption of new methods and exacerbation of self-harm as negatives.

As noted by Marchant and colleagues (2021), content related to self-harm and suicidality is rapidly spreading online, with rates of active internet and social media users consistently growing, with 7.7% growth worldwide in 2020 and 4% in 2021 (Datareportal, 2022). Since March 2020 people have been spending more time online due to COVID-19 related national lockdowns, with suggestions that digital consumption has risen by 30%, resulting in new consumer habits (WARC, 2021). Therefore, it is hoped that an updated review of the literature since 2019 will provide important new information on these emerging user habits and serve as a benchmark for future comparisons.

The current study aimed to systematically review the impact of the viewing and sharing of suicide and self-harm content since the latest relevant review by Marchant and colleagues (2021). In particular, the focus was on any outcomes related to suicide and self-harm behaviours as well as how the content is viewed and shared online. Whilst previous reviews limited the demographics or the type of content examined, the current study set no such restrictions as it intended to serve as a broader update on relevant studies since February 2019. The research questions this review aimed to answer were the following:

1. What is the impact of the viewing and sharing of self-harm and suicide content online on self-harm and suicide behaviours?
2. How is content related to self-harm and suicide viewed/shared online on different social media platforms?

Methods

This systematic review and narrative synthesis followed PRISMA guidelines (Moher et al., 2009) and was prospectively registered online on PROSPERO (CRD42022310435).

Search strategy

PsycINFO (13.01.2022), MEDLINE (13.01.2022) and Embase (13.01.2022) databases were searched using both keyword and subject heading terms related to social media and self-harm. Terms related to contagion (Cheng et al., 2014) were added to the search, however, these did not produce any additional findings. The search term 'internet' was included as there is a lack of agreed upon definition for social media, with some studies referring to it as 'internet networking', however, only texts that implicitly or explicitly referred to phenomenon occurring on social media were included. The search terms from Marchant and colleagues' (2021) review were adapted for the current study with the restrictions of image-based materials and young people removed to capture a wider range of relevant content (Appendix A). Searches were limited to between February 2019 and January 2022. A reference search of relevant reviews was also conducted. The full search strategy is available in Appendix B.

Inclusion Criteria

Articles were included if they examined to the viewing and sharing of self-harm or suicide related content online. For the purpose of the current review, viewing is defined as encountering content in any form, without any further type of engagement, whilst sharing refers to any actions to share existing content or create new content. The following eligibility criteria were set:

Inclusion

- Any population
- Exposure to self-harm/suicide related content online at any point in lifetime (including sharing or viewing any text-based material, images, videos)
- Reporting outcomes related to self-harm behaviours, suicidal ideation, suicide attempts, completed suicides
- Observational and qualitative studies with relevant outcomes
- Full text available in English

Exclusion

- Exposure to above content purely via traditional media (TV, physical newspapers, etc.)
- Exposure to above content through in-person discussions (with peers, family, etc.)
- Intervention studies, dissertations, conference abstracts and protocols
- Full text not available in English

Data selection

Articles from the initial searches were imported to a reference management software (Endnote) to be screened by reviewer KH. A random 10% sample was screened by second reviewer AT, with any disagreements resolved following discussion and when necessary, consulting with a senior systematic reviewer (PB). Following the title and abstract screening, full-text articles were accessed and reasons for exclusion were recorded.

Data Extraction

A data extraction sheet from the previous review (Marchant et al., 2021) was updated by the reviewer to capture more information about the nature of viewing and sharing self-harm and suicide related content online (Appendix A). Details on trigger warnings, help messages, comments and image-related points were removed. Instead, further details on intentionality of encounter, type of interaction (viewing or sharing and viewing), history of suicidal ideation and attempts as well as completed suicides were extracted. Furthermore, articles were screened for the forms of online media that the sharing or viewing of content occurred on. Only the outcomes relevant to the current review were extracted from the articles where several outcomes were reported.

Quality Appraisal

Following data extraction, the QualSyst assessment tool (Kmet et al., 2004) was used to assess the quality of studies. Whilst quality assessment in systematic reviews does not have a gold standard, this tool was chosen due to its suitability for assessing both qualitative and quantitative designs with the reviewer (KH) independently rating the quality of each of the included studies. A second reviewer (AT) reviewed 10% of all studies with any disagreements resolved via discussion or referral to the senior reviewer (PB). The quality scores of the articles were calculated as a linear score from 0 to 100 and divided into three categories: low (≤ 49), moderate (50–74), or high (≥ 75) quality studies, a method adapted from previous studies (Barnett et al., 2019).

Data Synthesis

Following Popay et al. (2006), data was narratively synthesised due to the heterogeneous nature of the studies retrieved. Characteristics of included studies were summarised with key outcomes reported using tables and accompanying descriptive texts summarising themes and trends in the data. Outcomes were considered and grouped based on the medium (e.g. Instagram, Twitter, etc.) and the type of engagement with the content (e.g. viewed or viewed and shared), with data relating to each research question reported separately. In line with good research practice (Popay et al., 2006), the grouping of articles was informed by preliminary discussions around potential theories of what might be observed and finalised before data extraction was completed. Further heterogeneity in the data, such as average age, moderation of platform and qualitative/quantitative study outcomes were also investigated. Where available, quantitative and qualitative studies were both drawn on to provide a richer description of findings relevant to the research questions. For example, descriptions of reasons for posting about own self-harm (Brown et al., 2020) were interpreted in the context of measurable impact on suicidal ideation and attempts as reported by other studies (Swedo et al., 2021; Liu et al., 2020)

For this review, the platform was defined as the specific social media or websites where this data was available or categorised as 'various' where no further data was available. For the type of engagement with the content, viewing or sharing (which includes viewing and sharing) were defined as categories.

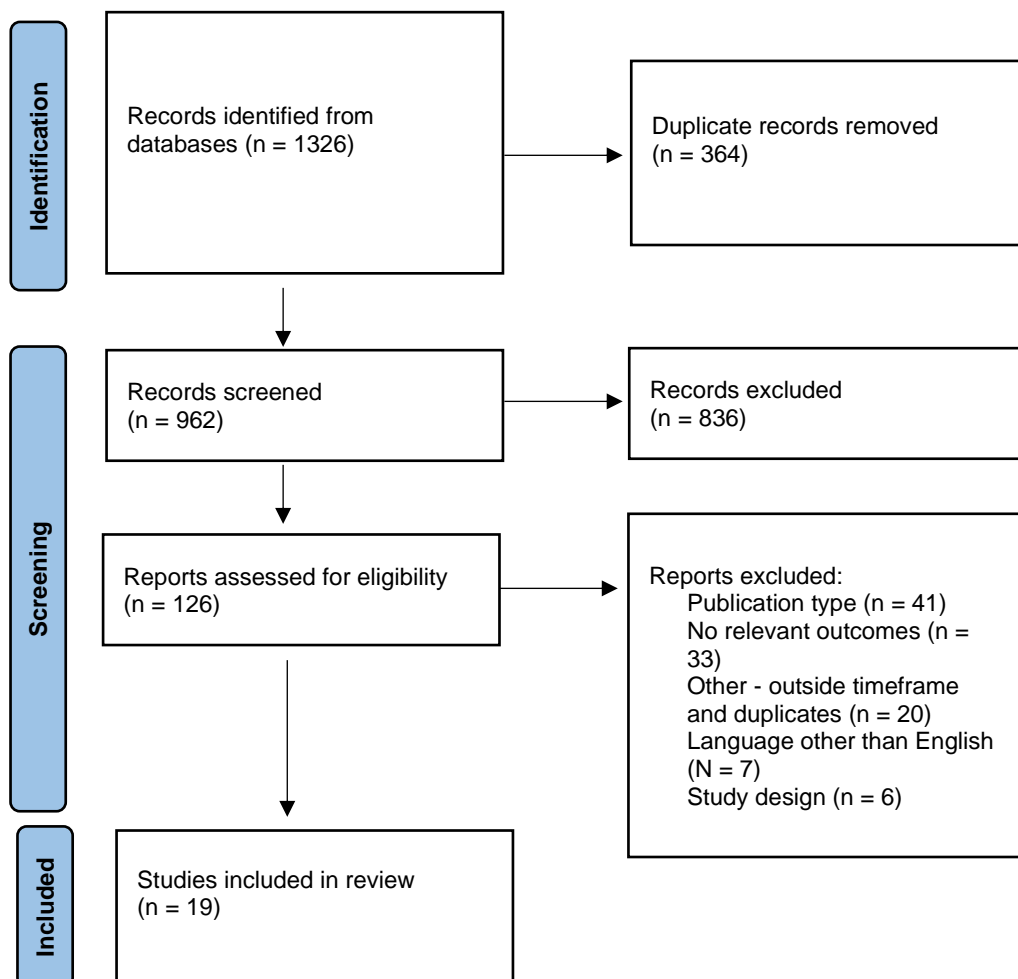
Results

Search results and screening

1326 articles were identified in the initial search across PsychINFO, MEDLINE and Embase, and following the exclusion of duplicates, 962 remained for the next stage of title and abstract screening. Finally, 126 articles were accessed for full text screening. A total of 19 studies were included after exclusion of studies which did not meet the inclusion criteria. The most common reasons for exclusion were incorrect publication type (n = 41) and not having relevant outcomes (n = 33). A breakdown of the screening process is demonstrated in **Figure 1**.

Figure 1

Flow diagram for screening and selection of studies.



Categories of studies

Some studies examined multiple platforms: eight focused on a variety of sources without exact specification, two examined formal support websites, one focused on YouTube and Twitter, and another on Twitter, Reddit and Instagram. The rest of the studies explored one specific platform with three examining Twitter, two focusing on Instagram, one on Pinterest and one on Sina Weibo respectively. Ten studies employed quantitative, seven qualitative and two mixed methods. Furthermore, 14 studies examined both viewing and sharing of materials and four studies focused on the impact of only the viewing of content. In one study, it was not possible to determine the nature of interaction with the content due to the lack of available details (Kirtley et al., 2021). **Table1** summarises the relevant main findings related to the platform examined and type of interaction with content.

Table 1

Summary of key details of studies and relevant findings related to the platform examined and type of interaction with content.

Lead author, Year, Country	Study design	Study population/sample	Aims/objectives	Platform	Type of interaction (sharing, viewing or both)	Key findings	Quality score
Arendt (2019), United States	Quantitative	T1 N = 1262 T2 N = 729 Young adults (18-29, <i>M</i> = 24.15) who reported having access to Netflix as part of a previous study	To determine whether existing risks for suicide and self-harm are related to exposure to self-harm on Instagram and examine whether exposure between T1 and T2 was likely to increase or maintain such outcomes	Instagram	Viewing	Analyses indicated that exposure to self-harm on Instagram was associated with suicidal ideation, self-harm, and emotional disturbance, even controlling for exposure to other sources with similar content. Exposure to self-harm on Instagram at the first wave prospectively predicted self-harm and suicidality-related outcomes at the second wave one month later. Notably, only 20.1% of participants sought out content intentionally and 63.9% who encountered content	0.91

unintentionally found it emotionally disturbing.

Biddle (2020), United Kingdom	Qualitative	53 young adults (19-69) from community, emergency departments and Samaritans survey	To explore users' perceptions of online suicide help and emotional support offered by official healthcare and mental health/suicide prevention charity websites	Formal suicide help and emotional support websites	Viewing	Participants valued general mental health information, however, did not feel that the websites could meet the needs or engage those experiencing suicidal thoughts. Criticisms included being dispassionate, impersonal, too focused on information-giving and being insensitive to the reasons why an individual may wish to seek help online for suicidal thoughts. Further criticisms were the lack of novel solutions and tendency to signpost to offline services whilst participants wished for immediate, responsive online help with the incorporation of self-help tools, interactions and lived experience content.	0.4
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Brown (2020), Germany	Qualitative	59 young adults (<i>M</i> = 16.7) who posted using one of the 16 most common German NSSI hashtags on Instagram	To explore the motivations of young people for sharing pictures of their NSSI wounds on Instagram and their reactions to seeing comments on these posts. The study further aimed to explore the reactions of participants to viewing NSSI pictures posted by others.	Instagram	Both	Participants reported connection, communication and disclosure as social reasons for posting whilst documentation of NSSI and recovery was mentioned as self-orientated reasons. Participants reported that positive reactions to posts included offers of help and empathy, making them feel connected whilst negative reactions included harassment and not being understood. When seeing posts of NSSI by other users, participants often reported feeling triggered as they identified with the content, although at times this would lead to being deterred from self-harming and wanting to offer help to the poster. There were no mentions of receiving professional	0.85
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						help as a result of posting about NSSI.	
Dardas (2021), Jordan	Qualitative	92 Jordanian secondary school students aged 14-17 who scored mild to moderate on the Beck Depression Inventory	To understand Jordanian adolescents' perceptions, beliefs, and attitudes toward suicide	Unclear, labelled internet e-games, learned about it from friends or the news	Viewing	The four themes identified from focus group discussions were (1) perceived risk factors, (2) perceived protective factors, (3) active and passive suicidality, and (4) e-games and internet influences. The latter emerged from several young males disclosing knowledge and participation in the Blue Whale Challenge, which is an internet 'game' aimed at 'teaching' people how to complete suicide by engaging in increasingly high-risk behaviours.	0.8
Ekpechu (2020), Nigeria	Qualitative	30 university students who witnessed online reported suicides	To examine the dynamics, instruments and suicidal thoughts among Nigerian university students following witnessing social media reported suicides	Various social media	Viewing	The students disclosed mixed experiences with witnessing online reported suicides as some spoke about finding it triggering whilst for others, it deterred them from considering ending their	0.55

						<p>lives. Furthermore, a finding of concern was the fact that many students learned about new methods to complete suicide online, for example, drinking Sniper, an insecticide.</p>	
<p>Guidry (2020), n.s.</p>	<p>Quantitative</p>	<p>500 random sample of posts containing the keyword 'suicide' in the caption</p>	<p>To examine how suicide-focused visuals and captions are portrayed on Pinterest and how Pinterest users engage with this information</p>	<p>Pinterest</p>	<p>Both</p>	<p>Most content was posted by individual Pinterest users with few formal support organisations present. Suicidal ideation was most present in the visuals posted rather than the text, with more helpful than harmful content (according to WHO guidelines), although explicit details were prevalent (15% of visuals and 12% of captions). The majority of comments identified with the ideation expressed (62.9%), with more than half including helpful or supportive content (55.9%). However, almost a quarter</p>	<p>0.78</p>

						included bullying or negative content (24.1%), with no comments present from formal support organisations.	
Khasawneh (2019), n.s.	Qualitative	First 60 videos ranked by relevance on YouTube for the keywords 'blue whale challenge' and 1112 associated comments. 150 tweets containing different versions of the same keywords and hashtags.	To investigate the following question: how is the Blue Whale Challenge presented and described on YouTube and Twitter?	YouTube and Twitter	Both	The common themes observed amongst the three data types were (1) raising awareness about the BWC and discouraging participation (YouTube – 83%, Twitter – 68.7%), (2) expressing sorrow for people with mental health difficulties including encouraging and supportive comments, (3) criticising or making jokes about the challenge or the participants (10% of YouTube videos called participants 'show off'; 47.7% of YouTube comments criticised participants and their intelligence; 16% of Twitter posts were sarcastic posts about	0.85

the challenge), (4) providing experiences and asking to play (60% of YouTube videos interviewed parents and showed pictures of the participants' self-harm, 16% of YouTube comments discussed experiences of acquaintances or asked to participate in the challenge). Moreover, only five of the 60 videos blocked minors from viewing the content with at least 50% of videos violating the SPRC safe and effective messaging guidelines.

Kirtley (2021), United Kingdom	Quantitative	477 university students from two major UK universities	To investigate the relationship between exposure to self-harm or self-harm related content and individuals' own self-harm thoughts and behaviours, using a network analysis approach applied to pre-existing online survey data.	Internet in general	Unknown	The network analysis indicated a direct ('one hop') association between self-harm thoughts and behaviours and exposure via the internet (rrp = .34, 95% CI [.26, .42]), which was the most direct and	0.94
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						strong association in the study.	
Lavis (2020), United Kingdom	Qualitative	(1) 10169 original posts with 36934 comments from Twitter, Reddit and Instagram identified from keyword searches, (2) Semi-structured interviews with 10 young people who use or have used social media to engage with self-harm content	To explore why and how young people engage in online self-harm discussions and what they post	Twitter, Reddit, Instagram	Both	The ethnographic analysis suggested that peer support is at the centre of online interactions around self-harm, with those accessing such content likely already self-harming. They may turn to social media for support and to understand their feelings and actions without the stigmas they have to face in their offline life. The authors recognise the offline context that creates the need for such online spaces (waiting times, stigma) and caution against thoughtless regulation of online spaces which may cause further harm by the removal of the helpful aspects of such communities.	0.85

Liu (2020), China	Quantitative	569 adults who commented under a 'popular' post of a blogger's suicide note and expressed suicidal ideation in questionnaires	To identify behavioural markers in social media use that relate to suicidal ideation and suicide attempts in users as well as explain the mechanisms leading from ideation to attempt	Sina Weibo	Both	Compared to the group with suicidal ideation only, those who attempted suicide reported significantly higher suicide-related social media use including (1) attending to suicide information (t567=1.94; P=.05; two-tailed), (2) commenting/reposting suicide information (t567=2.12; P=.03; two-tailed), (3) talking about suicide (t542.22=5.12; P<.001; two-tailed). Findings suggested that the effect of suicidal ideation on suicide attempt is mediated by the suicide-related social media use behaviours, revealing potential behavioural markers for the progression from ideation to suicide attempt.	1
Mokkenstorm (2019), Netherlands	Mixed methods	106 users of the forum who responded to the	To explore the reach, benefits, and potential harmful effects of an online forum of a national suicide prevention website	Suicide prevention charity forum	Both	78% of responders experienced a high severity of suicidal ideation with 12%	0.8

recruitment
questionnaire

visiting the forum to find suicide methods and 3% looking for a suicide partner. 48% were repeat visitors of the forum and 53% of them reported no impact on their mood directly after forum use with 35% feeling better and 12% feeling worse. There were also more returning users who had higher suicidal ideation compared with low suicidal ideation (48% vs 39%) with more daily visits (44% vs 11%) and frequent postings (29% vs 0%). Users especially valued anonymity and peer support and criticised the lack of personal contacts and few reactions to posts. The main reasons for moderating posts (by psychologists) were suicide threats and suicide methods.

Nesi (2021), United States	Quantitative	589 psychiatrically hospitalised	To explore adolescents' online self-injury activities including frequency,	Various interactive	Both	43.3% of participants engaged in online self-	0.94
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		adolescents (11-18)	type, perceived functions and associated risk for self-injurious thoughts and behaviours (SITB)	websites including major social media platforms		injury activities, with 74.8% using social networking sites. These behaviours were significantly more common among gender and sexual minority youth. Furthermore, those who talked about self-injury with people they met online were more likely to report a history of suicide attempts. Latent profile analyses indicated that the subgroup reporting higher levels of engagement in online self-injury activities for identity exploration, self-expression and aiding recovery were at heightened risk for negative outcomes of these activities and reported higher suicidal ideation severity.	
Phillips (2019), Northern Hemisphere	Quantitative	26 online media reports of suicides over the internet with an audience of one or more people	To examine media reports of livestreamed suicide threats and attempts, and consider factors contributing to the baiting behaviours of audiences	Various sources	Both	In 92% of the cases, the streamer went through with the suicide threat with baiting (encouragement of suicide attempt) or	0.69

jeering (denigrating the victim) from viewers being present in 42% of the cases. On the other hand, attempts to discourage the person from acting on the threat occurred in 88% of the cases. Furthermore, analyses revealed that larger audiences, longer videos and videos with apparent drug use were more likely to have baiting present.

Seong (2021), South Korea	Quantitative	902 6 th to 9 th graders from South Korean schools	To investigate social and behavioural features associated with lifetime suicidality and identify how these features explain lifetime suicidal risk	Social media (not specified)	Both	Posting about own self-harm on social media in the year prior to the study was associated with increased odds of lifetime suicidality (OR 3.15, p < 0.001), whilst seeing suicide related content in the same time was not.	0.91
Simms (2020), n.s.	Mixed methods	235 trans youth (14-18) identified from Twitter profile descriptions	To examine trans youth's posts about self-harm and suicidality and associated peer responses to these tweets	Twitter	Both	1468 tweets were identified from the 235 accounts, with 56.6% of accounts not receiving any responses to their tweets mentioning mental health	0.8

						<p>difficulties. Of the 43.4% who did receive responses, 62.7% received a maximum of two responses. The themes in the replies to tweets in order of frequency were (1) support, (2) feeling the same and (3) advice. The study did not identify any harmful or negative responses to the tweets examined.</p>
<p>Sinyor (2020), Canada</p>	<p>Quantitative</p>	<p>17 suicide-related Twitter events (at least 100 tweets) geolocated to Ontario</p>	<p>To examine whether suicide-related stories/occurrences generating a large volume of tweets (Twitter events) in Ontario were associated with increases in suicide rates compared with control events</p>	<p>Twitter</p>	<p>Both</p>	<p>17 suicide-related Twitter events were identified with 12 being categorised as putatively harmful and five putatively innocuous. The tweets per event ranged from 121 to 6202. There was no significant relationship found between Twitter events and actual suicides. There was also no characteristics associated with contagion even in the putatively harmful events.</p>

Sinyor (2021), Canada	Quantitative	787 tweets geolocated to Ontario and originating from the highest-level influencers	To identify associations between social media content posted by people with a high authority score (e.g. news organisations/journalists/celebrities or others with high follower count) and suicide deaths in Ontario	Twitter	Both	The following were found to be associated with increased subsequent suicide counts: (1) tweets about the suicide of a local newspaper reporter (OR = 5.27, 95% CI = [1.27, 21.99]), (2) 'other' social causes of suicide (e.g. cultural, relational, legal problems; OR = 2.39, 95% CI = [1.17, 4.86]), (3) advocacy efforts (OR = 2.34, 95% CI = [1.48, 3.70]), and (4) suicide death (OR = 1.52, 95% CI = [1.07, 2.15]). On the other hand, decreased subsequent suicides were associated with tweets related to: (1) murder suicides (OR = 0.02, 95% CI = [0.002, 0.17]) and (2) suicide in first responders (OR = 0.17, 95% CI = [0.05, 0.52]).	0.86
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Swedo (2021), United States	Quantitative	9733 7 th to 12 th grade students in Ohio during a 2017-2018 suicide cluster	To investigate the prevalence of suicidal behaviours and measure the impact of suicide cluster-related exposures on adolescent suicidal behaviours in a community affected by an ongoing suicide cluster	Social media and news websites	Both	9% of participants reported suicidal ideation and 4.9% attempted suicide during the suicide cluster in the community. Students who posted suicide cluster-related content to social media reported higher rates of suicidal ideation (22.9%) and suicide attempts (15%). Posting suicide cluster-related content was associated with both suicidal ideation (adjusted odds ratio 1.7, 95% confidence interval 1.4–2.0) and suicide attempts during the cluster (adjusted odds ratio 1.7, 95% confidence interval 1.2–2.5). In subgroup analyses, seeing suicide cluster-related posts was uniquely associated with increased odds of suicidal ideation and suicide attempts during the cluster among	0.94
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						students with no previous history of suicidal ideation or suicide attempts.	
Weinstein (2021), United States	Qualitative	30 adolescents from an inpatient psychiatry unit where they were hospitalised for a suicide attempt or severe suicidal ideation	To explore the negative and positive social technology experiences of psychiatrically hospitalised adolescents and to further describe their experiences of a break from the regular use of social technology during their hospitalisation and their views on subsequent return after discharge	Various social media	Both	Participants reported mixed experiences. Common negatives were difficulties with regulating use, encountering triggering content, stress related to social media metrics, hostility and meanness, self-denigrating comparisons and burdensome friendship expectations. Positives mentioned were social connection, affect-enhancing content, social support, shared interests and resources for coping. Participants reported valuing the break from social technologies during hospitalisation, however, saw it as integral to returning to society and identified related concerns.	0.85

Quality assessment

Sixteen of the included studies received 'high', two 'moderate' (Ekpechu, 2020; Phillips & Mann, 2019) and one 'low' (Biddle et al., 2020) quality rating. Seven studies reported no participant characteristics due to the collection of indirect data which may be a reflection of new types of data (such as written text, images, videos) being the sole focus of studies dealing with social media, rather than a methodological shortcoming. Furthermore, some studies used convenience samples, often including data and participants from previous studies which may have introduced a risk of bias. Whilst there were some studies reporting non-significant findings, the risk of publication bias remains a concern. A variety of effects were observed across the studies, potentially due to methodological differences, however, owing to the lack of validated, standardised measures for social media and internet use in the general literature, it is difficult to confidently generalise across different studies.

