**Identifying relevant dimensions to the measurement of adolescent social media experience via focus groups with young people: Stage 2 registered report**

\*\*\* This Stage 2 registered report is yet to be peer-reviewed \*\*\*

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**Abstract**

While work on the relationship between social media use and adolescent mental health has allowed for some progress, research in this area is still relatively new and shows mixed evidence. This is partly the consequence of a rapidly changing field, resulting in conceptualisation and measurement issues that hinder progress. Given the need for robust conceptualisation, the present study included five focus groups with 26 adolescents aged 11-15 in Northwest England, to understand their experiences, motivations, and perceptions of social media use, relating to mental health and wellbeing. Reflexive thematic analysis was used to analyse the transcripts. We developed five themes and 10 sub-themes. Young people discussed being present and connected on social media (theme A); identity formation and self-presentation (theme B); enjoyment and managing moods (theme C); exposure to risky content and relationships (theme D); and self-control (theme E). Across these themes three direct mental health and wellbeing outcomes were identified: social aspects, anxiety and self-esteem, plus two less clearly defined experiences around coping and self-control. Our findings also demonstrate the heterogeneity and multidimensionality of social media experience, and point to some possibly differences across age and gender.

Overall, this study has contributed to our understanding of the salient dimensions and language to inform the development of an adolescent social media experience measure related to mental health.

*Keywords:* social media, adolescent mental health, youth voice, focus groups

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Adolescent social media use is a hotly contested topic: while there are concerns about the negative effects on mental health, its predominance, particularly in the wake of the COVID-19 pandemic, mean its potential positive effects are also starting to be demonstrated (Cauberghe et al., 2021). Fundamentally, this area is still relatively new, with research tending to be of lower quality, and based on coarse measurement (Orben, 2020b; Valkenburg et al., 2022b). To add to this landscape, the field is highly polarised with unclear conclusions, likely contributing to public panic and concern (Orben, 2020a) while other research has focused on methods and open science highlighting the lack of any evidence substantiating firm conclusions (e.g., Orben & Przybylski, 2019). To shed light on this debate and generate robust estimates of the effects of social media on adolescent mental health, psychometrically reliable and valid instruments must be developed. The current study represents the first stage in this endeavour, reporting on early to mid-adolescents’ (ages 11-15 years) conceptualisation of social media experience to inform measure development in line with best psychometric practice (Flake et al., 2017; Vogt et al., 2004).

**The Construct of Interest and its Conceptualisation**

Social media use is complex, encompassing multiple levels of conceptualisation and analysis (Meier & Reinecke, 2021). Still, current evidence on the relationship between social media use and adolescent mental health relies largely on measures of estimated frequency and duration (Schønning et al., 2020; Valkenburg et al., 2022b), overlooking the nuanced levels that can further explain this relationship. For over a decade research has tended to focus on the influence of surface-level aspects (e.g. time spent, an issue discussed by Walther, 2010), and a lack of attention to nuanced behaviour and underlying mechanisms persists (e.g., social capital, loneliness; Keles et al., 2020; Meier & Reinecke, 2021; Schønning et al., 2020; Valkenburg et al., 2022b). The current study therefore focuses on the experience of social media interaction as it relates to mental health (Meier & Reinecke, 2021). This is in line with the hypothesis that adolescents’ responses to social media and its content are potentially more impactful for mental health than the time spent on social media – which is better measured by objective data (Valkenburg et al., 2022b). We consider this experience to be vital since it allows consideration of aspects relating to underlying mechanisms. These can potentially capture how social media impacts mental health and who is more susceptible to this impact (Meier & Reinecke, 2021; Schønning et al., 2020; Timpano & Beard, 2020). Whether, for example, chatting on social media platforms influences mental health cannot be fully captured without understanding and assessing the underlying mechanism. One such mechanism could be that “this interaction enables the individual to stay connected to others”. This could then inform the development of a dimension of social media experience that focuses on “social capital”, as has been theorised elsewhere (Meier & Reinecke, 2021; Qi et al., 2018).