Platforms and engagement with content

Table 2 provides a brief overview of the various platforms investigated in the included studies.

Table 2

Characteristics of platforms examined.

Platform	Various/ unspecified	Twitter	Instagram	Formal platforms	Pinterest	Sina Weibo	YouTube	Reddit
Number of studies	Eight	Five	Three	Two	One	One	One	One
Typical type of content	Various	Primarily text-based but may also include images and videos	Primarily image-based but may include videos and text	Text-based	Primarily image-based but may include videos and text	Primarily text-based but may also include images and videos	Video	Primarily text-based but may also include images and videos
Monthly users as of January 2022 (Statista, 2022)	Unknown	436 million	1.5 billion	Unknown	444 million	573 million	2.5 billion	430 million
Suicide and self-harm policy available on platform	Unknown	Since 2019	Since 2019	Yes	Since 2018	Unknown	Yes	Community moderation since beginning, formal intervention since 2020

Unspecified platforms

Eight studies did not specify which platforms the self-harm or suicide related content was encountered on, with some mentioning social media in general (Ekpechu, 2020; Seong et al., 2021; Weinstein et al., 2021), whilst others focused on 'the internet' but described phenomena that are associated with social media, such as the Blue Whale Challenge (Dardas et al., 2021) and sharing content between each other (Kirtley et al., 2021) or a mixture of these two broad categories (Nesi et al., 2021; Phillips & Mann, 2019; Swedo et al., 2021). Five of these studies examined general internet and social media usage and self-harm and suicidality related outcomes (Dardas et al., 2021; Kirtley et al., 2021; Nesi et al., 2021; E. Seong et al., 2021; Weinstein et al., 2021), whilst three focused on specific events (Ekpechu, 2020; Phillips & Mann, 2019; Swedo et al., 2021).

Two studies recruited participants who were hospitalised for severe suicidal ideation and/or suicide attempts and found that 43.3% engaged in online self-injury activities, such as viewing, posting or messaging about self-injury (Nesi et al., 2021), with interviews revealing patterns of difficulties with regulating use and being negatively impacted by social media metrics and comparisons in a qualitative study (Weinstein et al., 2021).

Viewing: Being triggered and experiencing suicidal ideation was reported in qualitative explorations of witnessing suicides reported on social media (Ekpechu, 2020) and when viewing suicide cluster (a group of suicides close together in time and location) related posts in a local community in the US in a quantitative study (Swedo et al., 2021). Furthermore, in three studies the participants reported learning about new methods to end their lives after viewing suicide related content (Dardas et al., 2021; Ekpechu, 2020; Nesi et al., 2021). The viewing of materials in both quantitative (Swedo et al., 2021) and qualitative (Dardas et al., 2021; Ekpechu, 2020) studies was associated with increased risks of the enactment of behaviour. More specifically, Swedo and colleagues (2021) found that in students during a community suicide-cluster, seeing suicide cluster-related content was associated with statistically significant increase in suicidal ideation and suicide attempts even for those with no prior history of either. In contrast, in a quantitative study, Seong and colleagues (2021) found that viewing suicide and self-harm related content in the past year was not associated with increased lifetime suicidality. Two studies focusing on psychiatrically hospitalised adolescents described different experiences of being triggered. Nesi and colleagues (2021) found that some adolescents felt that their online self-harm activities and being triggered by content they encountered was an important part of their identity and recovery. On the other hand, Weinstein and

colleagues (2021) described participants struggling with managing encounters with triggering content and welcomed the break from technology during their inpatient stay.

Sharing: In quantitative studies, Nesi and colleagues (2021) found that those posting about suicide and self-harm were more likely to report a history of suicide attempts, with Seong and colleagues (2021) finding a similar association between posting about own self-harm and lifetime suicidality. Swedo and colleagues (2021) proposed the presence of contagion promoting factors, following findings that posting suicide-cluster related content was associated with suicidal ideation and suicide attempts during the cluster, with viewing such content being associated with increased odds of suicidal ideation and attempts for those without a previous history of suicidal ideation or suicide attempts. Finally, Phillips (2019) examined viewers' responses to livestreamed suicides (a live transmission of suicide over the internet) and found that whilst in 88% of cases there were offers of support, 42% also contained suicide 'baiting' by audience members.

Twitter

Three studies focused solely on Twitter, a mainly text-based social media platform (Simms, 2020; Sinyor et al., 2020; Sinyor et al., 2021), with two additional studies using Twitter as one of their sources amongst other social media platforms (Khasawneh et al., 2020; Lavis & Winter, 2020). Of these studies, two focused on general habits and patterns of engagement with self-harm and suicide-related content (Lavis & Winter, 2020; Simms, 2020), whilst three identified specific phenomena and events, such as an online 'suicide game' and suicide-related posts on Twitter within a one year period (Khasawneh et al., 2020; Sinyor et al., 2020; Sinyor et al., 2021).

Viewing: Two similar quantitative studies from the same research group focused on Twitter events, defined as events generating at least 100 tweets, (Sinyor et al., 2020) and tweets from users with a wide reach (Sinyor et al., 2021) and their impact on subsequent suicides in Ontario. Tweets related to suicide from accounts with a high authority score (e.g. news organisations, journalists, celebrities and those with a high follower count) were shown to be associated with increased subsequent suicide counts in the Ontario area: (1) tweets about the suicide of a local newspaper reporter , (2) 'other' social causes of suicide (e.g. cultural, relational, legal problems), (3) advocacy efforts (e.g. support events, against stigma, improvement in healthcare) , and (4) suicide death . On the other hand, a similarly designed study, where the authors (Sinyor et al., 2020) examined suicide related twitter events (at least 100 tweets about the event) in Ontario, they detected no significant associations with subsequent suicide rates, even for tweets categorised as 'putatively harmful'.

Sharing: Simms (2020) examined trans youth's posts about self-harm and suicidality and associated responses in a mixed methods study. Whilst 56.6% of tweets did not receive responses, the study found no negative responses to the 1468 tweets examined. Lavis and Winter (2020) collated and examined posts from Reddit, Twitter and Instagram in an ethnographic analysis and found that whilst peer support was at the centre of online interactions around self-harm and suicidality, many found providing support triggering and burdensome. Khasawneh (2020) examined the portrayal of the Blue Whale Challenge (BWC) on Twitter and YouTube in a qualitative study. The Blue Whale Challenge refers to an online 'suicide game' where young people engage in increasingly high-risk behaviours, with the final step of the 'game' being suicide. Young people who post about mental health difficulties, loneliness and being unhappy with life online are contacted by 'moderators' of the game, inviting them to participate and 'guide' them through the steps of the 'game'. It was found that 68.7% of the tweets were cautioning against participating in the challenge, whilst 16% were sarcastic in nature. In contrast, 83% of YouTube videos were cautioning against participation with 47.7% of associated comments criticising participants, whilst 16% mentioned wanting to participate in the challenge.

Instagram

Three studies focused on Instagram, an image-based social media platform, with two setting it as their only focus (Arendt et al., 2019; Brown et al., 2020) and one (Lavis & Winter, 2020) as one of the data sources.

Viewing: The only longitudinal study in this review (Arendt et al., 2019) examined the impact of exposure to self-harm on Instagram on outcomes related to self-harm and suicidality. In this quantitative study the authors found that encountering self-harm content on Instagram was associated with higher rates of self-harm, suicidal ideation and emotional disturbance, with 32% reporting being triggered by viewing the content. Furthermore, exposure to this content at first wave prospectively predicted self-harm and suicidality outcomes one month later. Interestingly, only 20.1% of participants reported that they intentionally sought out content, with 63.9% of those encountering content unintentionally finding it emotionally disturbing (Arendt et al., 2019) and 30.5% being triggered by the perceived distress of posters in a similar qualitative study (Brown et al., 2020).

Sharing: Two qualitative studies, with one focusing solely on Instagram (Brown et al., 2020) and one on Reddit, Twitter and Instagram (Lavis & Winter, 2020) found that participants were motivated to share about self-harm/suicidality online for the purposes of connection and documentation of self-harm and recovery. Furthermore, there were suggestions that those engaging

in discussions around self-harm online are likely already self-harming (Lavis & Winter, 2020). However, there were also instances when posters were faced with harassment and criticism in the comments (Brown et al., 2020).

Moderated platforms

Only two of the 19 studies in the review examined formal sources (platform provided by a healthcare organisation or charity) discussing self-harm and suicide and the potential impact on people both viewing content in a qualitative (Biddle et al., 2020) and sharing content in a mixed methods (Mokkenstorm et al., 2019) study. A common theme in both studies was a disclosure from participants that they encountered the platform when researching high-risk materials (Biddle et al., 2020) or methods to end their lives (Mokkenstorm et al., 2019). Biddle and colleagues (2020) focused on people's general experiences with visiting formal websites focused on suicide prevention and found that participants were left disappointed, feeling that the focus was too much on signposting and that the website lacked personalisation, lived experiences and it also could not serve as a platform where users could connect with someone online. Mokkenstorm and colleagues (2019) examined a professionally moderated forum of a suicide prevention charity in the Netherlands. Of the visitors surveyed, a concerning 12% were visiting to find suicide methods, with 3% hoping to find a suicide partner. Returning users with higher suicidal ideation were the most frequent posters on the forum. Moreover, only 35% of repeat visitors reported feeling better after visiting the forum while 12% felt worse, with reports of being criticised and misunderstood cited as reasons for this.

There were suggestions that instead of signposting, interactions with professionals and peers would improve engagement with the content and the promotion of safety (Biddle et al., 2020), with peer interactions being one of the most valued aspects of a forum (Mokkenstorm et al., 2019).

Pinterest

Engaging with content on Pinterest, an image-focused social media platform similar to Instagram, was the focus of Guidry and colleagues' quantitative (2020) study who found that in 15% of visuals and 12% of captions of posts tagged with keyword 'suicide', there were explicit details of suicide, going against WHO safe reporting guidelines. They also observed high rates of identification with the poster (62.9%) with supportive comments (55.9%), but an alarming 24.1% of comments were negative or bullying in nature.

Sina Weibo

Liu and colleagues conducted a quantitative study (2020) focused on Sina Weibo, a microblogging social media platform mostly used in China, and invited their participants from commenters on the suicide note of a popular blogger on the website. They found that participants with a history of suicide attempts reported significantly higher suicide-related social media use. Viewing, commenting/reposting and talking about suicide was the mediator of the progress from suicidal ideation to attempt.

Discussion

This systematic review aimed to synthesise the latest literature on the impact of sharing and viewing suicide and self-harm related content online as well as to explore how this content is being viewed and shared. Following a literature search and screening, 19 studies published between February 2019 and January 2022 were included for review. Whilst serving as an update to a recent systematic review (Marchant et al., 2021), the current study broadened the scope of the search, removed demographic limitations and included text-based content in an attempt to capture a wider range of studies. Searches before 2019 to investigate the expanded characteristics were not conducted due to the current search identifying a recent review providing a broader update on social media and self-injurious thoughts and behaviours (Nesi et al., 2021). An update on Marchant and colleagues' review was warranted, as they highlighted the exponential growth of suicide and self-harm related content (Twenge, 2020) which may be further exacerbated by increased screentime due to the COVID-19 pandemic (Nagata et al., 2022).

The current review focused on a period of less than two years with less stringent inclusion criteria and produced an equivalent number of eligible studies to Marchant and colleagues' (2021) who reviewed almost two decades of research. Such rapid expansion of research into social media and self-harm and suicide content calls for 'living reviews' to capture the ever-changing usage patterns (Elliott et al., 2014).

Whilst similar in the findings of empathy, solidarity and providing support as positives, in contrast with normalisation, adoption of new methods and exacerbation of self-harm as negatives to Marchant et al's (2021), the current study also revealed new patterns of impact. Firstly, it was found that the sharing of self-harm and suicide content was associated with more negative outcomes than viewing, suggesting a potentially more vulnerable group of people may be responsible for a large proportion of posts (Mokkenstorm et al., 2019). Furthermore, previous research has rarely highlighted the role of Twitter in reviews, with the current study finding that people with a larger reach on the platform may have a significant role in the 'spread' of potentially harmful suicide and self-harm related information (Sinyor et al., 2021).

A further factor to note when interpreting the findings of this review is the issues with the methodological approaches, as highlighted by Valkenburg and colleagues (2022). There is a lack of consistency across the studies regarding definitions of social media use, with studies failing to specify

what terms such as ‘digital media use’ or ‘technology use’ refer to. This issue is further highlighted by the fact that the majority of studies identified and categorised in the current review under ‘various’ do not define the exact platforms their participants used. Studies also relied on subjective self-report measures which have been shown to only moderately correlate with more objective measurements (Verbeij et al., 2021), with only one longitudinal design limited to one month between the two measurement points (Arendt et al., 2019). Furthermore, the use of convenience samples, often collected as part of other studies, introduces further risk of bias, suggesting a need in this field to move to more rigorous experimental methods.

Patterns across platforms

With the rapid advances of technology in recent years, the platforms where self-harm and suicide-related content are shared have changed. Against the backdrop of online forums in the pre-social media era (Daine et al., 2013), only one study examined a forum as their main source in the current review, further reinforcing Marchant and colleagues’ (2021) findings that such communities have migrated to a variety of social media platforms. This likely echoes trends of the exponential expansion of social media platform user bases (Datareportal, 2022).

Whilst eight studies did not specify the platform examined, there were references to content ‘spreading’ across platforms, such as the Blue Whale Challenge (Khasawneh et al., 2020; Lupariello et al., 2019). Due to the nature of the different mechanics of social media websites, it may be that different platforms have their own unique ways of influencing people. For instance, Twitter and Instagram often offer users ‘trending’ content which is based on a number of other users ‘tagging’ posts with the same keywords in a short amount of time, leading to a rapid spread of information. On the other hand, Facebook (whilst not examined explicitly in any of the reviewed studies) is more designed to show content from people the user knows or ‘follows’ rather than what is popular across the platform at a given time.

Notably, five studies examined Twitter, a mainly text-based platform. Sinyor and colleagues’ 2 studies examined the impact of suicide-related Twitter events (2020) and tweets from highest level influencers (2021) on subsequent suicide rates and only found an association with the latter. The fact that those with more ‘influence’ may have a more prominent impact on subsequent suicide rates is a stark warning of the lack of safety practices being in place on social media which has been highlighted as significant source of concern (Miguel et al., 2017; Moreno et al., 2016).

The impact of viewing and sharing suicide and self-harm related content

The studies in this review reported a variety of different outcomes related to the impact of viewing and sharing of suicide and self-harm related content online. In line with previous findings (Biernesser et al., 2020; Marchant et al., 2021; Memon et al., 2018), sharing of suicide related content was associated with increased lifetime suicidality (Seong et al., 2021), with posters more likely to report a history of suicide attempts (Liu et al., 2020; Mokkenstorm et al., 2019; Nesi et al., 2021). This finding lends support to the idea that ‘posters’ may already be at higher risk of harming themselves and are struggling with more severe self-harm and suicidality than viewers, presenting a vulnerable group who may be using the online space to express their distress, away from the stigma of the offline world (Lavis & Winter, 2020; Marchant et al., 2017; Wang et al., 2017).

Highlighting the difference between posters and viewers, Seong and colleagues (2021) found that the sharing but not the viewing of content was associated with increased lifetime suicidality. Swedo and colleagues (2021) found that just viewing suicide and self-harm related content may also play a key role in the progression of risk of engaging in harmful behaviours, as participants who viewed cluster-related content had higher chances of experiencing suicidal ideation and suicide attempts even if they had no prior history of either. Attempting to provide an explanation for such occurrences. Liu and colleagues (2020) suggested that high suicide-related social media use (viewing, commenting/reposting and talking about) was the mediator of progress from suicidal ideation to attempt. Such findings also suggest that more engagement with harmful content may result in increased risk of self-harming and suicidal behaviours. At the same time, the internet and social media may facilitate the spread of content and subsequent behaviour in a contagion-like manner (Cheng et al., 2014). Such spread resembles the Werther effect, lending support to previous studies suggesting that suicidal and self-harm behaviours may not only spread via offline direct social ties (Christakis & Fowler, 2009) but also via indirect contact online (Arendt, 2018; Brown et al., 2018; Hawton et al., 2020; Hilton, 2017; Lupariello et al., 2019). However, such connections are difficult to detect as links between individuals may be different than offline, often influenced by platform algorithms (Marchant et al., 2017; Robertson et al., 2012).

The only longitudinal study (Arendt et al., 2019) identified in this review found that exposure to self-harm and suicide-related content on Instagram was associated with higher rates of self-harm, suicidal ideation and emotional disturbance, with exposure at first wave prospectively predicting suicide and self-harm related outcomes one month later. In light of Joiner’s (2005) framework on the significance of exposure to self-harm as a facilitator of later suicide attempts, it may be that online encounters with such content are not qualitatively different from offline experiences, becoming

facilitators of self-harming and thus potentially suicidal behaviour. Furthermore, unlike the offline world, where self-harm and suicidality is stigmatised, posters often report feelings of being accepted, appreciated and part of a community (Brown et al., 2020; Lavis & Winter, 2020). At times, they may even receive compliments on their posts depicting their own self-harming (Guidry et al., 2020). Whilst some aspects of the community support may have value for recovery (Lavis & Winter, 2020), Swedo and colleagues' findings during a local suicide cluster indicated that it may lead to users without a previous history of suicidal or self-harm behaviours imitating what they encountered online (Swedo et al., 2021). Whilst unique in examining social media use during a suicide cluster, the findings of this study are a source of concern as the internet may remove the traditional physical barriers of suicide clusters, leading to a potentially wider and further spread of content amongst people (Hawton et al., 2020).

Patterns of 'spread' of content between platforms and people and attempts to moderate

The cross-platform presence of trends, such as the Blue Whale Challenge (Dardas et al., 2021; Khasawneh et al., 2020; Lupariello et al., 2019), suggest that much like offline (Christakis & Fowler, 2009), suicidality and self-harm related content 'spreads' between people, but at a more rapid rate, unobstructed by geographical boundaries. The findings of this review also highlight the importance of online communities in the 'spread' of this content. Studies, regardless of platform, reported complex engagement with suicide and self-harm related content, going beyond positive and negative impacts which have been the traditional narratives around the relationship between social media and mental health (Hawton et al., 2020; Marchant et al., 2021; Marchant et al., 2017). For example, findings that for psychiatrically hospitalised adolescents being triggered by content was an important part of identity and recovery (Nesi et al., 2021) is seemingly at odds with others reporting struggles with being triggered (Weinstein et al., 2021).

Those escaping the stigma of the offline world may find themselves in a community that on the surface meets their needs of wishing for immediate, personalised and non-judgmental support (Biddle et al., 2020). However, the lack of moderation and formal sources of support make this space a dangerous one to navigate, easily leading people down the path of engaging in increasingly harmful behaviours (Khasawneh et al., 2020; Lupariello et al., 2019).

There have been attempts to restrict the posting of graphic images of self-harm on Facebook and Instagram (Davis, 2019; Mosseri, 2019), with policies around suicide and self-harm and reporting tools on Twitter (Alhassan et al., 2021). The effectiveness of these measures remains questionable, as

communities often simply use more ambiguous hashtags which the moderators cannot keep up with (Moreno et al., 2016). Moreover, it has been suggested that these processes may result in the removal of helpful aspects and resources of online communities (Lavis & Winter, 2020), leaving users without guidance when seeking help (Miguel et al., 2017). The occurrence of these encounters in the context of the normalisation of harmful behaviour previously observed (Arendt, 2018; Hilton, 2017; Lewis et al., 2012; Seko et al., 2015) suggests a need for more structured and formal support for these online spaces.

However, only two studies examined formal sources of support for those struggling with self-harm and suicidality, with both finding that some participants visited for the purpose of engaging with high-risk materials (Biddle et al., 2020; Mokkenstorm et al., 2019). Whilst this may signal that these websites are reaching people as intended – as a lifeline for those seeking help –, participants reported that the websites often failed to make a meaningful impact to their wellbeing. They wished for responsiveness, resource sharing and tailored support for those wanting to escape the offline stigma, features that were commonly appreciated in studies examining user generated content.

Limitations

This review provided an update on the state of the literature relating to the impact of social media on self-harm and suicide. The findings of this review should be considered in light of the following limitations in both the included studies and review methodology. Whilst not intended to capture studies pre-2019, this restriction may have led to potentially relevant work prior to 2019 not being included.

Limitations of the included studies begin with the type of data examined, with seven studies (Guidry et al., 2020; Khasawneh et al., 2020; Lavis & Winter, 2020; Phillips & Mann, 2019; Simms, 2020; Sinyor et al., 2020; Sinyor et al., 2021) not reporting participant demographics due to their focus on the content of posts and other online metrics. Furthermore, even in the studies where data was collected directly from participants, full demographic details were often not reported (Ekpechu, 2020; Seong et al., 2021; Swedo et al., 2021), with eight studies also not specifying the platform examined. The lack of data therefore makes it difficult to evaluate patterns across the study findings relating to these characteristics.

Another limitation of the included studies is that most relied on self-report measures or data extracted from posts, lacking validated measures and consistency across studies. Therefore, whilst

similar impacts may have been observed across studies, one must be cautious with drawing conclusions based on this due to methodological differences. Furthermore, only one study (Arendt et al., 2019) examined changes over time. Even with the two data collection points being one month apart, such designs only allow for the examination of short-term impact on participants. Further research is needed to examine the impact of long-term or repeated exposure to such content and potential links with self-harm and suicidality outcomes.

This review only identified two studies where the average age of participants was over 25 years (Kirtley et al., 2021; Mokkenstorm et al., 2019). Whilst most previous research focused on adolescents or young people, often defined as people under the age of 25 (Dodemaide et al., 2019; Marchant et al., 2021; Memon et al., 2018), with only one review not restricted by age (Nesi et al., 2021). There may be qualitative and quantitative differences in the impact on older generations, suggesting a potentially under-represented population in the current research.

Finally, the current review encompasses a time period when many platforms were in the process of implementing policies and guidelines around suicide and self-harm related content. Whilst Lavis and Winter (2020) purposefully examined the impact of new moderating guidelines, it is likely that a significant proportion data captured in the studies in this review would now be subject to different publication guidelines. Consequently, one must be cautious interpreting the findings, as newly published research is likely some years behind actual usage trends, with the current review likely quickly becoming outdated due to the rapid expansion of this field.

Implications for research, policy and practice

Research

Given the findings that self-harm and suicide-related content may have a serious impact on wellbeing, including increases in lifetime suicidality, it is clearly a priority for research to further explore this complex relationship. Whilst many of the major social media platforms have been implementing policies and guidelines around self-harm and suicide-related content (Facebook, 2019; Instagram, 2019; Twitter, 2019), the impact and effectiveness of these guidelines needs to be evaluated (Ng et al., 2021). Such efforts could also examine adherence to safe reporting guidelines in online spaces, which has been shown to have a positive effect (Sumner et al., 2020), especially in light of findings that the unmoderated posts of high-level influencers may be associated with increased subsequent suicide rates (Sinyor et al., 2021).