Identifying our focal concept as “adolescent social media experience” is only the first in the multi-step iterative process of construct conceptualisation (also referred to as concept explication; Chaffee, 1991). This is the first and most crucial step in measure development, that should draw on multiple sources (Carpenter, 2018; Flake et al., 2017; Vogt et al., 2004). Since the available inputs to analysing the impact of social media use on mental health are somewhat coarse (Valkenburg et al., 2022b), we focused on developing putative dimensions that reflect social media experiences *linked to mental health.* These will later be triangulated in other studies not reported here (see Figure 1), as part of our ongoing iterative process of conceptualisation and item development (Chaffee, 1991). We therefore did not aim to document all possible levels of behaviour and experience encompassed in social media use.

A comprehensive literature review (e.g. of existing measures) and Delphi study with key stakeholders are often suggested as the first steps within measure development (Carpenter, 2018; Chaffee, 1991; Detmar et al., 2006; Herdman et al., 2002). However, we opted for a bottom-up focus groups approach as our initial groundwork in understanding relevant dimensions. This is vital, given that while such experiences or mechanisms have been studied and theorised to an extent (Schønning et al., 2020; Valkenburg et al., 2022b), the limited qualitative work here is a major threat. That is, adolescence is a period of vulnerability to poor mental health with unique, often only internally accessible challenges (Rapee et al., 2019) likely to colour the constructs of interest here.



*Figure 1. Flowchart of planned studies for the development of definition, dimensions, and items. The grey parts represent the current study, and the last box represents the common aims across all studies, including the current one.*

**Psychometric Issues and Best Practice**

While self-report data have been shown to be inaccurate for considering time spent on social media (Parry et al., 2021; Verbeij et al., 2021), when considering nuanced subjective experience, self-reporting is likely key. Moreover, it is cognitively appropriate (de Leeuw, 2011; Riley, 2004), and vital for considering social media experiences proximal to mental health (Black, 2022; Deighton et al., 2014). A few self-report measures of social media behaviour/experience with relevance for mental health that move beyond frequency or duration, have been developed. However, a key limitation of such measures is their insufficient or unclear conceptualisation with the target adolescent population. Rather than drawing on the experiences of adolescents to develop sensitive dimensions, these measures have tended instead to carve out approximations based on other frameworks. For example, widely used measures of social media addiction (e.g., Andreassen et al., 2017) are theoretically grounded in nicotine dependence, diagnostic, and gambling addiction criteria, even though the use of such criteria might not be appropriate to assess non-substance behavioural addictions (Flayelle et al., 2022; Fournier et al., 2023). Furthermore, measures based on diagnostic criteria (e.g., van den Eijnden et al., 2016), are by design more likely to reflect clinician, not adolescent conceptualisations. Even newer measures that focus on potential mechanisms and have shown some promise by considering age-appropriateness (e.g. Rosič et al., 2022), have not drawn on *conceptualisation* with adolescents, but rather relied on adapting adult measures. Similarly, while some work with adults thoroughly conceptualised relevant social media experience constructs through qualitative work before proceeding to item development (Lee & Hancock, 2023; Lee et al., 2021), these robust procedures have not, to our knowledge, been applied with adolescents.

**Stakeholder Engagement in Measure Development**

Adaptation of measures to other populations is considered poor psychometric practice, where development does not include consultation with the target population (Terwee et al., 2007), as appears to be the case in this area of work. Not consulting the target population poses a significant problem because even measures that achieve high reliability might represent a poorly defined construct. That is, basic psychometric statistics such as internal consistency without initial conceptual validation work, are arguably meaningless (Clifton, 2020; Flake et al., 2017). Furthermore, there is consensus that adolescents must navigate a unique constellation of biological, social, and cognitive development that impacts their daily experience and mental health (Rapee et al., 2019). In turn, this is likely to impact how they experience and are affected by social media. We therefore argue progress in understanding adolescent social media experience is likely to hinge on bottom-up consultation with young people (Lee et al., 2021).

 Conducting focus groups in the initial stages of measure development therefore provides an opportunity for participants to discuss ideas and issues in a language and framework that makes sense to them (Madriz, 2003). Focus groups are considered to elicit open responses, that can be used to understand both the experiences and phraseology used by the target population. This in turn can directly inform more valid item development (Haynes et al., 1995; Vogt et al., 2004).