Furthermore, the effectiveness of trigger warnings, censorship and signposting should be further investigated as users reported disappointment with current content and practices in both studies examining formal platforms (Biddle et al., 2020; Mokkenstorm et al., 2019). When evaluating such efforts, researchers should be mindful of the rapid transfer of communities and content in response to censorship and moderation (Lavis & Winter, 2020) and focus on effective ways to maintain easy access to formal resources and engage effectively with these online communities.

Finally, efforts to address the methodological issues identified by the current study as well as by Valkenburg and colleagues (2022) are key to the advancement of research into social media. Improvements in research design, such as the use of universal definitions, standardised measures and longitudinal data collection could support the establishment of strong evidence base in this field. Furthermore, more flexible designs, such as 'living reviews' may be necessary to keep up with the rapid pace of social media and changing user habits (Elliott et al., 2014).

Policy

A number of studies in this review focused on young participants during a developmentally crucial period in their lives. These users may encounter information related to self-harm and suicidality online for the first time which could have a significant impact on their wellbeing, as they may not be aware of the harmful nature of content or the sources of support available (Miguel et al., 2017). To promote safe practices, policymakers should focus on early intervention, potentially through increased online presence of formal resources and professionals embedded in online communities, and they should evaluate the impact of such efforts on subsequent self-harm and suicidality-related outcomes in experimental studies. This area has been noted to be underutilised, with recent calls for more evidence-based support and guidance to make the most of the opportunities presented by social media for the spread of helpful information and interventions (Dodemaide et al., 2019). Swedo and colleagues' (2021) investigation of an active suicide cluster is a promising effort in rapid response to an ongoing crisis. Co-production of materials, guidelines and support systems may be a fruitful avenue for effective intervention implementation, with promising results seen in similar efforts in cyber security (Chang et al., 2018).

In light of debates about legislation and the duties and responsibilities of social media platforms (e.g. Wall Street Journal, 2021), many have called for more transparency for algorithms, accountability for harms and thoughtful solutions to address engagement-promoting mechanisms that present increasingly extreme content to young people (e.g. House of Lords, 2022). The Joint

Scrutiny Committee, commenting on the Online Safety Draft Bill (2022), recommends increased efforts for the online protection of children and young people, including calling for platforms to take more responsibility to ensure they cannot access potentially harmful content. As the current designs promote engagement without considering the potential harms of increasingly extreme materials presented, this needs to change by 'designing out' (5rights Foundation, 2022) these features in favour of a safety-by-design rather than a risk-by-design approach.

Perhaps such improvements in the design and policies of platforms could be achieved through consultations with young people, professionals and organisations who could utilise knowledge about what is harmful for young people when accessing online spaces and account for this in the design of the platforms.

Practice

Risk assessment and management was also not routinely present in the current studies, with the focus often being on exploring usage patterns and associated suicide and self-harm related outcomes. Clinicians should focus on ways of promoting safer online habits and an increased presence of formal support online. This is especially pertinent as in the reviewed studies many posters received no responses to their expressions of distress (Simms, 2020), which at times included posts with graphic details of self-harm and suicide (Guidry et al., 2020). Providing support to these posters may be of clinical value and efforts should be made to ensure people expressing distress online are responded to. In line with Marchant et al's (2021) recommendations, there may be clinical value in exploring access to and engagement with self-harm and suicide-related content in clinical settings and in promoting 'digital hygiene' to safely manage these encounters.

Mental health professionals are in the position to be able to offer education to staff and to young people directly through school-based intervention programmes. This could focus on the promotion of coping skills and resilience to support young people to negotiate interactions online. It might be especially useful to focus on those groups of young people who may be more vulnerable to mental health difficulties. When designing these interventions, it is key to involve young people in co-production of any programme to gain a better understanding of the topic as well as keep up to date with the relevant platforms, trends and concerns.

From the social media perspective, platforms could be incentivised to use their engagement-promoting algorithms to include recommendations of relevant mental health services and resources

for young people rather than thoughtlessly promoting high-risk content in pursuit of engagement. Furthermore, platforms across the board are accused of regularly allowing behaviours going against their terms and conditions (Centre for Countering Digital Hate, 2021), highlighting the issue of a lack of responsible monitoring. Given the accounts of harm described in many of the studies, social media companies should use psychologically informed guidance on age restrictions and the enforcement of restrictions on content.

Furthermore, in light of young people's dissatisfaction with impersonal content (e.g. Biddle et al., 2020), social media platforms should utilise their tools and resources to develop customised responses offering personalised support to young people based on the content they have accessed (e.g. chat-based support staffed by trained professionals or direct links to relevant services, such as eating disorder or suicide prevention services determined by content accessed).

Conclusions

People increasingly live their lives online, where the traditional barriers of the physical world are removed, getting access to data and connection with others at their fingertips. Young people are progressively fleeing the stigma of the offline world to read about and discuss sensitive topics such as self-harm and suicide, with the current review providing a timely update on Marchant et al's. (2021) recent findings on the impact of such activities.

It has become clear in recent years that there is more to the relationship between social media and mental health than a simple dose-response (Hawton 2020; Nesi et al., 2021). The findings of the current review are in line with such indications that the viewing and sharing of content and mechanisms of impact are complex issues, with social media and online activities potentially taking the role of a facilitator in the spread of often harmful information. It has also become increasingly clear that people's motivations for engaging with this content is a complex and poorly understood process with generalised bans unlikely to bring meaningful changes. Clinicians and researchers have an important role to ensure the needs of this group are met and that the opportunities for support online are utilised in thoughtful ways.

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Part 2: Empirical paper

“It’s *cool* to feel sad”: A thematic analysis of the social media experiences of university students who have self-harmed

Abstract

Background: Suicide and self-harm rates amongst young people have been identified as a public mental health concern with emerging links to social media use.

Aim: The current study aimed to qualitatively explore the social media experiences of university students who have self-harmed, as they have been identified as a group vulnerable to suicide.

Method: Semi-structured interviews were completed at two time points with students aged 21 and under who have self-harmed whilst at university, with transcripts of interviews analysed using reflexive thematic analysis (Braun & Clarke, 2021).

Results: Three organising themes were identified: 1) Instagram vs reality, 2) A double-edged sword, 3) Curating online spaces. The analysis provided a developmental overview of patterns across students' experiences online, identifying negative social comparisons, the romanticisation of mental illness, and the development of their insight and rules to engage with social media in a helpful way.

Conclusions: The study provided an insight into the evolution of the online lives of students who have self-harmed, highlighting key modifiable risk factors that researchers, policymakers and clinicians could meaningfully target to promote 'digital hygiene' and the reduction of potential harm from social media.

Keywords: social media, internet, self-harm, suicide, young people, university students, qualitative, thematic analysis

Introduction

Suicide is a leading cause of death worldwide and has been deemed a public mental health concern (WHO, 2019). In young people aged 15-29, suicide is the second leading cause of death (WHO, 2018) after accidental injury, highlighting a significant issue of preventable deaths. Amongst young people, university students are a specific group that is at increased risk of suicidal thoughts and behaviours, with nearly a quarter of university students experiencing lifetime suicidal ideation (Mortier et al., 2018).

Suicidal ideation and attempts as well as non-suicidal self-injury are significant predictors of death by suicide (DeVillie et al., 2020; Franklin et al., 2017; Ribeiro et al., 2016), with up to 30 times higher risk of suicide amongst those who self-harm (Hawton et al., 2020). Self-harm, referring to physical injuries as well as eating disorders and substance abuse (Shanahan et al., 2019), has been on the increase in the UK, particularly amongst girls aged 13-16 (Morgan et al., 2017), with over 15% of 14-year-olds having self-harmed (Patalay & Gage, 2019) and 7% attempted suicide by age 17 (Patalay & Fitzsimons, 2020).

A concern amongst professionals is the low rates of help-seeking (Kidger et al., 2012) and the lack of effective interventions for these populations who are at high risk of suicide (Harrod et al., 2014).

Identity development in the online world

Despite its ubiquitous presence, little research to date has focused on online activities as a potential risk and protective factor for suicide in young people. According to the Office of National Statistics, 92% of adults use the internet, with 99% of those aged 16-44 being regular users (ONS, 2020). Furthermore, the average adult spends nearly seven hours on the internet per day with 2 hr 27 minutes of this being spent on social media, the largest single share of connected media time (Datareportal, 2022).

Young people are often at the forefront of the adoption of new technologies and thus are well situated to focus on when exploring the impact of social media use on mental health and wellbeing. The increased attention to this age group is important as this is a period when people often begin to experience difficulties with their mental health (Murphy & Fonagy, 2012), and little is known about the impact of online activities on the developing brain. During the challenging time when young adults

are navigating their social landscapes and 'trying on' different identities, the internet may become a significant influence (Duffy, 2019). Much like in pre-internet times, the construction of these identities is about learning how to present oneself in a way that conforms to the characteristics of the roles they are 'trying on' (Goffman, 1978; Leary & Kowalski, 1990). However, young people now have endless opportunities to curate and construct their identities via the internet. Videos, images and memes (pictures with humorous captions) are shared to express thoughts and feelings in an attempt to gain recognition, or to help people become members of a community and conform to social norms (Duffy, 2019; Leary & Kowalski, 1990). Through collaboration and interactions with others online, young people give and receive feedback, with their emerging identities being co-created in a shared narrative. The potential consequence of these opportunities for sharing personal thoughts, feelings and events is that young people may become hyper-preoccupied with the self and the image-based portrayal that they present on these platforms (Duffy, 2019; Malikhao & Servaes, 2011; Manago, 2015)

The impact of online activities on mental health

The internet clearly has an important role in the identity development of today's youth; however, such influence comes with potential negative consequences. Researchers have investigated the effect of media on mental health for several decades with adverse implications identified, such as the Werther effect (Phillips, 1974), where media depictions of suicide can lead to consumers imitating the depicted harmful behaviour. However, such effects have not only been implicated in media coverage of high-profile events but amongst everyday content and communication online that is easily accessible to anyone with an internet connection (Lupariello et al., 2019). Consequently, exposure to self-harm and suicidal content on Instagram has been suggested to lead to an increase in self-harm and suicidal behaviour in young people (Arendt et al., 2019; Brown et al., 2018). Furthermore, Hilton (2017) found that encountering high-risk content on Twitter may perpetuate and normalise harmful behaviour by increasing the user's sense of community, relatedness and understanding generated by the support other users provide. Other potential harmful online behaviour includes challenges and competitions such as the Blue Whale Challenge which encourages young people to engage in increasingly harmful behaviour ultimately ending in suicide as the final part of the challenge (Dardas et al., 2021; Sumner et al., 2019).

Figure 1

Steps of the Blue Whale Challenge from Dardas and colleagues (2021).

1. Carve with a razor "f57" on your hand, send a photo to the curator.
2. Wake up at 4.20 a.m. and watch psychedelic and scary videos that curator sends you.
3. Cut your arm with a razor along your veins, but not too deep, only 3 cuts, send a photo to the curator.
4. Draw a whale on a sheet of paper, send a photo to curator.
5. If you are ready to "become a whale", carve "YES" on your leg. If not, cut yourself many times (punish yourself).
6. Task with a cipher.
7. Carve "f40" on your hand, send a photo to curator.
8. Type "#i_am_whale" in your VKontakte status.
9. You have to overcome your fear.
10. Wake up at 4:20 a.m. and go to a roof (the higher the better).
11. Carve a whale on your hand with a razor, send a photo to curator.
12. Watch psychedelic and horror videos all day.
13. Listen to music that "they" (curators) send you.
14. Cut your lip.
15. Poke your hand with a needle many times.
16. Do something painful to yourself, make yourself sick.
17. Go to the highest roof you can find, stand on the edge for some time.
18. Go to a bridge, stand on the edge.
19. Climb up a crane or at least try to do it.
20. The curator checks if you are trustworthy.
21. Have a talk "with a whale" (with another player like you or with a curator) in Skype.
22. Go to a roof and sit on the edge with your legs dangling.
23. Another task with a cipher.
24. Secret task.
25. Have a meeting with a "whale".
26. The curator tells you the date of your death and you have to accept it.
27. Wake up at 4:20 a.m. and go to rails (visit any railroad that you can find).
28. Don't talk to anyone all day.
29. Make a vow that "you're a whale".
- 30-49. Every day you wake up at 4:20 a.m., watch horror videos, listen to music that "they" send you, make 1 cut on your body per day, talk "to a whale".
50. Jump off a high building. Take your life.

In addition to the potential negative impact of online activities on mental health, research revealed that helpful guidance and materials from mental health professionals are not routinely present in online spaces, leading to risks that people accessing high-risk content are unaware of its potentially harmful nature and the sources of support available to them (Miguel et al., 2017). This is an especially potent issue as young people find it easier to discuss high-risk thoughts and behaviours online, leading to increased reliance on sharing their distress online (Marchant et al., 2017; Wang et al., 2017). It is also suggested that those in vulnerable groups engage in more harmful online activities (George, 2019).

On the other hand, online activities can be helpful for users, such as the Papageno effect (Niederkrötenhaller et al., 2010), which refers to positive media stories with an emphasis on recovery and capability having positive influence on vulnerable people, potentially aiding suicide prevention and increased access to mental health services. Highlighting the complexity of social media use, people also reported that accessing images of self-harm online acted as a substitute for engaging in the behaviour (Baker & Lewis, 2013), whilst posting own content may act as an emotional outlet, helping people resist urges to self-harm (Seko et al., 2015). Other potential benefits of online activities include reduction in social isolation, access to digital and traditional therapeutic resources and crisis support, with users reporting that acceptance, sense of community and belonging online may counteract the potential negative impacts of social media (Baker & Lewis, 2013; Daine et al., 2013; Rice et al., 2016; Robinson et al., 2016).

Talking about self-harm online

Trying to escape the stigma of the offline world (Gargiulo & Margherita, 2019), young people's online communication may include depictions of distress, loneliness and emotional suffering in text, image or video form, often posted anonymously (Bucci et al., 2019; Naslund et al., 2016; Shanahan et al., 2019). Users would share content tagged with terms related to self-harm, depression, or suicide, with posts characterised by self-hatred and loneliness, often accompanied by graphic pictures of self-harm (Cavazos-Rehg et al., 2016). Qualitative research findings examining both posts and user perspectives revealed themes of belonging and identity being a key element of such online spaces, suggesting a complexity to this phenomenon, where helpful and harmful may be closely intertwined (Lavis & Winter, 2020; Radovic et al., 2017; Shanahan et al., 2019; Weinstein et al., 2021). Young people are accessing and sharing in these spaces to seek connection as well as begin to 'try on' different selves as part of their identity development (Duffy, 2019; Gabriel, 2014). These spaces are utilised by young people as they offer a confidential, safe space to talk about their difficulties without judgment, with this process being conceptualised as a form of informal help-seeking in research (Alvarez et al., 2020; Hilton, 2017; Seko et al., 2015; Seko & Lewis, 2018). However, the risk of unmoderated discourse without professional support is that aspects of pain and suffering discussed online could become a part of young people's identities, making it difficult to choose to seek help and give up a part of the self that is attached to the suffering (Shrestha, 2018).

Online communities

Through discourses around mental illness, suicide and self-harm, online communities are constructed based on shared experiences (Alvarez et al., 2020). Such communities are of special interest as they combine the influences of media with peers (Moreno et al., 2013). Young people not only feel part of a community with their peers, a membership that they may lack in their offline lives, but may also develop deep and intimate relationships with one another that are not restricted by physical boundaries. In these relationships, there is a focus on care and support for their experience of symptoms as well as underlying causes of mental health difficulties (Andreassen, 2017).

A recently emerging issue around online communities is the concept of 'romanticisation' of mental illnesses. The term refers to the depiction of mental health difficulties as more attractive or alluring than the realities experienced by those living with mental illness (Brown et al., 2016; Shrestha, 2018). This often takes the form of posting aesthetically pleasing photos with quotes or captions associated with mental illness and suicide. As young people share on social media to achieve image-based goals and curate their presence centred around how they want to be perceived by others, it is important to understand the potential influences of the portrayals of harmful behaviours, such as self-harm, disordered eating and suicidality related content.

The mental health of university students

University students are likely to face a set of stressors that impact their mental health, including moving away from the family home, loss of friendship groups, academic and financial pressures. This is often a period of transition with little access to traditional support systems of family and friends (Arnett, 2000) which may increase the likelihood that students will turn to online resources to express distress and engage in discussions around their mental health (Wang et al., 2017).

Research so far has mostly focused on young people's experiences of social media as they are often the earlier adopters of these technologies and they are accessing online content in a potentially crucial time in their self and identity development (Gabriel, 2014). Current university students are likely to have been exposed to social media in their formative years. However, little is known about how they made sense of their earlier experiences and in what way these may have influenced their mental health as well as online habits. Furthermore, there is some evidence that young people's views may change over time as they reflect on their experiences (Radovic et al., 2016), with suggestions that the experiences of specific groups of young people such as university students should be explored

more in depth to gain a better understanding of this phenomenon (Dodemaide et al., 2019). This is especially important in light of year-on-year increases in mental health difficulties (Thorley, 2017; UCAS, 2021), the rising rates of suicidal ideation (Sivertsen et al., 2019), self-harm and completed suicides (Gunnell et al., 2020) amongst university students. Alongside sleep deprivation (Russell et al., 2019), increased new media screen time has been suggested to be linked to these difficulties (Twenge, 2020b; Twenge et al., 2018).

The current study

Explorative research on the social media experiences of university students is limited, despite this being a time of significant mental health challenges (Thorley, 2017) which may lead students to seek support online (Wang et al., 2017). Little is known about how the impact of social media on mental health may change over time as most research is limited to cross-sectional studies (Valkenburg et al., 2022), with qualitative studies often focused on exploring specific or temporally limited experiences, such as witnessing online reported suicides (Ekpechu, 2020), peer support (Lavis & Winter, 2020) or experiences with posting images of self-harm online (Brown et al., 2020). The current study aimed to approach university students' experiences with social media from a developmental perspective, attempting to map out their online lives from early experiences, progressing to present day. A further aspect was to gain an understanding of how online self-harm content impacted on university students and how they have learnt to mitigate potential harms and utilise the positives.

Because of the increased risk of being engaged with harmful content online (George, 2019), the current study focused on students who have self-harmed whilst at university and thus may be at higher risk of suicide (DeVillie et al., 2020; Franklin et al., 2017; Ribeiro et al., 2016). As younger students are thought to be at higher risk of experiencing poor mental health (Wyatt & Oswalt, 2013), with difficulties often persisting from mid-adolescence (Auerbach et al., 2018), the particular focus was on exploring the experiences of students aged 21 and under.

Research question

The central question of this study aimed to better understand how university students aged 21 and under who have self-harmed are impacted by social media, what influences helpful and harmful experiences, and how these changed from adolescence to the present.

Methods

Design

Joint project

Data was collected for this study as part of a joint project with AT (Tickell, 2022) with Appendix C outlining the contribution of each researcher.

Student consultation

A student advisory panel was recruited from popular university Facebook groups to advise the researchers on the overall direction of the study. They contributed to the design of the study, recruitment methods and materials, as well as the interview topic guide. The panel provided advice based on their lived experience to ensure that the sensitive topics in the study are explored in a thoughtful and non-harmful manner in the interviews.

Ethics and funding

The study received ethical approval from the University College London Research Ethics Committee, reference number: 16733/003 (Appendix D). Data was collected as part of a larger research project (PsychUP for Wellbeing) and jointly funded by the UCL Clinical Psychology Doctoral Training Course and the British Psychological Society Division of Clinical Psychology, under the Supporting Students at Risk (SstaR) project. Students were reimbursed £5 for completing the online questionnaires and £15 for completing the interview at each time point whilst the BPS funds were used to reimburse the student consultation group members for £20 for each meeting they attended.

Recruitment

A member of the PsychUP team not involved in the current study contacted participants from two previous projects who have disclosed self-harming whilst at university and opted to be contacted about future research. The initial contact email (Appendix E) included details of the study and a link to a survey to express interest and confirm eligibility to take part.

Following this, one of the researchers (AT or KH) contacted potential participants by phone to explain the details of the study and answer any questions they had about participation. All the

participants who chose to continue were sent a link to an online survey which included a participant information and consent form (Appendix F), questions about demographics, mental health history, service use, self-harm history and internet use details (Appendix G). Whilst these were not analysed in the current study, the responses supported the researchers to situate the sample and prompt in the interviews when necessary. A further link allowed the participants to book in a time for the interview with either researcher KH or AT.

Participants

39 out of 207 students responded to the initial recruitment email. 25 participants consented to the wider study (six did not meet inclusion criteria and eight decided not to participate), with the current study focusing on the interviews of 11 students aged 21 and under in order to explore the impact of social media on mental health from a developmental perspective, in line with the research question. 11 participants were interviewed at T1 (April) and 10 at T2 (July-September), due to a participant not responding to the invitations for the second round of interviews. For the purposes of anonymity, participants were assigned a number between 1-11 and quotes are identified by participant number and interview number in the results (e.g. P3T2).

The following eligibility criteria was set for the current study:

1. Student at a London University
2. Aged 18-21
3. Having experienced mental health difficulties whilst at university
4. Engaged in self-harm and/or suicidal behaviour whilst at university

Exclusion criteria

1. Answers to recruitment questionnaire indicating the student is not part of above identified group of students
2. Students who left the university or finishing degree before the end of the 2020/2021 academic year

Interviews

Two interviews were conducted with each student between April and September 2021. The interview questions (Appendix H) were split into two parts with the first half covering help-seeking experiences (AT's project) and the other half focusing on online activities, social media and mental

health. The same interview schedule was used for all the interviews developed by the author, AT, and the student advisory panel.

As part of the iterative development of the interview schedules, two interviews were planned in order to allow for the exploration of emerging topics of interest in more depth in the second interview. Following the first interview, the developmental changes in participants' accounts became a salient theme which led to a clarification of the aims of the study and more focused questioning in the second interview.

In the first interview, the aim was to explore the students' general online life and highlight key themes of what they spend their time on (e.g. news consumption, keeping in touch with people, being involved in activism, gaming, etc.). Questions then focused on gaining more information about perceived links between online activities, behaviour and mood (e.g. "Have you ever noticed your mood impacting on what you do online? Can you give me an example of that?"). Next, students were asked about the people they speak to online and what topics they may discuss in light of suggestions that young people may prefer to discuss sensitive topics online (Marchant et al., 2017; Wang et al., 2017). Finally, they were asked to reflect on the impact their online activities had on their mental health. The overall aim of this first interview was to explore the general landscape of students' online lives as well as to begin to identify patterns across their experiences to further explore in the second interviews.

Following a consultation with the student advisory panel and reflexive discussions with supervisors and colleagues, the second interview focused more specifically on social media and mental health portrayals. More specific questions centred on encountering self-harm online and social comparisons. These topics were explored as a result of the iterative development of the project's focus, in line with research suggesting that many young people who self-harm also access related content on social media platforms (Alvarez et al., 2020; Arendt et al., 2019; Dodemaide et al., 2019; Lavis & Winter, 2020; Weinstein et al., 2021).

For the current paper, in consultation with a qualitative expert (supervisor, Dr Sandra Obradovic), the interviews from both time points are treated as one dataset due to the iterative development of the topic guide. Interviews were conducted on a video-conferencing software (MS Teams) due to COVID-19 restrictions and recorded for verbatim transcription by a research assistant. The interviews lasted approximately 1.5 hours, with 45 minutes focused on the current study (the other 45 minutes on AT's study).

Approach and analysis

When designing the study and throughout data analysis, reflexive thematic analysis (Braun & Clarke, 2021a) was adopted, recognising the centrality of the researcher throughout the research process. This approach is not concerned with objectively analysing data but rather appreciates the active role of the researcher in constructing the themes from the data in relation to the research question. Consequently, themes are seen as being constructed, tested and refined through an iterative process, rather than 'emerging' from the data (Terry & Hayfield, 2020). The aim is to capture recurrent patterns and meanings across the dataset, a process which will inherently be influenced by the researcher's values, interests, experiences and context (Braun & Clarke, 2016, 2021a).

The author approached the research questions from a critical realist stance (Willig, 1999). Critical realism suggests that one cannot simply observe the world and produce knowledge about universal laws as the observer is in fact an active, subjective participant in the process. Critical realism is different from realism in that it proposes that there are no universal truths that could be found in the world but only tendencies or patterns that may explain causal mechanisms. It is also different to constructivism as it is not focused on understanding reality through social discourses; rather it seeks patterns across individual accounts. The critical realist position appeared to fit the focus of the study as the aim was to conceptualise common experiences and patterns across the different individual accounts of participants rather than revealing specific effects or the underlying societal discourses. As part of this view, it is recognised that both agency and societal structures are real and there is a need to investigate them together.

Throughout the project, the author approached the research questions from a mainly inductive, semantic approach. This allowed for an exploration of the participants' social media experiences whilst remaining close to their reality and meanings. At the same time, this stance also acknowledged that the participants' reality does not reflect 'the reality' as universal truth and that the interpretative lens will inherently influence the way meaning is made of these experiences (Smith & Shinebourne, 2012). Starting in an inductive, semantic manner, the author's position moved flexibly on the spectrums of inductive-deductive and semantic-latent meaning at specific points throughout the project. This process is common in reflexive analysis: as the researcher's understanding of the data deepens, they begin to contextualise the findings in relation to the existing literature (Braun & Clarke, 2021a; Terry & Hayfield, 2020).

In line with Braun and Clarke's (2021) guidance, the author employed the six recursive iterative phases of reflexive thematic analysis. Terry and Hayfield (2020) define these as facilitators to engage

with the dataset where moving to and fro between the phases is a natural part of the analysis (see Appendix I for more detail on this process):

1. Familiarisation with the data: immersion in the dataset through repeated readings of the transcripts through the lens of the research questions
2. Generating codes: NVivo software was used to begin to generate short, meaningful labels about the data segments relevant to the research question, resulting in the initial codes
3. Constructing candidate themes: NVivo was used to visually represent the collation of codes into organising themes and themes, attempting to find the best fit that tells the story of the data in relation to the research question
4. Reviewing themes: revisiting the dataset as a whole with the candidate themes as an interpretative framework to establish whether they are the best fit to answer the research question
5. Defining and naming themes: as part of the iterative process, the author kept note of the evolving definitions of themes and refined them, attempting to capture the essence of the themes by naming them
6. Producing the report: excerpts from the transcripts were used to represent common themes constructed by the author through the analysis alongside references to relevant literature

Thematic networks (Attride-Stirling, 2001) representation was then used to visually represent themes and the relationships between them.

Reflexivity

Reflexive thematic analysis sees the researcher's subjectivity as an essential part of the analytic process and a key resource that is engaged through reflexive processes (Braun & Clarke, 2021a). This consisted of a bracketing interview, reflective discussions with supervisors and other colleagues, and the continuous use of a reflective log which are expanded on in more detail in part three as part of the critical appraisal of the project. In accordance with the transparency of the approach, the following segment outlines the personal characteristics, context and previous experience of the author in aid of the reader's evaluation of the current project (Barker & Pistrang, 2005).

I am a trainee clinical psychologist in my late twenties and identify as a heterosexual cisgender female. I am of a mixed ethnic background from a European country. I am a fairly passive user of social media, spending less time on fewer platforms than the participants in the study. Furthermore, I have

a special interest in the use of technology in mental health, having been the lead for online therapy in a previous clinical role. Following the consultation with the student advisory group, I also immersed myself in various social media platforms, registering for those where I did not have a personal account and started to monitor my usage, impressions, and impacts. Through reflexive discussions with supervisors and peers, I came to reflect on my own brief encounters with harmful content on social media as a teenager. I predicted that I may be biased to look for negative experiences in participants' accounts and privilege the experiences of young women due to my own experience of being a young woman on social media as a teenager and the dominant narratives and high-profile cases of harm in the media (e.g. Molly Russel, Tallulah Wilson who are just two of the many young women who died by suicide following a period of engagement with suicide and self-harm content on social media). Therefore, when developing the topic guide, as well as throughout the interviews, I focused on actively looking beyond my initial assumptions and attempted to consciously explore a diverse range of perspectives.

Results

Participants

Table 1

Participant demographics, self-reported mental health difficulties and main social media platform used

Participant ID	Age	Gender identity	Ethnicity	Sexuality	Mental health difficulties	Main social media platform used
1	21	Female	White Other	Not sure	Anorexia, bulimia, anxiety*, ASD*, ADHD*	Instagram
2	21	Questioning	Mixed Ethnic Background	Gay or Lesbian	Depression and anxiety	Reddit
3	19	Female	White Other	Bisexual	Suicidal ideation, borderline personality disorder*	TikTok
4	20	Female	Mixed Ethnic Background	Bisexual	Depression and anxiety	TikTok, Youtube
5	21	Female	White British	Gay or Lesbian	Depression*, anxiety*	TikTok
6	20	Female	White British	Bisexual	Depression, anxiety, anorexia, C-PTSD, Emotionally Unstable Personality Disorder **	Instagram
7	20	Female	White Other	Gay or Lesbian	Depression*, anxiety*, disordered eating*, sensory hypersensitivities*	Instagram
8	20	Female	White Other	Bisexual	Depression, anxiety	Youtube
9	21	Female	White British	Gay or Lesbian	Depression, anxiety, disordered eating	TikTok
10	21	Transgender Male	White British	Bisexual	Depression*, anxiety*	TikTok, Instagram

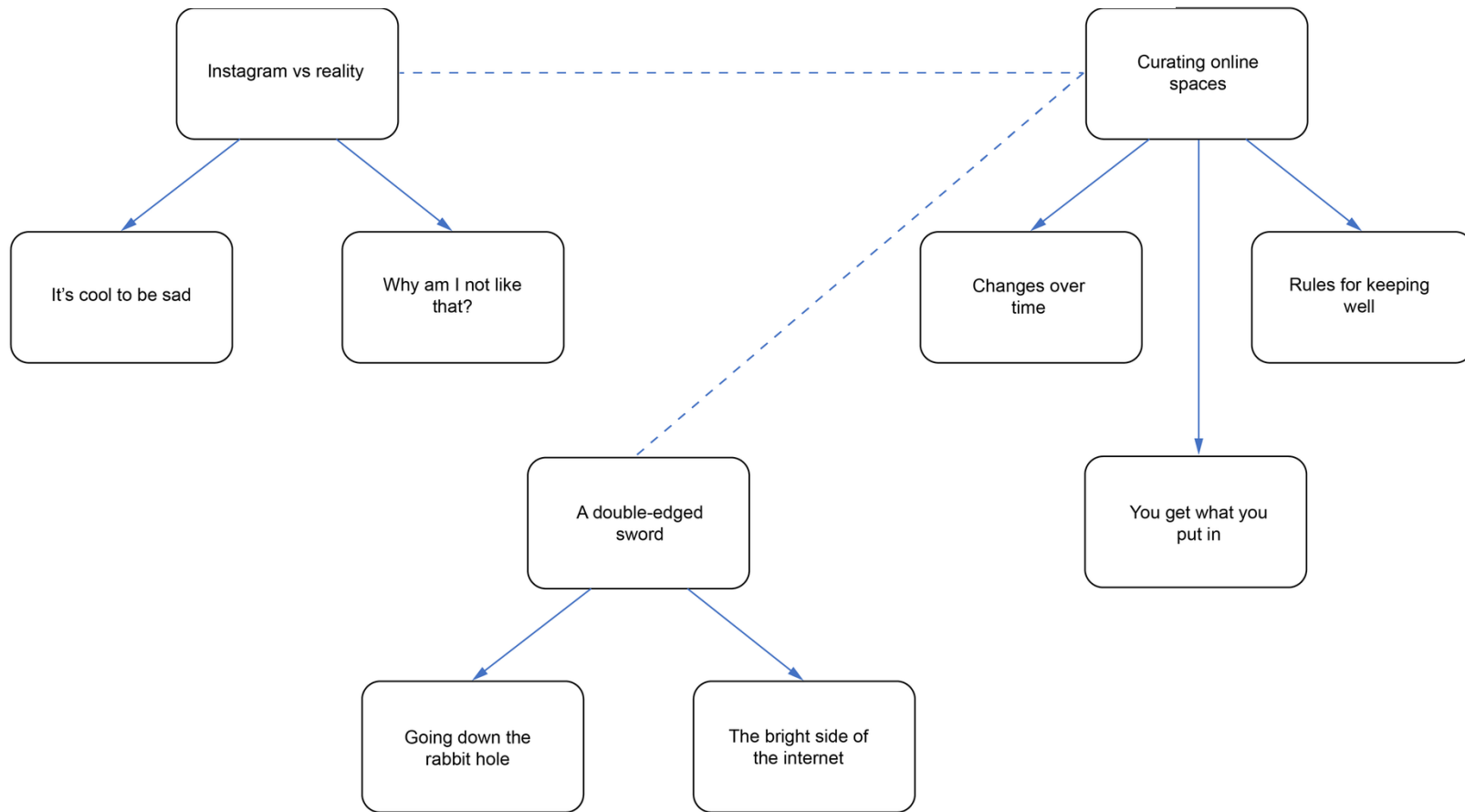
11	21	Female	Mixed Background	Ethnic	Heterosexual	Depression and anxiety	Instagram
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* Self-reported but no confirmed diagnosis

** Participant's preferred diagnostic label

Figure 2

Thematic network of results (Attride-Sterling, 2001)



'Instagram vs reality'

This organising theme refers to a modern online phenomenon of 'Instagram vs reality', where people compare appealing, often edited photos of someone with disadvantageous pictures of the same person. The expression also aims to convey the illusionary nature of social media, where often what is posted is not reflective of reality. Students spoke about how people present an idealised representation of themselves online, whether it is mental health and illness, body image, diet, wellbeing, productivity or achievements. What is left unsaid in these posts and voiced by the students is the knowledge that these images are often a cherry-picked, polished and romanticised version of the person, and they are ultimately not real. However, this realisation only comes with age and experience and when they were younger, many found themselves aspiring to be like the portrayals and went to great lengths to achieve this. Students recounted first encountering these presentations as teenagers with their curiosity drawing them further in to engage with these materials and explore what is behind the portrayals. This represents the early stages of their journey in the development of their online world and the process of exploration without much supervision, censorship or reflection at the time.

It's cool to feel sad

Students spoke of the desire to be like the people who broadcast their suffering or pain in a 'romanticised' way. In these posts suffering is portrayed as something beautiful that people should strive to achieve. Students looked up to these idealised people as role models who they assumed must have the 'perfect life' – as what they portrayed was perceived as perfect. As they looked closer however, they were faced with the dissonance of the portrayal of pain and sadness as something that is 'beautiful' and desirable:

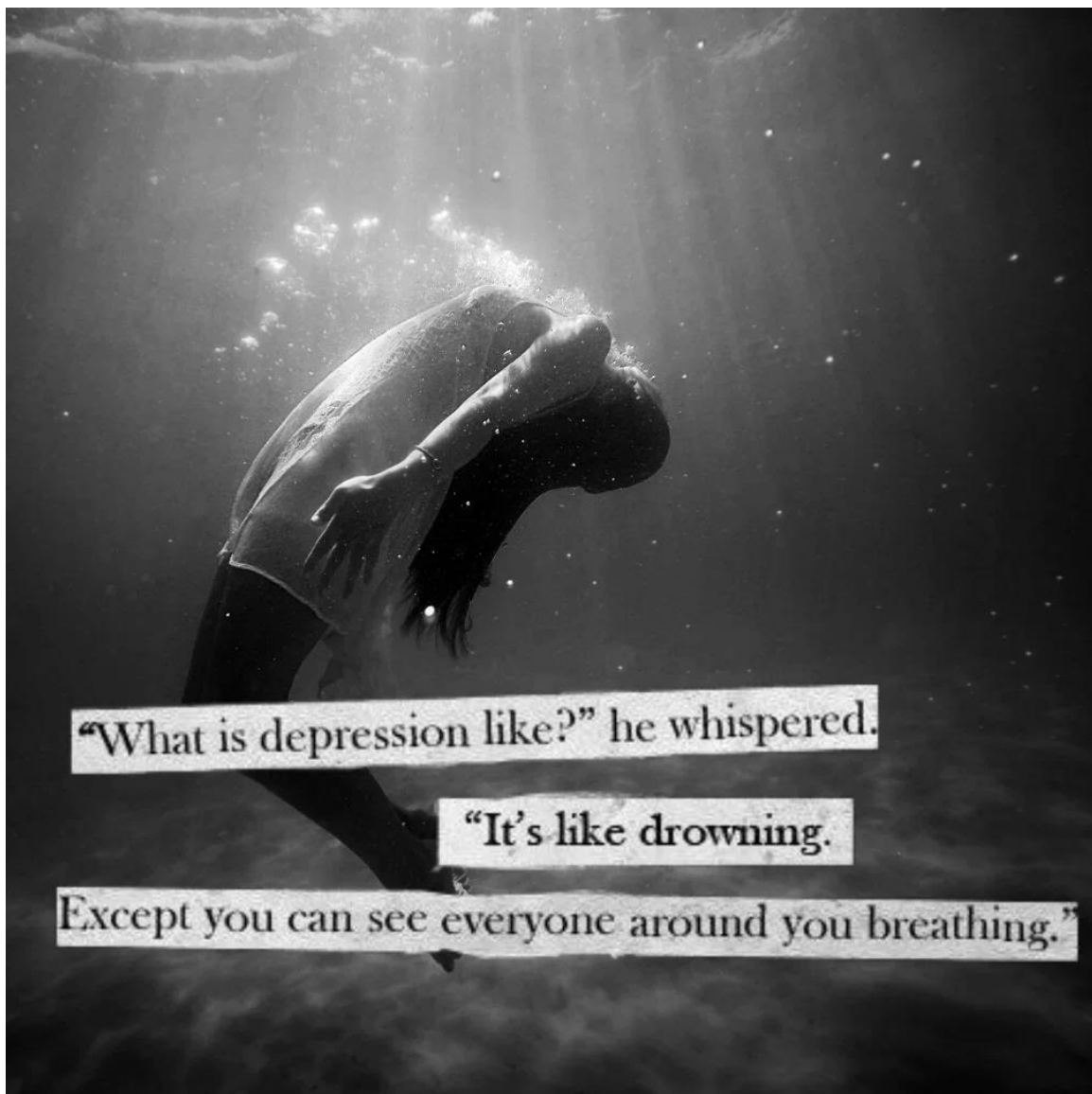
I think there was a whole phase on Tumblr where it was romanticising depression and eating disorders [...] it's very subtle because at first you kinda just think 'oh no, I would never do that' but you don't really understand it and then slowly the more content you see [...] I don't know how, but they really managed to reel you in and then make you see, make you feel that being depressed is the cool thing and it's a thing that's beautiful and sad and not just sad. P3T1

Delving deeper to attempt to understand the dissonance of beauty and suffering, students recounted becoming entangled in adopting the behaviours the posters alluded would lead to being like the portrayed ideal. These may be ways to restrict eating, self-harm or begin to engage in any

behaviour that promotes them feeling the sadness and pain they have witnessed online. These patterns of behaviour were then further strengthened by the validation and explanations for suffering from the online community, often in the form of quotes such as: *“Depression is like, slowly drowning, and you can see everyone still floating, and they can't really do anything about it. (P11T1)”*

Figure 3

The image version of the above quote identified by the author in a google search, likely originating from a now deleted Tumblr blog.

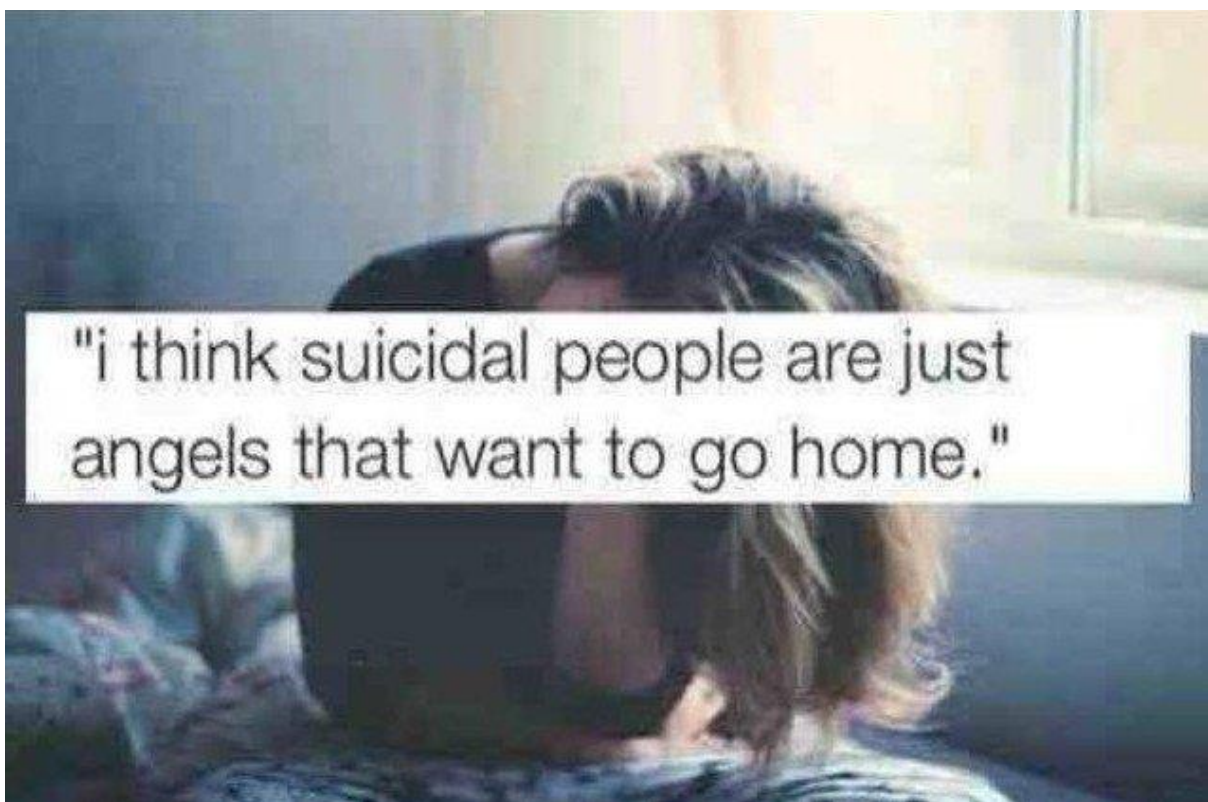


Such ‘romanticisation’ of mental health difficulties may support the idea that it is a “hero’s struggle” that the authors of the posts are going through (Shrestha, 2018). The unvoiced suggestion

behind these posts is that those who self-harm, restrict eating or engage in other harmful behaviours deserve admiration for the pain they go through to achieve the beautiful aesthetic they present to the world through their posts. However, students highlighted that the danger is that those with existing mental health difficulties may not want to seek help and lose the ideal they are aspiring to, and those without mental health issues may begin to engage in harmful behaviours that could lead them down the path of developing difficulties themselves.

Figure 4

Image and quote on Tumblr as an example of 'romanticising' suicide from Shrestha (2018)



In these online spaces, suffering and emotional (and often physical) pain had a meaning and signified the membership to a community. Through this membership, self-harm and restricted eating became normalised as part of someone's daily routine (Lavis & Winter, 2020), often presented as helpful tools to cope with the difficulties of life:

There are a lot of communities online that very much celebrate that, and that give you a lot of dangerous tools to further hurt your body in that way. And that was definitely not good. I was very young, and in that way the internet can be very unchecked, and you can stumble across things that are dangerous to you and you, you don't really know it. P7T2

Especially when I was younger, like thirteen, fourteen, it kind of showed me that self-harming was an acceptable way to cope with things, or maybe a good way to cope with things. And, there were periods of like a week or something when I wouldn't self-harm when I was younger, and then I would see those images and then that would make me want to self-harm. P4T2

These accounts suggest that the adoption of social norms as part of identity development may also happen on the internet. The process of being “reeled in” is students beginning to conform to the characteristics of the roles they are adopting, which are the dominant narratives in their online social environment (Goffman, 1978; Leary & Kowalski, 1990). However, the scope of social norms has widened through unlimited access to unrestricted content via the internet (Duffy, 2019) and students described being easily influenced browsing unmoderated content generated by their peers:

Tumblr around 2014 was the worst place to be, 'cause it was just people romanticising self-harm and people diagnosing themselves with mental disorders they didn't have. And also being like 'oh, it's cool to feel sad and it's like a, woe is me,' very much wallowing in their own sadness. But it made them feel better than everybody else? It was a really weird thing. And obviously those sort of feelings, when you're really young, sort of pre-teenager, you're very easily influenced. P3T2

The spread of this worldview and rapid expansion of associated communities may have occurred due to the removal of the physical barriers of the offline world (Duffy, 2019). The unrestricted, 24/7 access to peers' content quickly led to the formation of micro-communities, where people reflected back the same content at each other, with the validity of the content and associated worldviews going unchallenged (Shresta, 2018). An important part of this experience and these micro-communities is the participation in the form of first viewing, then sharing posts as well as making their own contributions to the content. The community membership and the united views of a large group of peers strengthened the perceived validity of the portrayed behaviours and content:

I'd just post things, I never really spoke to anyone in it, I think because the subject topic was almost so deep that it felt like more of a community, 'cause everyone's dealing with the same thing. So that felt like way more of a community than anything else. P9T1

Why am I not like that?

Students also described the process of them being faced with the differences between their real selves and the idealised portrayals of others online. These comparisons involved looks, mental

health, success or productivity, often without the realisation that what is portrayed is not real.

These portrayals also set the standards for what is desirable and the norm people should aspire to (Leary & Kowalski, 1990). Students began to dismiss their own difficulties as not serious enough when comparing their mental health to others'. Therefore, 'ill enough' became being in hospital like many other authors of posts, leading to the denial of own difficulties and avoidance of help-seeking:

Seeing these pictures of people online that had hurt themselves, that had these huge scars put this feeling into me of 'if I was truly struggling, in a way that deserved attention, that deserved help, then I would have scars that big too.' And what I was doing was not deep enough, was not big enough. I remember feeling very embarrassed because I felt for a long time that I was faking the problems that I was having [...] And, and that definitely made me hurt myself a lot more, and a lot more dangerously. P7T2

Such patterns are in line with the findings of Lavis and Winter (2020) who found that to maintain online support from their peers, people can feel that they need to keep showing that they need it which can exacerbate severity of behaviours.

On the other side of these comparisons, students voiced their fear of missing out (FOMO) when seeing others post about positive things such as travels, social events or achievements. They noted that they were aware that these portrayals were likely "cherry-picked as people don't post themselves taking a nap (P4T2)". However, this did not stop them from comparing themselves, often ending up feeling isolated and lonely for missing out on the experiences.

These feelings were especially prominent when students may have missed out on experiences due to their mental health difficulties. The fast-paced nature of social media, where some posts may only be available for a 24-hour period further evoked fears that if they disconnect, they miss out on seeing important events:

I think it can like make you even more down 'cause you just don't really know how to get out of the bad place that you're in. And everybody else is fine without you and then moving on, they're partying and you're just kind of left behind. P3T1

That makes you feel like if you aren't on it in the day, and for a lot of the day, you're going to miss out. And these things are only available for twenty-four hours, and then, you've just missed out. P9T1

The common thread amongst all the comparisons was the influence of the way the ideals were depicted. Students expressed similar desires to be 'beautifully sad' but also wanting to have brunch with a group of friends or wishing they looked like the 'Instagram models'. Whilst depicting different lifestyles and perhaps even identities, the perfect, cherry-picked portrayals had a similar effect of drawing students in.