More broadly, there is also a growing commitment to providing space for young people to have a voice on issues that affect them, including in health-related research (Adler et al., 2019; Department of Health & NHS England, 2005; Inchley et al., 2021). Patient and public involvement in research is an active partnership – children and young people should be meaningfully involved in ways that facilitate them to legitimately influence the research process. This is consistent with the model proposed by Lundy (2007) which posits that young people not only have the right to express their view, they must be given the opportunity to do so, and their view must be given appropriate weight and be acted upon, as appropriate. By conducting focus groups first, we are prioritising the voices of young people in the research process and using their voices to give the critical ‘on-the-ground’ perspective (Fredricks et al., 2016), enabling progress in understanding the relationship between adolescent social media use and mental health.

**The Qualitative Registered Report Format in Psychometric research**

There have recently been calls for improved transparency in measure development, including to strengthen the validity of claims made on their basis (Flake, 2021). The current registered report therefore offers two key features to ensure the transparency of our measure conceptualisation. First, it sets a clear aim and initial conceptual focus that is suited to a review-before-results-are-known approach. This is to understand which experiences young people view as relevant to inform the development of putative dimensions of social media experience. Second, the current study is designed to uncover both example experiences and language that can be further tested (Vogt et al., 2004), consistent with the idea that open qualitative research can be ideal to generate future hypotheses (Haven & Grootel, 2019). Specifically, and consistent with the iterative process of construct conceptualisation (Chaffee, 1991), dimensions elicited will go on to be further explored and refined (see Figure 1). We argue that transparency within measurement is particularly valuable within the polarised nature of the social media/mental health literature due to the potentially higher vulnerability to bias at the analysis or publication stage. For instance, it may be difficult to publish findings that suggest social media experience as conceptualised by young people bears little resemblance to existing scales in journals that have championed their use.

**The Current Study**

Given the need for robust conceptualisation and therefore qualitative work, the current study aims to understand adolescents’ social media experiences that are relevant to mental health (aim 1). We acknowledge, however, that each level of social media use (Meier & Reinecke, 2021), including the experience itself, does not exist in a vacuum. Therefore – and while acknowledging the bidirectionality of this relationship (Flannery et al., 2023) – our focus groups aimed to also capture adolescents’ views on the antecedents (e.g. motivations, individual differences) and effects (on mental health) of social media use (aim 2). We argue that without these we cannot fully understand and thus conceptualise our construct of interest. The current study will contribute to our understanding of salient dimensions and language to inform the development of the social media experience measure. Given the bottom-up youth-focused design of our measure development, the current focus groups also aimed to inform the design of future studies in the measure development process (aim 3; see Figure 1 – unique aim). Our research questions are as follows:

*RQ1: How do motivations behind adolescent social media use relate to mental health?*

*RQ2: What are adolescents’ social media experiences in light of mental health?*

*RQ3: What are adolescents' views of mental health risks and benefits associated with using social media?*

**Method/Protocol**

**The Research Team and Reflexivity Statement**

The core team who conducted the data collection and analysis are all women aged 19-34. We have different personal experiences of and motivations for using social media. Collectively, we have research experience in the areas of adolescent mental health, loneliness, and social media, alongside lived experience. We thus recognised that our biases, experiences, and exposure to the literature would bring other viewpoints to the data, and we were committed to capturing and unpacking these through the analysis and interpretation (e.g. through reflexive note-taking, see <https://osf.io/g7fkh/>). We sought to be guided by participants’ views, and, as discussed below, our focus group schedule was deliberately open to provide space for a variety of responses to be elicited.

Given this, we have also registered qualitative hypotheses. Qualitative hypotheses are not intended to be tested, as the data is not suited to the null-hypothesis significance paradigm (Karhulahti et al., 2023), and are not necessarily rooted in prior literature or the study’s research questions. Instead, they relate to the research team’s extant knowledge and experience and act as a mechanism for transparency (Karhulahti et al., 2023). Based on our own experiences and perceptions, and our overall engagement with previous literature (as part of this report, or through our own work; e.g., Panayiotou et al., 2023), we considered the following qualitative hypotheses, which have relevance for all three research questions:

*H1: We expect heterogeneity in the motivations and experiences of social media use and types of platforms used, especially between different age groups.*