A double-edged sword

As students began to navigate the social media landscape as teenagers, they all experienced points in their journey where they were faced with the extremities of social media. With this, the realisation came that similar actions could have favourable and unfavourable consequences. That not everything is good or bad and they have some agency in curating their online spaces or being caught up in self-perpetuating cycles.

Going down the rabbit hole

Going down the rabbit hole refers to the process of being sucked in and consumed by the often negative and engagement promoting side of the internet. It is the idea that once students take the first step (i.e. click on a post), they start their internet footprint, whereby algorithms and recommendations will curate the space for them based on their history of engagement. The danger with this is the process of being shown more extreme content and reducing natural access to content that may be at odds with their use history. Combined with a lack of moderation, students can easily find themselves in a 'rabbit hole' that is detrimental to their mental health:

TikTok, I remember, has clearly picked up on my mind that I'm mentally not that great ((laughs)). So without even asking for it now, I can scroll through my feed page and I reckon I wouldn't be able to go through five videos without seeing someone who's in an inpatient unit section or something, who has a massive bandage over their head, 'cause they've hit their head against a wall or something. P9T1

Being reminded of past difficulties and even being triggered was painful and difficult to manage. Students highlighted the flaws and harms that algorithms and recommendations could pose, especially when in a vulnerable state of mind, as the platform would use their history to make recommendations: "But then on Tik Tok, it randomly suggests you things, so you do just get videos of

people in A&E, in mental health wards. Things that you don't actively search for but now are being shown (P5T2)."

I'm only following these accounts I consider, you know, good for myself. But the explore section... I don't open it, ever, and when I have to for some reason, I kind of hide with my hand, because their algorithm is terrible. It's suggesting lots of very different accounts, either focused on weight loss and diet, which is very different from what I'm looking for, or other accounts about eating disorder recovery, but that deal with the matter in a very graphic way, with before/after pictures. P1T2

Once they started going down the 'rabbit hole', it was difficult to get out. Students found their offline life shrinking when mindlessly scrolling "*just to kill time (P6T1)*". Whilst perhaps not triggering in nature, this often impacted their mental health negatively as it would take time away from seeing offline friends, studying or working which would have brought them a sense of achievement and enjoyment. Going down the rabbit hole is also exhausting, draining and overwhelming for students. When they are in it, everything seems bleak and hopeless and the more they let themselves sink in, the worse it gets. This is combined with pressures of needing to be online all the time to be informed to see things that are only available for a short time: "*There's definitely a culture at the moment of having to be on it all the time, you know, like. Everything that happens in the world you're supposed to be knowing about, which can become quite overwhelming (P9T1).*"

Overall, students described their journeys down the 'rabbit hole' as an experience that is lacking agency over their online life and presence. Something that is taken out of their hands, and they are becoming passive consumers rather than active participants in the process.

The bright side of the internet

The bright side of the internet theme represents all the positives that students experienced on the internet. The same online communities that may have introduced students to ways to harm themselves also provided a sense of comfort and understanding that they are not alone in their pain and suffering:

I felt less alone in a way. Because I could... I don't know, other people struggle too, and it's not that I'm happy that they're struggling, it's just that I feel that I'm surrounded by humans, like real humans, compared to perfect images on social media. P1T2

This was often missing from their offline lives with online communities destigmatising mental health difficulties as well as providing helpful explanations and giving students words to express what they were going through:

I think without social media, I probably wouldn't be very aware of a lot of mental health things. Especially going back to when I was younger, I grew up in a culture where you don't talk about mental health, and it's very, very, very stigmatised. And I think having access to Tumblr, when I was 15 or whatever, probably did help a bit to understand that the difficulties I was having were, potentially like, normal, I guess? P2T2

I guess it definitely helped deepen my understanding of my condition, and just made it less of an isolated thing. Because a lot of people go through varying degrees of what I'm going through. I guess it just made me realise that regardless of kind of what you're going through, there are some very similar experiences. And that it's OK, and that a lot of people go through them, and they hang on, so, you're gonna be able to do that too. P8T2

The more recovery-oriented stories and accounts drew people in with raw and real depictions of difficulties – and students appreciated the lack of ‘sugar-coating’. For this to happen, the online portrayals needed to move away from the perfect ideals that are prominent in early experiences of students. This connection was now based on a shared understanding and sameness rather than comparison and aspirations to be like the other – and it opened up the possibility to share the burden of difficulties and receive help from peers.

Online communities have become a safe space to talk about the things that students were feeling away from the stigma of the offline world. Stories of others’ struggles and recovery offered a sense of hope and prompted students to seek support themselves:

There is a sense of you're not alone, like it's not you who is like being damned by karma, or life, or being punished. There is a way through, there are words to qualify this, there is a medical condition to qualify this, it's not your fault. So I think that was definitely comforting for me because once I learnt that there was actually, you know, like a condition behind it, a medical one, it's like, ‘oh, OK, I'm not making this up.’ So you could finally put a word or condition on it, that's actually really reassuring, because it's like ‘OK, now that I know what I've got, then, OK, how do we proceed now?’ P11T2

Moving further away from the negative social comparisons and going down the rabbit hole, students appreciated encountering and searching for positive messages online. This was described as a slow process that is more difficult to integrate into life than the harmful habits. Representation that goes against the ideal that is portrayed in Instagram vs reality was appreciated and connected with students on a level that inspired positive thinking and hope. Seeing imperfect people and sensitive, non-triggering portrayals of struggles widened their perspectives and opened the possibilities for starting on the road to recovery. In the next stage of this transformation of engagement, students may share their own content about mental health with the purpose of helping others the way they have been helped.

Curating online spaces

Following early experiences and realisation of the extremes of the internet, students become aware of the choices they make in their online lives and the associated outcomes which work as a feedback loop for what the platform shows them. This is an ongoing and evolving relationship where, after they have become part of the online spaces, students learn how to own it and make the most out of it.

Changes over time

This theme encompasses students reflecting on changes that have occurred in the way their online activities impacted them as well as their evolving internet habits. Early on, they did not realise when they encountered harmful content and the impact it had on them. Throughout their journey, students learnt to critically evaluate what they see online and resist being drawn into social comparisons.

Unaware as younger teenagers, students now recognised that making social comparisons was part of their search for identity, occurring in an online context:

When you are just more of a teenager, you're just gonna compare yourself to everything, 'cause you're trying to figure out who you are. You're gonna compare yourself to models or people living certain lives and want to be like that. It would just be the nature of being a teenager I think, or just growing up, that would make you compare. Unless you had a really strong sense of self, I don't think you would be able to not [compare] when you are that age. P5T2

Reflecting on their earlier experiences allowed students to begin to develop the ability to evaluate what they see online more critically and thus exercise more agency over the content they now engage with. There was a recognition that online and 'real life' are not the same and require different evaluations of trustworthiness:

'Cause you end up building this portfolio of experiences you can rely on, to judge a situation, right? So when I was much younger, it used to impact me quite a lot when people said 'oh, you should get over it' or 'it's only in your head,' or, you know 'just go for walk.' And then I realised that, yeah, these people didn't really know what they were talking about. So, yeah, I mean with maturity comes collecting experiences and that's always a good thing. P8T2

I think I'm probably a bit more of a critical thinker now ((laughs)). I think generally, now being a bit older, having a bit more experience, I think social media just generally affects me less? 'Cause at the end of the day, I think a lot of people on social media are not people who I would listen to in real life, so why am I reading their tweets and thinking that it's gospel? P2T2

Over time, students' reflections on the authors of posts changed too. Rather than finding comfort in the shared experiences, they were now more critical of the people posting graphic content or 'recommending' self-harm as a coping method for distress, recognising the need to protect young people from accessing such content without support or education:

I'm like relatively OK now mentally, but I feel bit angry towards the people that would post that kind of stuff. I mean, they were probably also people that needed help, but it's not fair to wanna involve other people and younger people, especially that don't know any better to start harming themselves. P3T2

Consequently, they expressed worries about the current generation who has even more access to unrestricted content, who they perceive will have to go through a potentially more harmful journey than them:

I feel really bad for thirteen, fourteen-year-olds growing up watching that because as someone who I feel like is a lot more confident than I was at thirteen, in terms of the way I look like, I'd hate to grow up watching that. Like for me, when I was a kid, the main form of social media I used was Tumblr and I think that that was kind of a big reason that I started self-harming actually. Because it was very glorified on Tumblr and there were no real restrictions, I guess. So, people would post images of their self-harming and like other triggering things. P4T1

In the descriptions of significant experiences of change, students explained that seeing others be more 'honest' and 'real' online helped them let go of unrealistic ideals and expectations of themselves. The representation of the realities of mental health and wellbeing as well as a full range of physical and personality attributes helped normalise differences and being 'imperfect'.

Rules for keeping well

As they engaged with online content and became aware of its impact, students began to develop rules to stay well online. In the face of lack of censorship and trigger warnings, students developed their own methods to moderate content. They would restrict topics and people they followed and avoided platforms they knew would be triggering for them. This progression is in line with general findings in the literature indicating that self-regulation is a key part of adolescent development (Gestsdottir & Lerner, 2008), allowing young people to employ increasingly sophisticated methods to adapt to their context and goals. This is a key developmental milestone in gaining independence and learning to manage priorities of growing demands.

Sometimes, the only effective moderation technique students saw was to withdraw completely from specific platforms:

I had TikTok over summer and deleted it because I saw a video, that was this girl talking about... Like really obviously alluding to self-harm and didn't put trigger warning or anything like that. It was video where she was like 'now showers have started to burn again' in reference to always having cuts and then showering and it burning and I thought I can't be looking at this. P6T1

As students' rules for their online lives developed so did the agency of their usage. They were more able and felt empowered to tailor their online experience to what they wanted, having learned from their past experiences:

I kept getting like notifications when I got likes and I just hated it, and I was like 'don't tell me.' And then I just kind of blocked those notifications and then I was like, 'ah yes, peace, it has returned.' P10T1

You know, the ever-present danger of things that are photoshopped and beautiful and perfect, and you have to realise that those aren't real. I think that's something that everyone deals with in general [...] But I think that's about how you experience social media, how you sculpt your

own experience, what you look at. And I think, being aware of it and then acting accordingly, you can mitigate a lot of it. P7T1

An increased amount of self-awareness and reflexivity allowed for this learning to happen with students developing ways to mitigate the impact of the harmful content they may still encounter:

It's as simple as, I can unfollow someone. Like there was this person I followed that I thought was quite nice, and then they posted this, you know, one of these skinny weight loss teas, that are obviously so harmful. And I was like right, I'm just going to unfollow you now and then just never saw again. P6T1

You get what you put in

In the way students spoke about the internet there was a sense that the internet is unlike the offline world, it is a specific lens through which they can look at things. The internet is a source of endless opportunities and students discovered that it is up to them to utilise this, unlike previously when they felt like passive consumers getting stuck in the 'rabbit hole'. A key feature is the fact that on the internet "you get what you put in", that the process of being influenced is dependent on the consumer.

Unaware of such feedback loops when they were younger, students reflected on the differences in their experiences based on what they "put in". When feeling down and struggling, they may have looked for content they knew would trigger them to engage in self-harm: *"I sought things that I knew would like trigger me and I sought out things that would feed into all of these self-destructive things I'd developed (P7T1)"*. Whilst once on the road to recovery, they would have searched for helpful and positive content:

I cultivated my Instagram very carefully so that it's a mixture of people that I know and who I'm actually friends with and then like sort of queer positive activists and like body positivity, stuff, vegan food. It's very deliberately a positive space. P2T1

Social media played the role of a facilitator and, through algorithms, began to create feedback loops based on the browsing behaviours of the students. They had to make a conscious effort to break the negative cycle and start feeding in recovery-oriented, positive data and curate their online spaces.

It's a little feedback mechanism, I think, where you look, you have a certain feeling, you look for certain things and certain things are fed back to you then that gets you in that mood. But also

in a positive way and in a negative way. And I think because you know that things will then be fed back to you, it's even more important to have a certain control over what you look for. P7T1

With age and experience, students finally learnt to not only be part of the online space but also own it.

Discussion

This study provides an account of the social media experiences of university students who have self-harmed and the evolution of their insight into its impact and associated usage patterns. Using thematic analysis, the author identified 3 organising themes: 1) *Instagram vs reality*, 2) *a double-edged sword*, 3) *curating online spaces*. Students reported social media to be an integral part of their teenage years, with a significant impact on their mental health due to making social comparisons and engaging in harmful behaviours to become more like the idealised portrayals they witnessed online. However, there were also reports of empathy, acceptance and understanding in their online experiences with the recognition of the helpfulness of online communities. The more experience they gained, the more they began to understand the extremities of social media and their agency over their online lives. Finally, through age and experience, they reflected on the changes that occurred over the years and the ways they began taking ownership of their online presence and curate their online spaces to make the most out of them.

The online lives of adolescents and young adults has been characterised by heated debates over the past decades with dominant narratives of harm and danger in the media alongside research revealing a much more complex picture of harms and benefits (Biernesser et al., 2020; Brennan et al., 2022; Dyson et al., 2016; Macrynikola et al., 2021; Marchant et al., 2021; Marchant et al., 2017; Memon et al., 2018; Nesi et al., 2021; Odgers et al., 2020). Some individual studies suggest an association between increased screentime and self-harm and suicide rates as well as depression (Sedgwick et al., 2019; Twenge, 2020b; Twenge et al., 2018). However, a recent umbrella review of social media use and its impact on adolescent mental health found mostly weak or inconsistent associations with a few exceptions of substantial or deleterious associations (Valkenburg et al., 2022). The authors also highlighted the lack of consistency in terms, measures and definitions used in most studies, which may prevent the detection of effects across studies. However, in light of the current study and wider reviews of the impact of screen time and social media use (Odgers et al., 2020), it is possible that particular groups, such as students who have self-harmed may be more negatively impacted by social media than their peers who do not experience these difficulties. It is suggested that for vulnerable adolescents, social media use may have an amplifying effect on mental health difficulties, resulting in repeated exposures to potentially harmful content (Nesi et al., 2018). However, research also suggests that social media may be especially beneficial to young people whose identities may be stigmatised in the offline world due to ethnic, gender, racial or sexual minority status, who may not feel safe to fully express themselves in their offline contexts (Odgers et al., 2020).

The Wall Street Journal (2021) recently suggested that social media platforms have also concluded that engagement with specific content on their website may be harmful for young people. However, this was not publicised until a whistle-blower testified before the US senate, alleging that Facebook (now Meta, who owns Instagram) withheld their internal findings. In the 'leaked' internal presentation published online by the Wall Street Journal (2021) they found that "aspects of Instagram exacerbate each other to create a perfect storm" that send struggling young users into a "downward spiral" in which "mental health outcomes (...) can be severe." Not acting on this information and withholding it from policymakers highlights the ethical issues surrounding this topic, with increasing calls for social media platforms to take more responsibility in preventing harm to their users (House of Lords, 2022).

The findings of the current study are in line with others' findings of the benefits and risks associated with social media use amongst psychiatrically hospitalised adolescents (Weinstein et al., 2021), non-clinical samples (Uhs et al., 2017) and depressed adolescents (Radovic et al., 2017). The benefits reported related to a sense of community that provided empathy, understanding and a safe space to talk about mental health difficulties. In contrast, there were reports of self-denigrating comparisons, unrestricted access to harmful content and being triggered. Adding further insight to these findings, students in this study gave detailed accounts of the progression from first encountering content relating to self-harm and suicidality (intentionally or unintentionally), the impact it had on them and the evolution of their view of the content in light of repeated exposures. Furthermore, the current study explored the development of students' online lives following the initial exposure. Over time, they began to recognise helpful and harmful contents and patterns of engagement and slowly became more "internet savvy" as they learned to take more ownership of the curation of their online experience.

Identity development and social media

As suggested in the current study, young people may use anonymous online spaces to test out different identities as part of their identity development (Duffy, 2019; Erikson, 1968; Pujazon-Zazik & Park, 2010). This is a key task in young people's online lives (Ragelienė, 2016) as they are developing greater autonomy away from the primary attachment figures (Fuligni & Eccles, 1993; Papini et al., 1991), with a need for peer comparison and associated ego validation now being achieved via self-presentation to peer-judgment online (Walther et al., 2011). However, the danger the students described in this study is that this happens at a life stage where they are vulnerable to fluctuations in wellbeing due to their still developing capacity for self-regulation (Berthelsen et al., 2017; Maciejewski et al., 2019). They also reported being more susceptible to peer pressure (O'Keefe & Clarke-Pearson,

2011), with the highest chances of risk-taking behaviours being triggered from online encounters (Shrestha, 2018; Steinberg, 2017). This led to the adoption of unhelpful coping strategies, such as self-harm, restricted eating or substance use originating from the dominant discourses they engaged with online (Griffiths et al., 2018). As a result, some integrated these behaviours and emotional states into their identity or daily routines, making it difficult to escape being caught up in self-perpetuating cycles (Lavis & Winter, 2020).

Students in the study reported being faced with an overwhelming need to resemble the perfect, idealised people, following encounters with such portrayals online. This echoes findings of Throuvala and colleagues (2019) who found that the need for validation from peers is a key tenet of interactions on social media. It is thought that social media is a facilitator for peer comparisons and self-presentation (Mascheroni et al., 2015), leading to the co-construction of ideal standards, impacting on self-esteem and identity development (Boyd, 2007; Meier & Gray, 2014). The danger with this process is that the ideals may steer far from reality, leading to discordance in self-beliefs and online standards (Chua & Chang, 2016).

Over the course of the development of their identity and evolution of their online habits, students learned to take more ownership of the content they consumed, and associated identities they aligned with, mitigating the negative impacts of social media, similarly to the findings of O'Reilly and colleagues (2018). Such control allowed them to curate their online lives to serve helpful purposes, such as engagement with topics of interest, providing and receiving support and feeling empowered from a sense of community and understanding (Hilton, 2017; Weinstein et al., 2021).

The double-edged sword

The problem of basing identities on online discourses and portrayals is that young people may end up encountering increasingly restricted views due to the formation of micro-communities and engagement promoting algorithms (Duffy, 2019; Griffiths et al., 2018). In such spaces, an 'echo-chamber' is likely to develop where community members reflect the same view back to each other, reducing opportunities for their worldview to be challenged (Shrestha, 2018). The engagement promoting algorithms and recommendations of social medial platforms further exacerbate these patterns, which has been a concern highlighted in the literature regarding polarisation, especially in social and political discourses (Cinelli et al., 2021).

In other studies, students reported an expansion of their support network (Best et al., 2014), learning about mental health conditions and treatments (Daine et al., 2013; Rice et al., 2016; Robinson et al., 2016) and the opportunities to express their thoughts and feelings in a safe environment (Keles et al., 2020; Lenhart, 2015; Lilley et al., 2014) as positives of their online lives. Students' accounts of

finding hope in the understanding, explanations and stories of recovery from mental illness online resemble the Papageno effect (Niederkrötenhaler et al., 2010), which refers to positive media stories with emphasis on recovery and capability having positive influence on vulnerable people. Such spread of positive messages of mental health and services has promising implications; however, evidence-based support of its utilisation remains largely unexplored (Daine et al., 2013; Rice et al., 2016; Robinson et al., 2016).

Implications for research, policy and practice

Research

The study revealed complex engagement patterns with self-harm and suicide-related content on social media, with various motivations for repeated use. In line with the suggestions from Lavis and Winter (2020), this indicates that there is a need to explore not only the impact but the motivations and processes behind young people seeking out self-harm and suicide-related content online, as it is likely that such motivations are embedded in the offline contexts of mental health difficulties (Joiner, 2003). Furthermore, there is an urgent need for longitudinal studies exploring the impact of technology on young people's development, as most of today's youth will have access to digital media essentially from birth (Odgers et al., 2020).

Some suggest young people talk about mental health online due to unmet needs in the offline world such as stigma around mental health difficulties, lack of friendship groups and peer support, long waiting lists for therapy, and psychoeducation available to begin to understand mental health and wellbeing (Hilton, 2017; Lavis & Winter, 2020; Shanahan et al., 2019). It is the role of future research to understand and develop ways to better meet these needs. It is especially important for researchers to focus on groups of young people who may be more vulnerable to experiencing mental health difficulties (e.g. young people from socially disadvantaged backgrounds, identifying as LGBTQ+ or as neurodiverse) and thus may be exposed to more harmful content online (Odgers et al., 2020).

Secondly, whilst evidence for efficacy is still lacking, social media based interventions have been shown to be highly usable, engaging and supportive for participants, suggesting it is a fruitful area to explore in experimental studies (Naslund et al., 2016; Naslund et al., 2020). Given the inconclusive evidence from reviews as well as the serious methodological issues associated with the research into social media use (Valkenburg et al., 2022), there is a need to establish definitions, evidence-based, validated measures, and rigorous experimental methods to allow for the exploration of potential causal links (House of Lords, 2022).

Policy

Whilst the main approach of online platforms has been to ban searches for sensitive keywords or place trigger warnings before accessing sensitive content (e.g. Davis, 2019; Mosseri, 2019), this has not been shown to significantly reduce access to the content (Moreno et al., 2016). Instead, the communities simply migrate to more ambiguous tags or words to describe the same content, such as ‘the secret family’ where each mental health difficulty has an associated name, or referring to words phonetically, for example, writing ‘sewer slide’ instead of suicide. Moreover, the ban of specific words leads to the removal of helpful resources that professionals or users have shared, leaving those newly entering this world without guidance. The difficulty lies in the nature of these communities where recovery oriented and harmful support may occur in the same context and attempting to separate these will not work (Lavis & Winter, 2020; Radovic et al., 2017; Shanahan et al., 2019; Weinstein et al., 2021). A focus on co-production and the setting up of Youth Advisory Boards may be appropriate to address these difficulties in the fast-paced world of social media with which current research and policy is struggling to keep up with.

Research suggests that regularly publishing new content with a ‘personality’ (i.e. content containing, emotion, humour or unique ideas) increases user engagement, whilst directly informative content leads to a reduction in engagement (Lee et al., 2018). Formal support websites (such as charities or the NHS) have been criticised for lacking personalisation, focusing too much on signposting (Biddle et al., 2020). With the increased reliance on online platforms for the delivery of healthcare, policymakers could focus on exploring such technology and techniques that have been shown to be effective in advertising to increase people’s engagement with evidence-based mental health support online.

The current study revealed that students often “didn’t know any better” and were “easily influenced”, highlighting the issue of the mostly still unmonitored spread of information online. Social media platforms can develop more sensitive ways of responding to these issues through co-production with users and experts in the field, as there are no signs of decline in young people’s access to sensitive topics online (Nagata et al., 2022). Considering that billion dollar companies have been alleged to have withheld information from policymakers and the public, targeted policies might be necessary to protect young people from the potential harms of social media use (House of Lords, 2022) Furthermore, targeting screen overuse to reduce the “mindless scrolling” may be a promising target of future policies, which could allow young people to engage more in their offline lives (Altenburg et al., 2016; Griffiths et al., 2018; Griffiths & Kuss, 2017).

Practice

A further modifiable risk factor implicated in the current study is the lack of education on safe internet and social media usage. Adolescents want to learn more about 'digital hygiene' with clinicians and educators having the opportunity to promote safe digital habits, warn of comparative thinking and teach how to evaluate the validity and helpfulness of content encountered (O'Reilly et al., 2018; Rice et al., 2016). This could be achieved through regular training of professionals on the general impact of online activities as well as on recent trends, supporting them to discuss these issues with young people in a way that is inclusive of their digital persona(s) (Odgers et al., 2020). This is not only important for prevention and treatment of mental health difficulties but also as part of developing a therapeutic relationship to facilitate meaningful change in young people's habits outside the therapy room, where most of the learning and recovery occurs (Fonagy et al., 2019).