*H2: We expect that social media experience will be multidimensional with key dimensions like cyberbullying, social comparison, fear of missing out, and social support and connection to be discussed.*

**Involving young people in Co-Production**

The current study was designed with three Young Researchers (YRs, aged 19-21) (co-authors MA, LCB, PN), who are part of the study team for the duration of the project. They were recruited through Common Room, a consultancy organisation specialising in engaging young people as partners in research, policy, and service improvement around mental health. The YRs ensured that the focus groups schedule, study procedures, and ethical considerations were appropriate and aligned with adolescents’experiences. The initial participant facing materials and focus group schedule were developed by MP, JHD and LB, but were revised based on feedback by the YRs prior to submission to the University Ethics committee. Two further rounds of revisions were undertaken with the YRs to create the final schedule. The YRs co-facilitated the focus groups, analysed the data as part of the coding team, and wrote materials for dissemination (see supplementary materials for more details).

**Participants**

In total, 26 adolescentsaged 12-15 years (school Years 7 to 10 in the English system) who self-identified as current or prior social media users participated in the study. This criterion was purposefully broad (e.g. not specifying a certain number of hours per day or week usage) to acknowledge the potential variation across age groups in social media use behaviours. Participants needed to be able to independently participate in the focus group discussion, without requiring the presence of a supportive adult. This was due to the group-based nature of the data collection, with the presence of an adult in the room possibly affecting the confidentiality of the other participants and the data collected (Pyer & Campbell, 2013).

Adolescentswere recruited through three[[1]](#footnote-2) secondary schools in Northwest England, via a convenience sampling approach. We chose to recruit within the specified age range given the increased mental health symptomatology in secondary school ages (Patalay & Fitzsimons, 2018) and the fact that 91% of that population engages with social media (Statista, 2022). We asked schools to lead on recruitment, considering the make-up of the group to support the representation of diverse backgrounds and a range of perspectives. Specifically, we asked teachers to invite individuals across gender, ethnic, socio-economic and marginalised groups (e.g., LGBTQ+) as far as possible. In order to help us navigate the ethics in practice of accessing young people in a school setting (Fecke et al., 2022) we did not specify quotas of diversity for teachers to meet, recognising that some socio-demographic characteristics are generally more easily accessible to teachers than others. To support this, we collected demographic information about adolescents, to enable us to conduct further focus groups if we identified that particular groups of adolescentswere not represented, where possible.

We conducted five[[2]](#footnote-3) focus groups, one each with years 7 (*N*=5), 8 (*N*=5) and 9 (*N*=6), and two with year 10 (*N*=10, total *N*=26). Focus groups were therefore homogenous in terms of year group. All were mixed gender except for one year 10 focus group, which was all male (*N*=4). Table 1 presents the detailed sociodemographic information for participants in the study. We initially overrecruited (*N* = 10 adolescents per school/year) to mitigate against attrition.

Table 1 Participant’s sociodemographic characteristics

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| --- | --- | --- |
|  | Categories | Total (*N*) |
| Age | 12 | 7 |
|  | 13 | 3 |
|  | 14 | 6 |
|  | 15 | 10 |
| Gender | Female | 13 |
|  | Male | 12 |
|  | Self-describe | 1 |
| Transgender | No | 25 |
|  | Prefer not to say | 1 |
| Ethnicity | White/White British | 12 |
|  | Asian/Asian British | 5 |
|  | Black/Black British | 4 |
|  | Mixed | 3 |
|  | Other | 2 |
| Sexual Orientation | Straight/heterosexual | 23 |
|  | Bi/pansexual | 2 |
|  | Not sure | 1 |
| Free school meal eligibility | Yes | 6 |
| Disability | Yes | 3 |
| English as an additional language | Yes | 1 |

**Focus Group Schedule**

The focus groups were guided by a semi-structured schedule of open-ended questions (available at <https://osf.io/g7fkh/>). The focus group schedule included 12 open-ended questions (with pre-determined and responsive probes) across four areas of interest: (a) how participants use social media, (b) motivations for using social media, (c) their experiences of using social media, and (d) their perceptions of social media. Given our contention that previous approaches to conceptualisation of adolescent social media experience measures are coarse, the questions were purposefully open and did not focus on the items or dimensions of existing measures. Rather, they mapped onto generic themes/levels of social media use (Meier & Reinecke, 2021; Vogt et al., 2004).