Furthermore, social media is currently under-utilised for the promotion and delivery of mental health education and interventions. A recent meta-review of systematic reviews showed only minimal effectiveness of social media public health and medicine interventions, however, there were noted benefits for patients for improved psychological functioning and psychosocial support (Giustini et al., 2018), which has been shown to be an important part of the therapeutic journey of self-harm cessation (Kleinberg & Ligett, 2013). Recovery stories of peers and celebrities have also been noted to be inspiring in the current study, echoing the desires expressed by others for more lived-experience content (Valkenburg et al., 2022; Biddle, 2020). More professionally developed and monitored campaigns on social media could have a positive impact on consumers' mental health, such as the Papageno effect (Hilton, 2017, Valkenburg et al., 2022), in which stories of recovery spread on social networks, inspiring and giving hope to users and publicising sources of support available.

Limitations

The current study recruited a small purposive sample appropriate for exploratory purposes (Braun & Clarke, 2013) but larger, more diverse samples should be used to further explore these experiences across different populations. The participants in the current study were mainly young women who identified as white, a pattern which has been noted in the representations in the online posts examined in previous studies (Shrestha, 2018). Whilst the sample is not representative of the university population, it fits previously established findings that young women are more likely to self-harm than young men (McManus et al., 2019). Furthermore, whilst not attempting to generalise due to the qualitative nature of the study, a further participant characteristic that is important to note is

sexuality. Only one participant identified as heterosexual, a proportion that is not representative of the university population or previous research findings on self-harm amongst young people with different sexual orientations (Batejan et al., 2015; Irish et al., 2019; Marchi et al., 2022). In light of recent research, it may be that that young people who identify as LGBTQ+ rely more on online spaces to discuss distressing experiences (Odgers et al., 2020) and thus perhaps LGBTQ+ students have taken more interest in the current study due to more experiences with social media. It is however important to note the study does not capture the experiences of the participants who did not respond to the initial recruitment email and their experiences may differ in meaningful ways.

A further limitation of the study is that data was collected via interviews, which is not a 'natural form of data' and has been suggested to be overused in qualitative research (Terry & Hayfield, 2020). Whilst the author consulted with experts by experience and followed guidance on researcher reflexivity throughout the process (Braun & Clarke, 2021a), future studies may benefit from synthesising a wider range of sources. Other primary data such as focus groups (Throuvala et al., 2019) or analysis of posts (Hilton, 2017; Shanahan et al., 2019) could also provide a richer overview of the topic and valuable insight. The temporal validity of findings also needs to be considered as social media is rapidly changing and research is struggling to keep up the pace. For example, many students spoke about self-harm and suicidality content on TikTok (a short video-based social media platform), however, the author's recent systematic review (Part 1) on publications between 2019 and 2022 did not identify any studies that explicitly examined this platform in relation to self-harm and suicide content.

Finally, the students in the study were recruited as they have self-harmed whilst at university, and following recruitment, have all disclosed a history of mental health difficulties. They were articulate and reflective in their descriptions of mental health, possibly due to experiences with psychological support previously which may not be representative of the general student population. It would be important to explore the online experiences of students without mental health difficulties to provide a richer picture of a variety of experiences of suicidal and self-harm content on social media.

Conclusion

The current study allowed for a qualitative exploration of patterns of influences of social media on students' mental health. Common themes of social comparisons and 'romanticisation' of mental illness were identified in addition to a developmental account of students' emerging insight into their online activities and attempts to mitigate the negative impacts. Common threads identified in these accounts were 1) the lack of agency in the initial encounters with social media, 2) the slow

and effortful development of critical thinking and 3) 'rules' to browse safely in order to make the most out of all the positives social media has to offer. Potential links to identity development and the role of social media in this process was discussed, highlighting the risks of unrestricted access to unmoderated content at a developmentally crucial stage. Whilst general literature on this topic is hindered by methodological issues, the study provides a clear account of students experiencing harm as a result of their social media activities, highlighting the need for increased efforts to mitigate such experiences. Recommendations are made for researchers to focus on the developmental impact of social media use using longitudinal studies and utilise social media for the delivery of mental health education and interventions. Policymakers and clinicians can play an important part in promoting 'digital hygiene' to increase young people's ability to critically evaluate the validity of what they see online.

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Part 3 – Critical appraisal

Introduction

The purpose of this chapter is to outline my experiences with conducting my research. I will attempt to summarise my personal experiences going through the 2+ years of my research project, personal connections to topic and an evaluation of my role as the researcher in the process and subsequent dilemmas. This will be supported by summaries of reflexive discussions, excerpts from my research journal and supervision notes. Reflecting on my research journal and countless discussions with supervisors and peers, I noticed that personal involvement and immersion, reflections on methodology, and my role as the researcher were themes dominating these discourses. Expanding on these aspects in the critical appraisal felt true to my experience and important to reflect on to explore my connection with the topic as well as the participants throughout the project.

Aim of critical appraisal

The aim of the critical appraisal therefore is to capture my personal reflexivity throughout the research process and contextualise this in relation to existing literature. I recognise that it is not possible to separate myself from my research topic and that my identities, beliefs, experiences and values have inherently influenced my research (Braun & Clarke, 2021a). Through reflexivity, I hoped to explore and acknowledge these influences and interactions, which is a key process in reflexive thematic analysis (Braun & Clarke, 2021b). 'Bracketing' was a process that supported this, referring to the attempts to hold my assumptions in mind throughout the research project, in order to avoid being drawn into my initial assumptions without questioning (Fischer, 2009). In line with reflexive thematic analysis principles, this supported me to make use of my subjectivity as an asset rather than a hindrance by acknowledging it and holding it in mind throughout the research process (Braun & Clarke, 2021b). The below account of my experiences is hoped to support the reader in contextualising the process and results of my research.

Choice of research topic

I cannot pinpoint the exact moment I decided that I wanted to focus on the social media experiences of students, with my early research journal entries detailing various topics of interests such as body image, help-seeking pathways at university and beliefs about mental health and wellbeing. Amongst these, social media did appear but only fully became the focus after we went into the first national COVID-19 lockdown in March 2020. The more social media became intertwined with everyday life during these periods of forced isolation, the more my commitment to this research topic

clarified. I reflected on my own mindless scrolling and its impact when I could not see friends and family and had nothing better to do within my four walls. With COVID-19 seemingly going nowhere, a digital focus for my study seemed not only appropriate but necessary due to the sudden reliance on digital technologies to keep in touch with each other (Tsao et al., 2021).

The negative impact of social media on mental health stood out as the dominant discourse in media and anecdotal evidence from people I spoke with in the initial phases of research. In my research diary, I began to keep track of these assumptions: “it takes away from *real life*”, “influencer culture is damaging to self-esteem”, “if you have a strong desire and 30 minutes to spare, you can find anything on the internet, even the most horrific things” and so on. I took note of the following headlines in articles describing the impact of social media I encountered throughout my research:

Meet The Girl Behind One Of Tumblr's Biggest Self-Harm Blogs – BuzzFeed, 2013

Inside Tumblr's teen suicide epidemic - The Washington Post, 2015

My daughter was driven to suicide by social media. It's time for Facebook to stop monetizing misery. – The Washington Post, 2021

Social media urged to take 'moment to reflect' after girl's death – The Guardian, 2019

Good social media experiences DON'T outweigh the bad – The Daily Mail, 2018

How to Turn Depressing Social Media Into a Positive Influence – The New York Times, 2020

Teens Say Social Media Isn't As Bad For Them As You Might Think – BuzzFeed News, 2018

Caroline Flack death: Will people now 'be kind' in the media and online? – BBC News, 2020

Finding news articles on the benefits and positives of social media was difficult and effortful, echoing the participants' experiences of attempting to turn their online spaces more positive. I ended up asking about portrayals of mental health and self-harm online in my topic guide as a result of this search. I was curious to hear whether participants' views and experiences are similar to these headlines or if it is a case of 'doom and gloom' amplified by the media (Arora, 2020). A lot of what was shared similar to the above headlines, perhaps suggesting that discourses around social media, mental health and self-harm are dominated by narratives focused on harm. Reflecting on this at the end of my analysis made me wonder what other narratives may co-exist and how to explore them in the future as an extension of the current study.

Immersion in social media platforms

As the study began to take shape, I had the opportunity to recruit a student advisory panel to advise us throughout the study. Students responded to a call for participants on Facebook and became a key part of the research project from early on. The views of experts by experience can add tremendous value to research, policy and practice, however, I was surprised to find their knowledge and expertise are often underutilised for research projects (Horgan et al., 2018). For the current project, it was particularly important for me to bring in a wider range of perspectives (Horgan et al., 2018), and allow the project to not only be shaped by my and my research group's priorities but the priorities of the students as well, as ultimately it aims to serve them (Bolam et al., 2010).

One of the key reflective experiences for this project came from the recommendation of the advisory group, that in order to better understand the world of my participants, I should immerse myself in the social media platforms I will be asking them about. I was grateful for this suggestion as upon reflection, it felt like a blind spot being pointed out to me – I assumed that knowing how platforms such as TikTok work without being a user would be enough for me to be able to make sense of someone's experience with it. The value of immersion has been highlighted as an analytic tool in healthcare research, supporting researchers to identify themes, patterns and categories in qualitative data through an inductive, iterative process, which I felt fit well with my epistemological approach (Borkan, 2021). I came to consider this process part of triangulation – as it was using a different source of data to gain a deeper understanding of my participants' world (Patton, 1999). And when the time came for the interviews, I felt much more aware and alert to the nuances of the students' online world, which painted a more vivid picture of their experiences.

In line with my predicted assumptions in the bracketing interview, I noticed in this chapter that I was immediately focusing on all the ways social media has impacted me negatively during my time of immersion. I noticed myself making more social comparisons, mindlessly scrolling late into the night and automatically opening a social media application as soon as I had my phone in my hand with a few minutes to spare. To account for this, I purposefully noted down positive experiences on a regular basis in order to move beyond my initial assumptions (Terry & Hayfield, 2020). These included becoming a member of 'the plant community' (exchanging tips, pictures and even plants with fellow enthusiasts) and practicing yoga regularly by following along Instagram videos. I gained a sense of enjoyment and achievement from these experiences, but I noticed that I always wanted more and

kept browsing. Furthermore, similarly to participants, I noticed myself paying more attention to negative experiences and the positives did not seem to outweigh them.

Throughout the interviews and during the data analysis, I was struck by how much my immersion in social media echoed descriptions of the participants, with similar themes of comparisons and lack of control, making me feel a sense of alliance with them that felt qualitatively different to a therapeutic alliance. I explored these feelings extensively in my research journal as I was previously focused on my influence on the research project, now being faced with the research project influencing me in ways I did not expect. To my disappointment, I found little guidance in the literature on managing these experiences, therefore, I approached it from the perspective of 'bracketing', in an attempt to hold these assumptions and experiences in mind, rather than trying to separate them from the research process (Fischer, 2009).

The 'researcher identity'

Combining personal experiences with a professional interest became an important topic of reflection for me. I have always had an interest in the role of digital technology in mental health, having been the lead for online therapy in a previous clinical role. In my bracketing interview, I was surprised that I have made rather negative assumptions about students' experiences, with prominent themes of harm and helplessness. I was grateful to have my position challenged in the interview and prompt me to reflect what I will be bringing into the research project. Discussing this in supervision helped me appreciate my role in the research and cemented my commitment to reflexive thematic analysis as my approach (Braun & Clarke, 2021a). It also allowed me to feel more comfortable with moving on the continuum of inductive-deductive throughout the project, as there is recognition that the researcher will inherently bring their own theoretical framework into the analysis, with a purely inductive, bottom-up approaches (Hsieh & Shannon, 2005) being incongruous with my adopted position (Terry & Hayfield, 2020). Disclosing this to my readers was an important part of the writeup process as it allows them to consider the outcome and process of my research taking into account the context in which the research was produced (Barker et al., 2015).

Prior to the interview, I had extensive discussions with my supervisors and peers about the differing identities of researcher and clinician I hold as a trainee clinical psychologist (Barker et al., 2015). In my aim of attempting to understand participants' experiences, I recognised that I needed to take on more of a 'researcher' role to conduct a research, rather than a clinical interview (Mann, 2016). I reflected on how in my 'clinician identity' I would perhaps offer my interpretations or even make

suggestions for the resolution of difficulties in the hope of therapeutic change, which is different to the aims of the research project. However, in line with recommendations (Braun & Clarke, 2013), I relied on many of the same core counselling skills I would use in my clinical work. I spent time in the beginning of the interview building rapport, followed by open questions and an inquisitive, curious approach, allowing students to speak of their experience. I relied on active listening, summarising and reflective skills, trying to carefully stay away from influencing what my participants were saying in ways that did not serve the exploration of the research question.

I was concerned about my lack of experience with research interviews and the participants finding it difficult to open up to my 'researcher identity' where I may not be able to offer as much reassurance, advice and validation as through my 'clinician identity'. Therefore, alongside Alice, we sought to practice our interview schedule with psychology masters students to not only refine our topic guide but explore their experiences of being questioned and our reflections on questioning. Through my previous clinical work, I have come to appreciate the importance of role-plays in developing skills (Lewis et al., 2013), which I feel has greatly contributed to feeling more at ease in the end and the participants reporting no adverse experiences as a result of the interview. I was pleased to hear in their feedback that they in fact found it helpful to reflect on their social media use, as many noted that they rarely have the chance to stop and evaluate in a similar way.

Reflections on methodology

As part of the critical reflection on this thesis, I feel important to note my dilemmas and struggles with my chosen methodology. Such reflection on challenges and learning from these experiences has been conceptualised as an important part of developing 'the researcher self' (Roberts & McGinty, 1995). Braun and Clarke (2013) also note the importance of reflecting on the learning process for early career qualitative researchers and highlight many common challenges I have also experienced.

Firstly, I feel that my topic guide could have been more succinct with some of the interview questions eliciting responses covered by the online questionnaires. The fear of missing something important may have been the driving force behind this, which is noted to be common amongst inexperienced qualitative researchers like myself who still might be too focused on quantitative methodology (Braun & Clarke, 2013). Utilising my own subjectivity did not come easy in the beginning, as I was still too attached to quantitative approaches which are still dominant in psychological research and teaching. Furthermore, I have not yet completed my systematic review when designing the

questions. Reflecting on it now, I feel that a more thorough exploration of existing research through the systematic review (Mulrow, 1994) would have helped the development of a more precise and concise topic guide. However, the learning process I have gone through in embracing the role of subjectivity in research feels like a key experience that I feel most researchers conducting qualitative research in their early careers inherently go through.

The broad topic guide may also be responsible for some of the 'excess data' that was not part of the analysis and writeup of the empirical paper which is a common feature of reflexive thematic analysis (Braun & Clarke, 2013). As I reflect back on the iterative development of the topic guide, the second interview was more focused and elicited responses that were more directly linked to exploring the research question. However, the first, broader interview was also key in developing rapport with the participants, allowing for an exploration of potentially more sensitive topics in the second interview and the revision of the topic guide in order to further explore key themes in more depth (Srivastava & Hopwood, 2009).

During the early drafts of my analysis, my supervisor highlighted my reluctance to 'let go' of codes and move beyond descriptive representations of what was said. I felt the need to capture everything that was said as I wanted to represent all the experiences the students have generously shared with me. I was so concentrated on 'finding' everything that might be in the data, that I was struggling to see the bigger picture. Reflecting on this in supervision and normalising this experience as part of the research process helped me 'let go' of codes, subthemes and even themes if they were not the best fit for the data to answer the research question (Terry & Hayfield, 2020). A key learning point in my supervision notes, following one of these discussions was: "analysis is not just reproducing what was said but the implications of what was said". I held this in mind throughout analysis as well as keeping my research question in sight as I was reading through the transcripts to avoid side-tracking (Braun & Clarke, 2013).

Whilst not an integral part of reflexive thematic analysis, I am hoping to share the results of the study with the participants, inviting them to share their comments and feedback. Even though 'member checking' is not at the core of the quality assessment of reflexive thematic analysis (Terry & Hayfield, 2020), I believe that the participants' insight and reflections could provide a further depth to the understanding this research has provided. Whilst unable to do so due to COVID-19 related delays to this project, I am hoping to do this prior to submitting my empirical paper for publication.

Conclusion

I feel privileged to have gained an insight into the online lives of the participants, and I feel that the findings of the study provide a blueprint to begin to safeguard young people from online harms more effectively. Throughout the research process, I found it immensely helpful to continuously engage in reflexive processes to examine the lens through which my research developed from initial ideas to the final writeup. My immersion in social media and subsequent impact on me was a particularly thought-provoking experience, helping me gain a better understanding of the participants' world and the researcher-research interaction. The exploration of methodological dilemmas and the 'researcher identity' was also crucial to reflect on my role as the researcher, which is key aspect of most qualitative approaches.

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Appendix

Appendix A – Data extraction sheet

	Article Information	Pg. / Para / Table
Paper ID		
Author		
Year		
Title		
Type of study		
Aims		
Results		
Participants Description		
Participant Inclusion/Exclusion Criteria		
Number of Participants		
Age Range		
Mean Age		
Standard Deviation of Age		
Percent Female		
Were participants grouped? If so, how?		
Locality		
Country		
Study setting		
Recruitment Method		
Data Collection Method		
Was the study quantitative, qualitative or mixed methods?		
Is the data direct (recruited participants) or indirect (analysed posts/videos/comments)?		
Time period of study		
Specific Measures		
Ethical Permission		
Did the participants have a mental health diagnosis?		
Diagnosis type/mental health subgroup		
History of self-harm		
History of suicidal ideation		

History of suicide attempts		
Completed suicide(s)		
Were participants divided into subgroups? E.g. self-harm, suicidal ideation		
Were participants taking medication?		
Family history of self-harm		
Frequency use		
Internet medium (e.g. social media, support sites etc.)		
Platform (e.g. twitter, tumblr etc.)		
Images, videos or text-based or both		
Brief description of the content		
Type of interaction with content (sharing or viewing or both)		
Was the encounter with the content intentional or unintentional?		
What were the participants' view of the content?		
Were there any positive impacts?		
Description of any positive findings		
Were there any negative impacts?		
Description of any negative findings		
Findings that do not fall into positive or negative		
Description of other findings		
Was there any change in participants?		
Suggested mechanism of change		

Did participants give any reasons for use, sharing or viewing		
Was the platform moderated? If so, was moderation peer or professional?		
Describe any missing information		
Notes		

Appendix B – Search terms

1. ("social media?" or internet or twitter or facebook or instagram or tik tok or tiktok or tik-tok or snapchat or (social adj2 network*)).ti, ab, id.
2. social media/ or online social networks/ or blog/ or computer mediated communication/ or online community/
3. ((self adj (injur* or mutilate*)) or suicide* or suicidal or parasuicid* or para-suicid*).ti, ab, id.
4. Self destructive behaviour/ or attempted suicide/ or self inflicted wounds/ or self injurious behaviour/ or self mutilation/ or suicide/ or suicide prevention/ or suicidal ideation/
5. 1 or 2
6. 3 or 4
7. 5 and 6
8. limit 7 to up=20190201-20220103

Appendix C: Details of Collaboration in a Joint Project

The current study was conducted as part of a joint project with Alice Tickell, another trainee Clinical Psychologist at UCL and as part of a wider research project investigating student mental health at university. Alice’s research focused on barriers and facilitators of help-seeking for mental health difficulties:

Further details on this project can be found in her thesis submission: Tickell, A. (2022). “Am I really the priority?”: The help-seeking experiences of students who self-harmed while at university. Unpublished doctoral dissertation. University College London, London.

The table below describes the joint and individual contributions of the researchers.

Joint work	Independent work
<p><i>Student advisory group recruitment and 3 online group discussions:</i></p> <p>I co-facilitated the online group discussions with Alice, preparing short presentations and questions for our respective projects.</p>	<p><i>Funding application for participant reimbursement:</i></p> <p>I secured funding from the Doctoral Course in Clinical Psychology to reimburse the participants I interviewed whilst Alice did the same for her participants.</p>
<p><i>Study design jointly, in collaboration with supervisors and student advisory group:</i></p> <p>I worked with Alice, our student advisory group and supervisors to develop the design of the current study.</p> <p><i>Research governance procedures:</i></p> <p>Responsibilities were shared between myself, Alice, our supervisor (LG) and other PsychUP team members in the preparation of the ethics amendment application, data protection amendment application and risk assessment. Whilst various tasks were carried out independently, the final product was reviewed by all team members to ensure consistency and best practice.</p>	<p><i>Research proposal:</i></p> <p>I submitted my research proposal independently, consulting only with my supervisor (LG)</p> <p><i>Systematic review:</i></p> <p>I conducted my systematic review independently (with the exception of previously outlined processes), only consulting with my supervisors (LG, SP, PB).</p>
<p><i>Design of online questionnaires on Qualtrics:</i></p> <p>I worked with Alice on developing the questions relating to demographics and mental health history and we both tested the final questionnaire prior to recruitment</p>	<p><i>Bracketing interview:</i></p> <p>I conducted a bracketing interview with another trainee from my course who was also working on a qualitative project</p>
<p><i>Development of interview topic guide:</i></p>	<p><i>Data analysis:</i></p>

Whilst I developed the interview questions related to social media experiences mainly based on my own research and in consultation with supervisors, Alice and I read the full interview schedule several times and provided each other with feedback to improve the flow and clarity of the topic guide.

Piloting interview topic guide with psychology masters students:

Alice and I piloted the interview topic guide with different masters students independently, however, we discussed the learning and feedback from this experience and used it to refine the topic guide

Recruitment of participants:

Responsibilities for recruitment were shared between myself and Alice based on random allocation and availability

Data collection:

Students booked in for interviews with either myself or Alice, with allocations based on availability in the calendar

Systematic review:

Myself and Alice reviewed 10% of each others' articles at the screening stage as well as 10% of quality appraisals.

Reflexive discussions:

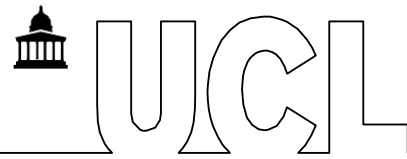
Throughout the research project, Alice and I had several reflexive discussions around broader and more specific topics relating to our individual studies. We also coded one of each others' transcripts with the aim to promote reflection on other perspectives rather than attempting to 'validate' findings.

I conducted my data analysis independently, in consultation with supervisors, who provided guidance and feedback at key periods (LG, SO, SP, PF).

Thesis write up:

I wrote up the thesis (parts 1, 2 and 3) independently, with feedback from supervisors (SO, PB, SP, PF)

Appendix D – Ethical approval



UCL RESEARCH ETHICS COMMITTEE OFFICE FOR THE VICE PROVOST RESEARCH

18th March 2021 Dr Laura Gibbon

Division of Psychology and Language Sciences UCL

Cc: Alice Tickell, Katalin Hajdu, Hanna Hirvonen, Kirsty Nisbet Dear Dr Gibbon

Notification of Ethics Approval with Provisos

Project ID/Title: 16733/003: Student mental health journeys

Further to your satisfactory responses to the Committee's comments, I am pleased to confirm in my capacity as Chair of the UCL Research Ethics Committee (REC) that your study has been ethically approved by the REC until 18th March 2022.

Approval is subject to the following conditions:

Notification of Amendments to the Research

You must seek Chair's approval for proposed amendments (to include extensions to the duration of the project) to the research for which this approval has been given. Each research project is reviewed separately and if there are significant changes to the research protocol you should seek confirmation of continued ethical approval by completing an 'Amendment Approval Request Form' <http://ethics.grad.ucl.ac.uk/responsibilities.php>

Adverse Event Reporting – Serious and Non-Serious

It is your responsibility to report to the Committee any unanticipated problems or adverse events involving risks to participants or others. The Ethics Committee should be notified of all serious adverse events via the Ethics Committee Administrator (ethics@ucl.ac.uk) immediately the incident occurs. Where the adverse incident is unexpected and serious, the Joint Chairs will decide whether the study should be terminated pending the opinion of an independent expert. For non-serious adverse events the Joint Chairs of the Ethics Committee should again be notified via the Ethics Committee

Administrator within ten days of the incident occurring and provide a full written report that should include any amendments to the participant information sheet and study protocol. The Joint Chairs will confirm that the incident is non-serious and report to the Committee at the next meeting. The final view of the Committee will be communicated to you.

Final Report

Office of the Vice Provost Research, 2 Taviton Street University College London

Tel: +44 (0)20 7679 8717

Email: ethics@ucl.ac.uk

At the end of the data collection element of your research we ask that you submit a very brief report (1-2 paragraphs will suffice) which includes in particular issues relating to the ethical implications of the research

i.e. issues obtaining consent, participants withdrawing from the research, confidentiality, protection of participants from physical and mental harm etc.

In addition, please:

ensure that you follow all relevant guidance as laid out in UCL's Code of Conduct for Research: <https://www.ucl.ac.uk/srs/file/579>

note that you are required to adhere to all research data/records management and storage procedures agreed as part of your application. This will be expected even after completion of the study.

With best wishes for the research. Yours sincerely

Professor Michael Heinrich

A handwritten signature in black ink that reads "Michael Heinrich". The signature is written in a cursive, flowing style.

Joint Chair, UCL Research Ethics Committee

Appendix E – Recruitment email



Are you a student with a personal experience of self-harming while at UCL?

We are researchers from **PsychUP**, a research group focused on improving student mental health. We want to understand what could **improve students' experiences of seeking support for their mental health while at UCL**. We would also like to understand the online lives of students better and how this impacts their mental health. In particular, we are looking for **current UCL students who have self-harmed while at university** to join our project. Ordinarily, people find it hard to speak up about these kinds of experiences, so we want to make it easier for you to have your voice heard. This will improve UCL's understanding about the best way to help such students access support.

Who are we looking for?

- Current UCL students
- Any course or study level
- 18 years or older
- Anyone with **experiences of self-harming whilst at university**, of any severity
- UK and international students are welcome, but you must be currently living in the UK
- We welcome students with diverse backgrounds and can discuss any adjustments you may need to take part.

What will be involved?

- **Two online interviews** about your experiences at university (approx. 1.5 hours each)
- An **online survey** before each interview (approx. 20 mins each)
- As a thank you for your time dedicated to the project, you will be given a **£15 voucher for each interview and a £5 voucher for each survey** you complete

Is my data safe?

All data will be collected and stored in accordance with the General Data Protection Regulation (GDPR, 2018). You will not be able to be identified from any reports or publications. Participants can withdraw from the study at any time.

To find out more, please register your interest: [fill in this form](#). If you have any questions, please contact the organisers Alice or Katalin (alice.tickell.19@ucl.ac.uk / katalin.hajdu.13@ucl.ac.uk) or the principal investigator (laura.gibbon@ucl.ac.uk). Thank you!

Appendix F – Participant information and consent form

Student Mental Health Journeys:

Participant Information Form

This project is being conducted by researchers from the Division of Psychology and Language Sciences, University College London.

Name and contact details of the Principal Researcher (staff member with overall responsibility): Dr Laura Gibbon (l.gibbon@ucl.ac.uk/ 020 7679 5997). **Name and contact details of the researchers:** Alice Tickell (alice.tickell.19@ucl.ac.uk) and Katalin Hajdu (katalin.hajdu.13@ucl.ac.uk)

This study has been approved by the UCL Ethics Committee (Project ID): 16733/003

Thank you or your interest in participating in this research. This document tells you more about our study. It is important to us that you feel fully informed and comfortable as a participant. Before you decide whether you would like to take part, please take your time to read the following information carefully and do not hesitate to get in contact with the researchers listed above if you would like more information.

Who are we?

We are researchers in UCL's Division of Psychology and Language Sciences. We are independent, which means we will not share your data with the university registry or other central departments. Some members of the team are working with UCL student services to help improve the support available to students. The outcomes of this research will be fed back to UCL senior management and will help improve student services.

What is the purpose of the study?

Over the last decade the number of students declaring a mental health problem has increased dramatically. Furthermore, increasing numbers of students are coming forward to say they have intentionally hurt themselves in some way. In this document, we refer to this behaviour as "self-harm", but we fully recognise that some people might use different words to describe it (and this is also something we would like to learn more about). There is a need for better provision of mental health care for students, including those who may have self-harmed while at university. However, there are lots of gaps in knowledge of the experiences of students seeking help for their mental health and how they navigate various supports and services. To improve services for students, we need to understand more about students' experiences from their own perspectives.

We want to gain a better understanding of the experiences of students seeking help for their mental health, by mapping students' mental health support journeys. One important focus of our research will be students who report that they have recently self-harmed in some way.

In particular we want to understand:

What are the current support journeys experienced by different students?

What are the things that help or hinder students accessing support for their mental health?

What can we do to improve the mental health support journeys of students?

How do students spend their time online and how does it impact their mental health?

Who can take part?

We have contacted you because you meet one or more of the following criteria:

You disclosed that you have experienced mental health difficulties while at university

You disclosed that you have self-harmed while at university

However, you can only take part if you also meet all three of these criteria:

You are a student at UCL

You are at least 18 years old

You are currently living in the UK

We are particularly keen to understand the experiences of students with a **range of mental health problems**, including more and less common problems and those with multiple difficulties. Also, we want to make sure that we hear from both UK and International students.

What will I need to do?

At the beginning of the study, you will be assigned a 'participant case manager' (Alice or Katalin) who will be your main contact throughout the study and facilitate all discussions. Before you agree to take part in the study, you will have an introductory call with them, to find out more about the study and whether you want to take part, and for us to ensure that you are suitable for the study. If you decide you want to participate, you will be invited to complete a secure online survey where we will ask you to answer some questions about your mental health (including self-harm), mental health service use, and your online activities. You can leave out any questions that you do not wish to answer. After completing the first survey, you will be invited to attend an interview-style discussion with your case manager, conducted via Microsoft Teams or telephone (in March-April). This discussion will be an opportunity for you to share more about your experiences of mental health, support, and online activities while at university. This discussion will be up to 1.5hrs for you to share your experiences in detail. Then, roughly three months later (May-August), your case manager will invite you to complete a second online survey and interview-style discussion. We want to collect information from you at two time-points to fully understand your experiences over a period of time that captures some of the ups and downs of the academic year. These timepoints will be agreed flexibly with you so that they are convenient and in line with your availability. With your consent, these conversations will be audio-taped for data analysis purposes. Only the researchers in the study will have access to this data.

Optional linking of this study data with previous study data

If you have taken part in any of our studies before, you can consent for your data collected in previous studies to be linked to your mental health journeys study data. Previous studies that you may have

taken part in include the online student mental health survey called 'SENSE' and a study investigating students' views of accessing mental health support (which involved an online questionnaire and optional follow-up interview). This linkage each study's data is optional. You do not need to consent to the linkage of data to take part in this study

Do I have to take part?

Your participation in the study is entirely voluntary. If you choose to take part you will be asked to sign a consent form, but you will be free to withdraw at any time. You will not need to give a reason and there is no penalty for withdrawing. If you wish to withdraw your participation in the study and also wish for your data collected up until that point to be deleted, you can contact your participant case manager (either Alice Tickell, alice.tickell.19@ucl.ac.uk, or Katalin Hajdu, katalin.hajdu.13@ucl.ac.uk who will delete this data).

What will happen to the results of the research?

We are planning on publishing the results in a peer-reviewed journal. Our aim in doing this research is to improve mental health services and so we will also be publicising our findings widely. For example, by presenting the results at workshops and publishing the findings on the UCL website. *We will take care to ensure that no students can be identified in any reports or communication about the study.*

What are the possible benefits of taking part?

You will be thanked for your participation in the study with e-shopping vouchers. For each online survey you complete, you will be sent a £5 voucher. For each interview you complete, you will be sent a £15 voucher. Therefore, if you completed both surveys and interviews, you would receive £40 in total. You can leave out any questions you do not wish to answer in the interviews and online surveys, and this will not affect your compensation. Participants will also be contributing to knowledge in this important area. This research is likely to have an impact on services at UCL and other universities.

Are there any possible disadvantages or risks to taking part?

It is possible that participants may feel discomfort as a result of being asked questions about their mental health. No question at any point in the study is mandatory – you do not need to answer any question you do not feel comfortable answering. Information of mental health support resources will be provided at any point if you would like more information about services. If you feel at risk of harming yourself, please discuss this with your GP or go to a hospital A&E department. Any serious adverse events or complaints should be reported to the Principal Investigator, Dr Laura Gibbon (l.gibbon@ucl.ac.uk/ 07869146642. If you feel like your complaint has not been handled to your satisfaction, you can contact the Chair of the UCL Research Ethics Committee by email (ethics@ucl.ac.uk).

Who is organising and funding the research?

The research is organised and funded by University College London (UCL).

How will my data be kept safe?

We will try to limit the amount of personal information we ask you, but some details are essential for us to be able to carry out our research project. The information we collect from you includes "personal data" and "special category data", which is regulated under the Data Protection Act (2018) and General Data Protection Regulation or GDPR (2018), which means that we must make special

precautions to ensure that your information is not shared with third parties or unauthorised people. Under GDPR, “personal data” is any information from which a person could potentially be identified from, for instance, a name or identification number. GDPR also singles out some types of personal data as “special category” because they are more likely to be sensitive, such as data concerning racial or ethnic origin, health, or a person’s sexual orientation, and gives these data extra protections.

Any data you share with us will be stored on secure, password protected servers, in line with national and UCL guidelines. After the surveys and interviews, researchers will download the survey data, audio recordings, and interview transcripts and store them in secure UCL servers in a folder that only the research team can access. They will encrypt audio recordings using 7-zip and password-protect all files using strong passwords. After ensuring that the data has been downloaded safely to the UCL server, the researchers will delete any recordings stored elsewhere. At the end of the project, audio files will be deleted. The CSV files and transcriptions will be retained for up to seven years beyond the end of the project. However, retained data files will not contain any information which could directly identify you. This project is part of a larger programme of work aiming to better understand student mental health. The Principal Investigator may repeat the study in the future, comparing data collected for this study with future data.

Will my taking part in this study be kept confidential?

If you participate in the study, your data will be pseudonymous:

You will be assigned a study ID number. Your responses in the interviews, online surveys, and questionnaires will be linked to this ID number only.

If you participate in the study, your data will be kept confidential:

All data will be collected and stored in accordance with the Data Protection Act 2018 and the General Data Protection Regulation (GDPR) 2018.

Pseudonymised data will be stored on a password protected UCL server.

Only the researchers involved in the study will have access to your pseudonymised data. These will not be shared with any third parties including your academic department or the UCL student services.

However – if during the research project you disclose something that makes us feel worried for your safety or the safety of someone else, we may need to contact professionals outside of the research team, such as your GP, a crisis service or UCL Student Support and Wellbeing, to ensure that you receive the support you need. In such cases we would always try to speak with you first and we would only share information that is relevant to ensuring your safety. You will have the opportunity to discuss confidentiality in more detail in your initial call with your participant case manager.

Thank you for taking the time to read this information sheet.

Local Data Protection Privacy Notice

Notice:

The controller for this project will be University College London (UCL). The UCL Data Protection Officer provides oversight of UCL activities involving the processing of personal data, and can be contacted at data-protection@ucl.ac.uk

This 'local' privacy notice sets out the information that applies to this particular study. Further information on how UCL uses participant information can be found in our 'general' privacy notice:

For participants in health and care research studies, click [here](#)

The information that is required to be provided to participants under data protection legislation (GDPR and DPA 2018) is provided across both the 'local' and 'general' privacy notices.

The lawful basis that will be used to process your personal data are: 'Public task' for personal data and 'Research purposes' for special category data.

Your personal data will be processed so long as it is required for the research project. If we are able to anonymise or pseudonymise the personal data you provide we will undertake this, and will endeavour to minimise the processing of personal data wherever possible.

If you are concerned about how your personal data is being processed, or if you would like to contact us about your rights, please contact UCL in the first instance at data-protection@ucl.ac.uk.

Thank you for your interest in taking part in this research. Before you agree to take part, please read through and complete this form to acknowledge that you understand your involvement in this study and that you consent to participating.

I confirm that:

	Yes
I have read and understood the written information above and the information sheet, and I understand what the study involves.	<input type="radio"/>
I have been given the opportunity to ask questions about the study and my participation.	<input type="radio"/>
I voluntarily agree to take part in this study.	<input type="radio"/>
I understand that the study involves participation over the course of 6 months and involves two components: two online surveys, including questionnaires, and two discussions via videocall.	<input type="radio"/>
I consent to participating in the discussions via videocall.	<input type="radio"/>
I consent to participating in the online surveys.	<input type="radio"/>
I consent to participating in completing the questionnaires.	<input type="radio"/>
I understand that the information I provide is confidential, but if the researchers assess that I am in serious risk of harm, then they may contact external stakeholders such as my GP. I understand that the research team will never share any of my information to external stakeholders without my knowledge.	<input type="radio"/>
I understand that I can withdraw from this project at any time, without having to give a reason and without penalty, and my collected data up until the point of withdrawal can be deleted by emailing the researcher.	<input type="radio"/>
I understand that my data gathered in this study will be stored pseudonymously and securely. It will not be possible to identify me in any publications.	<input type="radio"/>
I understand that according to data protection legislation, 'public task' will be the lawful basis for processing personal data, and 'research purposes' will be the lawful basis for processing special category data.	<input type="radio"/>
I understand that the data will not be made available to any commercial organisation but is solely the responsibility of the researchers undertaking this study.	<input type="radio"/>
I understand that the Researchers involved in this study will have access to this data.	<input type="radio"/>
I agree to sign and date this informed consent form.	<input type="radio"/>

Appendix G – Social media questionnaires

Over the past month, approximately how many minutes per day do you spend on the following websites/apps on average? If you don't use them daily, try to give an estimate of how much your usage would be per day (e.g spending 2 hours on Reddit once a week would be about 20 minutes per day). If you never use the mentioned website/app, please put 0.

Facebook	<input type="text" value="0"/>
Twitter	<input type="text" value="0"/>
Instagram	<input type="text" value="0"/>
TikTok	<input type="text" value="0"/>
WhatsApp	<input type="text" value="0"/>
Snapchat	<input type="text" value="0"/>
Other social media website (please specify) <input type="text"/>	<input type="text" value="0"/>
Other social media website (please specify) <input type="text"/>	<input type="text" value="0"/>
Other social media website (please specify) <input type="text"/>	<input type="text" value="0"/>
Reddit	<input type="text" value="0"/>
Tumblr	<input type="text" value="0"/>
Other blogging website (please specify) <input type="text"/>	<input type="text" value="0"/>
Other blogging website (please specify) <input type="text"/>	<input type="text" value="0"/>
Other blogging website (please specify) <input type="text"/>	<input type="text" value="0"/>
Online dating	<input type="text" value="0"/>
Online Shopping	<input type="text" value="0"/>
Gaming (phone and computer)	<input type="text" value="0"/>
Browsing news websites/apps	<input type="text" value="0"/>
Browsing websites/apps related to personal interests	<input type="text" value="0"/>
Any other web/app browsing (please specify) <input type="text"/>	<input type="text" value="0"/>
Any other web/app browsing (please specify) <input type="text"/>	<input type="text" value="0"/>
Any other web/app browsing (please specify) <input type="text"/>	<input type="text" value="0"/>
Total	<input type="text" value="0"/>

Approximately how many people do you engage with through the following websites/apps? This refers to both people you talk to and people you read/watch posts from (e.g. regularly watching instagram stories of celebrities). If you never use the mentioned website, please put 0.

Facebook	<input type="text" value="0"/>
Twitter	<input type="text" value="0"/>
Instagram	<input type="text" value="0"/>
TikTok	<input type="text" value="0"/>
WhatsApp	<input type="text" value="0"/>
Snapchat	<input type="text" value="0"/>
Other social media website (please specify) <input type="text"/>	<input type="text" value="0"/>
Other social media website (please specify) <input type="text"/>	<input type="text" value="0"/>
Other social media website (please specify) <input type="text"/>	<input type="text" value="0"/>
Reddit	<input type="text" value="0"/>
Tumblr	<input type="text" value="0"/>
Other blogging website (please specify) <input type="text"/>	<input type="text" value="0"/>
Other blogging website (please specify) <input type="text"/>	<input type="text" value="0"/>
Other blogging website (please specify) <input type="text"/>	<input type="text" value="0"/>
Online dating	<input type="text" value="0"/>
Online Shopping	<input type="text" value="0"/>
Gaming (phone and computer)	<input type="text" value="0"/>
Browsing news websites/apps	<input type="text" value="0"/>
Browsing websites/apps related to personal interests	<input type="text" value="0"/>
Any other web/app browsing (please specify) <input type="text"/>	<input type="text" value="0"/>
Any other web/app browsing (please specify) <input type="text"/>	<input type="text" value="0"/>
Any other web/app browsing (please specify) <input type="text"/>	<input type="text" value="0"/>
Total	<input type="text" value="0"/>

In the past week, approximately how many times have you:

Posted on social media	<input type="text" value="0"/>
Regretted posting something on social media	<input type="text" value="0"/>
Edited or deleted something on social media	<input type="text" value="0"/>
Unfriended, blocked or muted someone on social media	<input type="text" value="0"/>
Re-friended, un-blocked, or un-muted someone on social media	<input type="text" value="0"/>
Total	<input type="text" value="0"/>

Please rank the main online activities you engage in.

- Sending messages to people
- Sharing photos and videos of yourself
- Sharing photos or videos of other things
- Looking at photos or videos posted by other people
- Listening to music
- Playing games
- Finding out about things you are interested in
- Expressing your views about things
- Creating events
- Meeting new people
- Dating
- Reading the news

To what extent do you agree with the following?

	Agree	Neither agree nor disagree	Disagree
My online accounts are a true reflection of myself	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I compare myself to others online	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I can be honest with people about how I am feeling online	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In general I spend more time online than I mean to	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I worry about the impact of online activities on my mental health	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am happy with the number of friends/followers I have on social media	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I monitor the amount of likes, comments or shares I get on social media	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The number of likes, comments or shares I get on social media has an impact on my mood	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Any other social media experiences you had that would be important to mention or had a significant impact on you?

Appendix H – Topic guides for T1 and T2

Before Interview

- Read questionnaires and review: mental health, self-harm, service use, social media (highlighted the parts below where relevant to mention)

Interview Schedule

Introductions

- This interview will be made up of two parts: In the first part, I will be asking you questions about your experiences while at university, what have been the main sources of difficulties for you, who you have spoken to about that. As we discussed in our call last time, I will be asking questions about your mental health, including questions about self-harm while at university. That's because there is not a lot of information out there on how best to support people who might have experienced these difficulties. So, anything you can share with us about your experiences will really help UCL to understand how better to support students. However, if there are any questions you do not feel comfortable answering, that is totally fine. There's no pressure to answer any questions you don't feel comfortable with. How will you let me know if you don't want to answer a question?
- In the second part of the interview, I will be asking about your online activities, how you use social media, and what impact that has on you.
- Because this is a research interview, it will be a bit different from a normal discussion – you are the expert in your own life, and I am here to learn from your unique experiences. Therefore, I will be asking questions, listening, and encouraging you to elaborate on your experiences. There are no right or wrong answers. I won't be commenting on your answers much, because I want to give a platform to your voice, not mine. So that might feel a bit different from a normal discussion where we might have a bit more of back-and-forth. Please don't be put off by that, and I hope you can use the space to feel comfortable elaborating on your views.
- Confidentiality – Everything we talk about is completely confidential. The only exception to this is if I was worried that you or somebody else's life was in danger. Then I would pass on any information to your GP to keep you safe. I will always try and talk to you about this first. Can't offer mental health support but can talk to you about where you can get help.
- We will run for roughly 1.5 hours. Halfway through I'll offer you a short comfort break in case you need to get a drink/use the toilet. But if you'd prefer to push on through if you have somewhere to be then we can. And if you'd like a break at any other time just let me know.
- Agree what to do if somebody cuts out – send an email
- I will be audio recording the interview. Only the research teams will have access to that, and we will transfer the file onto a secure, password protected UCL server and delete it everywhere else. Type up what has been said, and we will take out any bits that identify you – like if you were to say your name or any other personal information. But if possible, don't say your name or anything else that can identify you. Do you give consent to record?
- Do they have any questions or concerns before taking part?

Say: This is the interview recording for <Participant Number> - NOT their name

Section 1 (Alice): Self-harm and help-seeking

Question		Details/ notes
1	<p>Firstly, I would like to start by talking about your experiences of mental health while at university.</p> <p>Can you tell me about the times you have struggled with your mental health <u>since starting at university</u>? <u>We could think of it a bit like a timeline</u>. Can you give examples of specific times that you found particularly difficult?</p>	<p>***Don't spend too long on this section***</p> <p>The aim is to collect some contextual information – main thing to know were the most difficult time points during their student journey (e.g., freshers/exams, etc..)</p>
Follow up/prompts	<p>Prompts:</p> <ul style="list-style-type: none"> In your questionnaire, you said that you have experienced <anxiety/depression/eating disorder, etc.> while at university. Can you tell me about how that impacted you? 	
2	<p>Who knows about these difficulties? Who have you spoken to about it?</p>	<p>Note: Be mindful that some people may have experience involuntary care (e.g., being admitted in hospital under the mental health act), so do not assume that they sought help voluntarily.</p>
Follow up/prompts	<p>Encourage them to list everyone they have spoken to... Prompt:</p> <ul style="list-style-type: none"> This could be a person from your family, a friend, academic staff, a therapist/counsellor, doctor, people online... If they don't mention it: You also mentioned in your questionnaires that you have received counselling/therapy/medication while at university. <p>Then explore each in more depth, in chronological order if possible</p> <ul style="list-style-type: none"> Starting with <person>, can you tell me about your experience of talking to them? <p>Additional prompts:</p>	

	<ul style="list-style-type: none"> • When did you talk to them? • Why then? How did the conversation come about? What prompted the conversation? • Did you approach them, or did they approach you? • What made you want to talk to them? What were you expecting? • What happened? Did it match your expectations? What was good/bad about it? • How did that make you feel? (About yourself/your problems?) • How did this affect you/ change things for you? <p><i>Who did you speak to next?</i></p> <ul style="list-style-type: none"> • Same as above <p><i>(If relevant) COVID-19 impact:</i></p> <ul style="list-style-type: none"> • How did the COVID-19 pandemic affect your experience of talking to them? <p><i>Prompt anyone else not mentioned:</i></p> <ul style="list-style-type: none"> • Is there anyone else who you have spoken to or tried to speak to about your difficulties? <p><i>If they have not spoken to anybody:</i></p> <ul style="list-style-type: none"> • What influenced your decision not to talk to anybody? 	
3	<p>So far, we have covered who you have spoken to about your difficulties while at university, and we will certainly discuss that in more depth as we go along.</p>	<p>When talking about self-harm make sure to check what language the person feels comfortable using. “Self-harm” might not sit well with everyone.</p>

	<p>Next, I would like to ask some questions about experiences of self-harm. Remember, you do not have to answer any of my questions, and you can tell me if you do not feel like answering any of them.</p> <p>In your questionnaires you indicated that you have [self-harm method(s)] while at university, X times.</p> <p>Can you tell me about the situations that led you to [self-ham method(s)] while at university?</p>	
<p><i>Follow up/prompts</i></p>	<p><i>Prompts:</i></p> <ul style="list-style-type: none"> • What would you say are the main triggers (for self-harm)? • Can you tell me about the times or situations where you were doing that more? • What about the times or situations where you were doing that less or not at all? <p><i>Prompt intention:</i></p> <ul style="list-style-type: none"> • When you do that, what is your intention? • [Has your intention ever been to end your life?] • How do you feel about the term 'self-harm'? Do you feel like those words reflect your experience? <p><i>Prompt for their views:</i></p> <ul style="list-style-type: none"> • What effect does this have on you? • Is this a good thing or a bad thing? • Has it always been like that? Have you ever felt differently about it? <p><i>If they have mentioned more than one self-harm method:</i></p> <ul style="list-style-type: none"> • Do you do one method more than the other? • In what ways do the [self-harm methods] differ for you? 	

	<p><i>Expand on self-harm:</i></p> <ul style="list-style-type: none"> Thinking about self-harm more broadly, is there anything else which you did not mention in your questionnaire that you have done even though you knew it would hurt you, or with the intention to hurt yourself? 	
4	<p>Before, we talked about who you have spoken to generally about your main difficulties, but I am interested to hear if there is anybody who knows about [self-harm]? (This could be a person from your family, a friend, academic staff, a medical professional in the NHS or a private service, a therapist or counsellor, somebody on a helpline)</p>	
Follow up/prompts	<p><i>Get them to list everyone they have spoken to... Then explore each in more depth, in chronological order if possible</i></p> <ul style="list-style-type: none"> Starting with <person>, can you tell me about your experience of talking to them? <p><i>Intention:</i></p> <ul style="list-style-type: none"> When did you talk to them? Why then? How did the conversation come about? What prompted the conversation? Did you approach them, or did they approach you? What made you want to talk to them? What were you expecting? <p><i>Their intention/the impact:</i></p> <ul style="list-style-type: none"> What happened? Did it match your expectations? How did that make you feel? (About yourself/your problems?) How did this affect you? Did that change things for you? How? 	<p>This section is similar to section 2, so a lot of their answers might be similar – focus on what might be different about seeking help for self-harm</p>

	<p>Who did you speak to next?</p> <ul style="list-style-type: none"> • Ask the same questions as above <p>(If relevant) COVID-19 impact:</p> <ul style="list-style-type: none"> • How did the COVID-19 pandemic affect your experience of talking to them? <p>Prompt anyone else not mentioned:</p> <ul style="list-style-type: none"> • Is there anyone else who you have spoken to or tried to speak to about the self-harm? <p><i>If not mentioned, prompt medical attention:</i></p> <ul style="list-style-type: none"> • Have you ever received medical attention for your [self-harm]? • How many times has that happened? • Ask questions above <p><i>If they have not spoken to anybody:</i></p> <ul style="list-style-type: none"> • What influenced your decision not to talk to anybody? • Have you thought about approaching anybody? 	
5	<p>Are there any other sources of support you know about that you think could be helpful for your difficulties? This could be anything we have not talked about yet – such as a person, helpline, online information, anything at all that you think might help you.</p>	
Follow up/prompts	<ul style="list-style-type: none"> • What do you know about them? How did you find out about them? • Have you tried to get support there? Are you planning to get support from them? What has influenced that decision? • What would need to change for you to reach out? 	

6	Thinking forward, what is coming up for you at university? When I next talk to you in 3 months or so, how do you think things will be for you? Do you anticipate any particular challenges? How do you plan to handle things going forward?	If you don't have time for this question, then that's ok
7	Is there anything else you would like to say about your experience of seeking help for your mental health while at university? How have you found it answering those questions?	

Optional comfort break

Section 2 (Katalin): Social media questions

The survey will cover their main social media use. This includes amount of time spent on different websites, types of social media use and some questions about the impact. Make sure you have their answers from the survey to help guide the questions and reflections.

Question	Details/ notes
<p>1</p> <p>In the next part of the interview, I will be asking about the types of things you do online. By that I mean the types of things you spend your time on when you are using the internet. Some people find it helpful to open up their phone and look at their apps to help with this or look up most visited websites or their laptop or PC so feel free to do that whilst answering this question.</p> <p><u>What sort of things do you do online?</u></p> <p><u>What do you like and dislike about your online activities?</u></p>	<p>You can go straight into question 2 (impact) for each activity if it flows better after establishing the main activities or jus list each and then go through each in question 2 (as written in the schedule)</p> <ul style="list-style-type: none"> If you go to question 2 and exploring the impact straight away, make sure you don't forget to come back for questions about online community membership and anonymous accounts
<p><i>Follow up/prompts</i></p> <p><i>Types of activities – refer to questionnaire answers to ask about specific activities. If more than one for each type, please ask to choose 3-4 most significant/impactful to discuss regardless of category - eg decide to talk about whatsapp, reddit and instagram based on usage/impact</i></p> <ul style="list-style-type: none"> - What do you usually do on x blogging site/social media site/website/gaming/etc? - explore 2-3 main - Do you consider yourself part of any online community? <ul style="list-style-type: none"> o [if yes] How involved are you in x online community? (explore each if more than one) - Do you use any anonymous accounts on any of the websites or apps we discussed? <ul style="list-style-type: none"> o [if yes] What made you want to be anonymous? o How does that impact on your use and experience of x website/app? 	<p>Very open question in the beginning to help the student reflect on the topic. This could help also refocus from previous part of the interview to start thinking about their online life. The aim is to explore the students' general online life and highlight key themes of what they spend their time on online (e.g. news consumption, keeping in touch with people, being involved in activism, gaming, etc)</p>

	<ul style="list-style-type: none"> - What is the impact of the covid-19 pandemic on your online life and activities? 	
2	We spoke a bit about your online life and the sort of things you do on the internet. How do these activities influence or impact on you?	Aims to get more information about links between online activities, behaviour and mood, seeking out content related to mood and incidental encounters that may impact mood.
<i>Follow up</i>	<p><i>Prompt to expand on each online activity discussed in previous question - max 3-4 different</i></p> <p><i>Prompt to expand on strong emotional reactions, behavioural changes following consumption of specific content</i></p> <p><i>Make sure to cover the following:</i></p> <p><i>Online activities impacting on mood</i></p> <ul style="list-style-type: none"> - How does [online activity] influence your mood? (expand on 2-3 significant ones identified in question 1) - <i>Based on what they describe, prompt for the other, e.g. any positive experiences if mentioned negative</i> - <i>What was it like when you felt x after [online activity]? (they may expand on behaviour here, e.g. withdrawing when feeling sad, etc)</i> - Did your behaviour change in any way as a result of this experience? (doing more or less of stg) <p><i>Mood impacting on online activities</i></p> <ul style="list-style-type: none"> - Have you ever noticed your mood impacting on what you do online? Can you give me an example of that? (e.g. doing more/less of something when feeling x? -> try to explore positive and negative emotions) - <i>[if yes] What expectations did you have when you felt x and sought out [online activity]?</i> 	
3	Now I'd like to ask a few more questions about your online interactions. By that I mean both reading posts from people and	Who do students talk to? This will help get an idea of their online social circle, interests and potential differences in levels of engagement and

	<p>actually interacting with others such as. friends, family, strangers, public figures, etc</p> <p>Who do you follow and engage with online?</p>	disclosure based on relationships and decision-making processes around online interactions.
<i>Follow up</i>	<p><i>Depending on who they mention, briefly ask about others:</i></p> <ul style="list-style-type: none"> - Family - Friends - Public figures - Professionals - University staff <p><i>If not mentioned yet, explore for each mentioned above:</i></p> <ul style="list-style-type: none"> - What kind of topics do you talk about with x? - Do you talk to x about the difficulties we spoke about earlier in the interview? - And if you know, what might impact on these decisions to talk to x about y? - And what might impact on your decision to not talk to or share with x about y? - How do these experiences impact you? <ul style="list-style-type: none"> o [if not mentioned yet] How do you usually end up feeling after talking to x? o Is there any way your interactions with x would impact what you do? 	
4	You've mentioned that you have been struggling with/diagnosed with [mental health difficulty]. What has been the impact of your online activities on this difficulty?	
<i>Follow up</i>	<ul style="list-style-type: none"> • Which experiences have been the most negative? • Which experiences have been the most positive? 	

Final question	I've asked all of my questions now. Is there anything you were expecting me to ask about / anything you thought I would ask you about, when you first heard the topic of this interview? How have you found answering the questions in the interview?	
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Before Interview

- Read questionnaires and review: mental health, self-harm, service use, social media (highlighted the parts below where relevant to mention)

Interview Schedule

Introductions

- Similarly to last time, this interview will be made up of two parts: In the first part, I will be asking you questions about your mental health, self-harm, and help-seeking generally... In the second part I will be asking you questions about your social media use and its impact on you. Anything you can share with us about your experiences will really help UCL to understand how better to support students. However, if there are any questions you do not feel comfortable answering, that is totally fine. There's no pressure to answer any questions you don't feel comfortable with. How will you let me know if you don't want to answer a question?
- Remember, there are no 'right' answers to the questions – I am really here to learn from you and your experiences. The questions might overlap a bit with last time so please don't worry about repeating yourself. Please just say whatever comes to your mind when I ask the questions.
- Reminder about confidentiality – Everything we talk about is completely confidential. The only exception to this is if I was worried that you or somebody else's life was in danger. Then I would pass on any information to your GP to keep you safe. I will always try and talk to you about this first. Can't offer mental health support but can talk to you about where you can get help.
- We will run for roughly 1.5 hours. Halfway through I'll offer you a short comfort break in case you need to get a drink/use the toilet. But if you'd prefer to push on through if you have somewhere to be then we can. And if you'd like a break at any other time just let me know.
- Agree what to do if somebody cuts out – send an email
- I will be recording the interview. Only the research teams will have access to that, and we will transfer the file onto a secure, password protected UCL server and delete it everywhere else. Type up what has been said, and we will take out any bits that identify you – like if you were to say your name or any other personal information. But if possible, don't say your name or anything else that can identify you. Do you give consent to record?
- Do they have any questions or concerns before taking part?

Say: This is the interview recording for <Participant Number> - NOT their name

Section 1 (Alice): Self-harm and help-seeking

Question		Details/ notes
1	How has your mental health been since we last spoke to each other?	The most important questions to prioritise are bolded, the rest are discretionary/might be helpful to encourage participants to elaborate
Follow up/prompts	<p><i>Prompts:</i></p> <ul style="list-style-type: none"> On your survey you mentioned that your mental health has been better/stayed about the same/gotten worse. Can you say more about that? What contributed to your mental health being better/the same/worse? How has the ongoing COVID-19 pandemic affected your mental health? <p><i>Self-harm:</i></p> <ul style="list-style-type: none"> On your survey, you mentioned that you [self-harm method] X times. What do you think triggered that? What was the sequence of events? What did you think after? How did you feel after? Has anything changed about how you self-harm? <p>Or if they have <u>not</u> self-harmed:</p> <ul style="list-style-type: none"> On your survey, you mentioned that you did not self-harm since we last spoke. Are you aware of anything that might explain this? Anything that happened or any changes for you? 	<p>If they have not filled in the questionnaire in advance, ask these questions <u>before the self-harm section</u>:</p> <p>Since we last spoke, have you hurt yourself on purpose in any way?</p> <p>What did you do to hurt yourself?</p> <p>How many times has that happened? When was the last time?</p>
2	Who have you been speaking to about your mental health since we last spoke to each other?	

<p><i>Follow up/prompts</i></p>	<p>Prompts:</p> <ul style="list-style-type: none"> • If they don't mention it: You also mentioned in your questionnaires that you talked to [your GP/a therapist] • When? Why then? What prompted the conversation? • What made you want to talk to them? • What happened? What was good/bad about it? • How did that make you feel? • How did this affect you/ change things for you? • How did the COVID-19 pandemic affect your experience of talking to them? <p>Self-harm</p> <ul style="list-style-type: none"> • We have talked about who you have spoken to generally about your main difficulties, but I am interested to hear if there is anybody who you spoke to about your [self-harm] or [self-harm] in general? • If yes: use some of the prompts above • If no: see below <p><i>If they have not spoken to anybody:</i></p> <ul style="list-style-type: none"> • What influenced your decision not to talk to anybody? • How did the COVID-19 pandemic affect your experience? 	<p>Link back with where we left off in previous interview. Explore if there were any changes in support since last interview (and perhaps link with what was talked about in the interview if appropriate). Follow up if last time they mentioned any potential avenues of support they were considering reaching out for.</p> <p>**If they mention lots of people they have spoken to – prioritise talking about professional and academic support</p>
<p>3</p>	<p>So far, I have asked you about your recent experiences of your mental health and who you have spoken to about that.</p> <p>Now I would like to ask you to reflect on your mental health journey as a whole since starting university.</p> <p>Up until now, how much do you feel that you got the support you needed for your mental health?</p>	<p>This question relates not just to support from the university, but in general</p>

Follow up/prompts	<p>Prompts:</p> <ul style="list-style-type: none"> • What was the most helpful type of support you received? What was less helpful? • What got in the way of you getting the support you needed? What helped you to get the support you needed? 	
4	<p>If you could take a blank sheet of paper, and design the ideal type of support you would have wanted for your mental health, what would it look like?</p>	
	<p>Prompts:</p> <ul style="list-style-type: none"> • Where and how would it be offered? How would you access it? • When would it be offered? <p>Self-harm:</p> <ul style="list-style-type: none"> • During your time at university, would you have ever wanted additional support to manage [self-harm/crisis]? <ul style="list-style-type: none"> o What would that look like? o Where/how would it be offered? How would you access it? o When would it be offered? 	
5	<p>Is there anything else you would like to say about your experience of seeking help for your mental health while at university?</p>	

Optional comfort break

Section 2 (Katalin): Social media questions

The survey will cover their main social media use since the last interview. Make sure you have their answers from the survey to help guide the questions and reflections.

Question		Details/ notes
5	<p>In the last interview we discussed your online activities in general and some ways in which it has impacted on you. In the interview today, I would like to focus on your social media experiences.</p> <p>Since the last interview, how have you been using social media?</p> <ol style="list-style-type: none"> 1. Have there been any changes in your views of social media since our last interview? 2. Have you had any particularly positive experiences? Negative experiences? Anything that has stood out as significant or impacted you significantly? 	<p>Link back with where we left off in previous interview. Explore if there were any changes since last interview (and perhaps link with what was talked about in the interview if appropriate). The questions in this interview are aimed at exploring ‘lifetime’ experiences – not just whilst at university.</p>
6	<p>In the previous interview we spoke about what you typically do online. Now I’d like to know more specifically what information about mental health have you encountered online and especially in your social media use?</p> <ol style="list-style-type: none"> 1. [if did not already listed] What negatives/positives? Any specific examples? 2. How do you think that impacts society’s view of mental health? 3. What has been the impact of this on your view of mental health? 4. What has been the impact of this on your own mental health and how you see yourself? (rather than view) 	<p>Aiming to get an idea of portrayals of mental health online. Might be helpful to take note if they talk about comparisons, self-harm, etc as this will be expanded on in later questions.</p>

	<p>5. How has the view/impact changed for you over time? How long did these thoughts/feelings/behaviours stay with you? (e.g. from child/adolescent to now)</p> <p>6. [if disclosed negative experiences] What do you think would have helped you manage the impact of these experiences better?</p>	
7	<p>Have you ever encountered any content related to self-harm online? [If relevant, explore more than one specific experience but focus on what had the most significant impact]</p> <ol style="list-style-type: none"> 1. Where/What was it about? 2. How did you encounter it? 3. How was self-harm depicted (positive/negative light, normalised, etc)? 4. How did it make you feel? 5. What did it make you think? 6. How might other people feel seeing such content? 7. What do you think about it looking back now? (if talking about past, rather than current experience) 8. [if disclosed negative experiences] What do you think would have helped you manage the impact of these experiences better? 	<p>If mentioned in previous question, just expand on that freely whilst trying to cover the main points here. Aiming to explore general and personal impact/view.</p>
8	<p>Some people when looking at posts by others find themselves comparing themselves to these while other people do not. Which seems closer to how you are?</p> <ol style="list-style-type: none"> 1. Do you ever find yourself comparing yourself to them whether they are friends, public figures, celebrities? <ol style="list-style-type: none"> a. Can you give some examples of this happening? [try to explore positive/negative/neutral experiences] 	<p>Aiming to explore social comparisons. Try to explore both positive and negative experiences here and the impact of these experiences on the students.</p>

	<ul style="list-style-type: none"> b. How does it make you feel/how do you think this influences you? [try to explore thoughts, emotions, behaviour] <ul style="list-style-type: none"> i. Explore friends/celebrities/family/professionals separately if applicable <p>2. [if disclosed comparisons] Do these online comparisons ever involve comparing your mental health or difficulties to other people's?</p> <ul style="list-style-type: none"> a. Can you give some examples of this happening? [try to explore positive/negative/neutral experiences] b. How does it make you feel/how do you think this influences you? [try to explore thoughts, emotions, behaviour] <p>3. [if disclosed negative experiences] What do you think would have helped you manage the impact of these experiences better?</p>	
9	<p>Is there anything else you would like to say about your experiences of social media that we haven't touched on yet? How have you found it answering those questions?</p>	

Appendix I – Worked example of thematic analysis

Initial codes after immersion in the data

I: And, and how do you feel afterwards like when, when you post these things, like these positive things, when you're actually not feeling great?

P: Erm. Well I don't know actually, I think sometimes it just helped, like I'll be like, 'oh, you know what?' is c-, we can look at the positives, of this. Erm, and then equally sometimes I'm like. I often think 'oh I wonder what everyone's gonna think of this,' and then 'I wonder what they'd think if they knew was really happening,' erm, oftentimes, erm. I think it is up, it, positive or negative makes me feel. I'm not really sure.

I: OK, that makes sense. And, and when you're online on, on these various platforms, would you say you are, feel part of any online community?

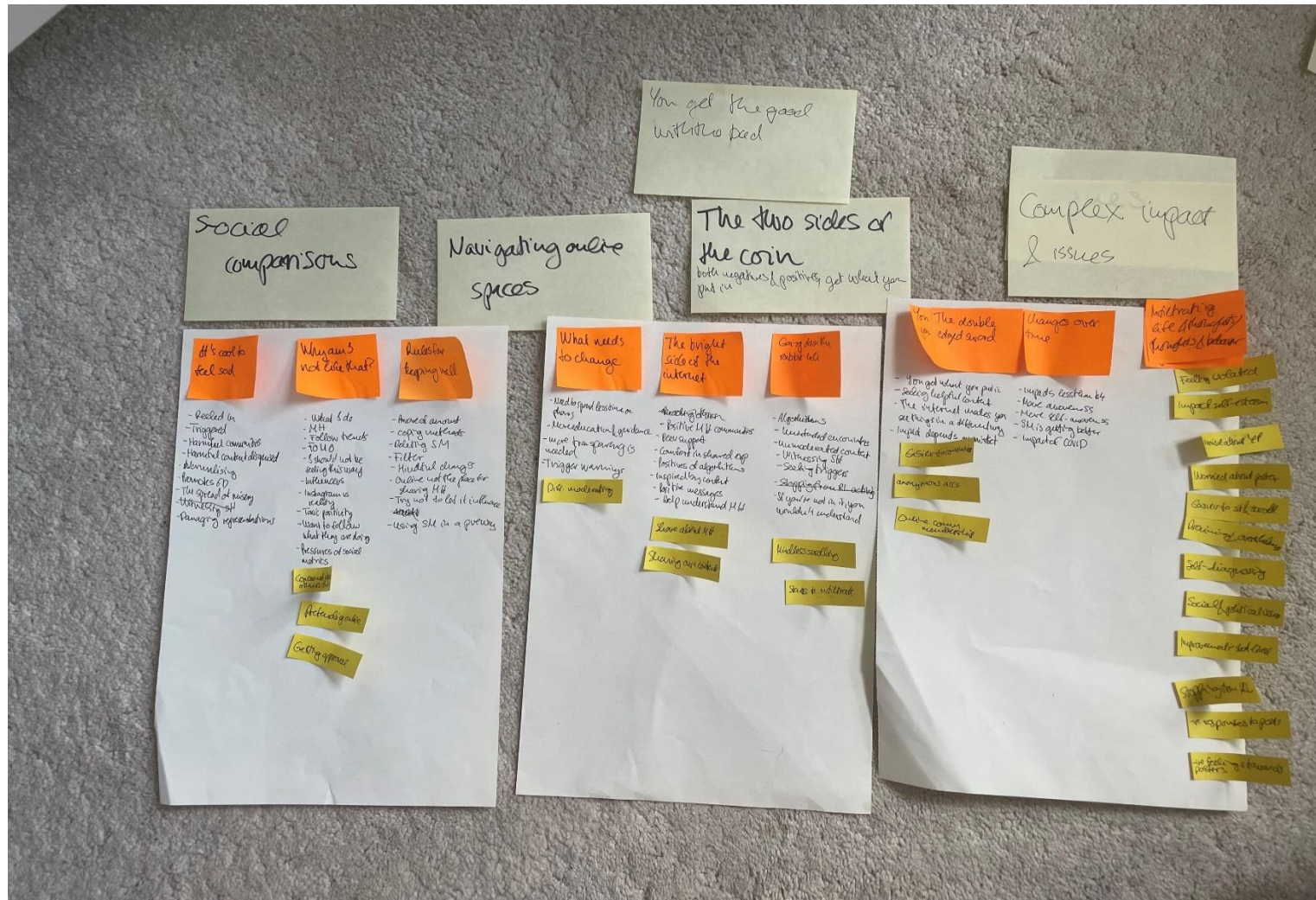
P: Erm. I'm not sure, pep-, like some influencers, like the little influencers, like to be like 'oh, this is my little community of people that follow me on here,' but I never really feel a part of that. Erm, I wouldn't say so. I would say that when I was, I'm not part of it anymore, but I definitely used to feel a part of, the like, 'struggling with their mental health' community, if that would be a thing, but like in a negative way, 'cause everyone's posting negative things, that definitely felt like a community. Erm, but no, no I wouldn't say so.

I: OK, and h-, how involved were you with that community?

P: Erm. Well, I'd just post things, I never really spoke to anyone in it, just like, it felt, I think because the subject topic was almost so deep that it felt like more of a community, 'cause like, everyone's dealing with the same thing. Erm. So that felt way, like way more of a community than anything else, erm. I, I'd just post random things occasionally, in it. Erm. I'd like, I, I mean, I still have these accounts and I see that things have been re-blogged, and I'll be like 'oh, should I delete my account now?' Erm. Then I'm like, in a way that's just my diary of events that was going on at the time. Or like, it'll be something I post in like 2017, it's got like hundreds of re-blogs now, and I'm like 'should I delete it, or should I just keep it?' Erm, at the moment I've kept it all, but I can see myself at one point, at some point just ending up deleting the entire thing, erm. But yeah, definitely did feel a community at the time, quite a toxic one thought ((laughs)).

Coding Density	
• Coming away feeling drained	
• Positive communities online	
• Posting to raise awareness	
• Impact of self-harm content – trigger	
• Concerns about sharing online	
• FOMO	
• Mixed impact of online activities on mood	
• Seeking out content – feeling worse	
• Difficulty opening up online vs offline	
• Anonymous accounts	
• Harmful communities	
• Online community membership	

Process of organising codes into themes



Example of codes that make up the themes

⊕ Name	▲ Files	References
⊖ ○ A double edged sword	0	0
⊖ ○ Going down the rabbit hole	0	0
○ Algorithms and recommendations	7	18
○ Draining and overwhelming	10	18
○ Mindless scrolling	9	20
○ Negative responses to posts	4	8
○ Unintended encounters with harmful content	7	14
○ Unmoderated content	14	27
○ Worried about the person behind the screen	2	2
⊖ ○ The bright side of the internet	0	0
○ Finding comfort in shared experiences	15	37
○ Help understand mental health	10	26
○ Inspired by content	8	14
○ Online community membership	7	16
○ Peer support	4	10
○ Positive mental health focused community	4	9
○ Positive messages	5	7
○ Positives of algorithms	4	6
○ Share about mental health	4	13
○ Sharing own content	5	10

Organising themes and associated themes

Codes

⊕ Name

☐ ○ A double edged sword

⊕ ○ Going down the rabbit hole

⊕ ○ The bright side of the internet

☐ ○ Curating online spaces

⊕ ○ Changes over time

⊕ ○ Rules for keeping well

⊕ ○ You get what you put in

☐ ○ Instagram vs reality

⊕ ○ It's cool to feel sad

⊕ ○ Why am I not like that