We recognise that, as with the research team, young people’s views and experiences of social media use do not exist in a vacuum and are likely shaped by prior research and associated headlines. These are also likely influenced by their own (Lee & Hancock, 2023; Angela Y Lee & Jeffrey T Hancock, 2024; Angela Y. Lee & Jeffrey T. Hancock, 2024)mindset (Lee & Hancock, 2024) (Lee & Hancock, 2023; Angela Y Lee & Jeffrey T Hancock, 2024; Angela Y. Lee & Jeffrey T. Hancock, 2024), which itself can shift during the focus groups discussions (Parker & Tritter, 2006). Therefore, we acknowledge that our approach, while bottom-up within the wider measure development framework, might not be entirely bottom-up for the participants. The aim of the focus groups was therefore to highlight potential gaps in previous conceptualisations and identify constructs that may have been omitted from existing conceptual frameworks (Detmar et al., 2006).

**Focus Groups Procedure**

Focus group preparation and delivery was steered by Krueger and Casey (2014) practical guidance. The focus groups took no more than 70 minutes, including the introduction and follow-up process, and were conducted in private spaces within schools (i.e. empty classrooms). In one school, a teacher was present in the classroom (in the corner of an ‘L’ shaped room). In all other schools just the participants and facilitators were in the room. Post-it notes were available throughout for participants to write down additional thoughts based on discussions. Participants were given time at the end to write anything down that they wanted to. These were collected and anything written was added to the bottom of transcripts for analysis. Participants received a £15 voucher as a thank you for their time and were provided with a debrief sheet sign-posting them to organisations they could get in touch with if they wished to speak to someone about their experiences on social media.

Focus groups were conducted by two facilitators (JHD, with MA for years 7 and 8 and PN for years 9 and 10) to allow for support in safeguarding procedures, notetaking, supervising recording equipment, and observing group interactions (Gibson, 2007). The inclusion of the YRs in the data collection team added benefit beyond practical delivery. There can be heightened power dynamics at play when undertaking research with adolescents (Lane et al., 2019; Morrow, 2008). Bringing in young peopleas researchers is an opportunity to minimise these power dynamics and create a more welcoming research environment, closing the gap between the researchers and the participants. While the involvement of the YRs is not meant to facilitate a peer research process (Coppock, 2011), as the YRs stated, they see themselves as a ‘bridge’ between MP, JHD, and LB, and the participants. In practice this worked well, as YRs often had a better understanding of how social media platforms worked and the types of situations participants were describing. This meant they could ask more useful follow-up questions and help to retrospectively ‘interpret’ some of the discussions with JHD. Overall, this supported a more effective feedback loop between researchers and participants during data collection, and the interpretive discussions that took place during the analysis process (see supplementary materials for more details on the procedures).

**Analytical Approach**

The transcripts were analysed using thematic analysis (TA), specifically drawing on Braun and Clarke (2006, 2019) guidance for reflexive thematic analysis. This approach fits with the aims of the study to better understand adolescents’ views and experiences and support an expansive conceptualisation of social media experience, that can be further built upon in the next phases of this project (see Figure 1). We adopted a ‘hybrid’ analytical approach, making a deductive start-point by structuring our focus group schedule and data analysis on broadly defined themes that are important for the aims of our study: types of platforms, behaviours on social media, motivations for use, perceptions of effects, and experiences of social media. We also allowed new overarching themes or subthemes to be developed inductively through the analysis process.

This hybrid approach to TA has been described elsewhere (Swain, 2018) and allows room for new ideas and themes to be developed through engagement with the data (Braun & Clarke, 2021). Aligned with the aims of this study, we saw the value in both the development of semantic coding and summative themes to support dimension development, and creating space for reflexive and interrogative discussion. Accordingly, we also adopted a collective approach to coding, not to work towards a more ‘accurate’ coding of the data or establish reliability, but to allow for multiple interpretations and points of view to be incorporated into the coding and theme development process (Tracy, 2010).

**Thematic analysis.**  The six key phases of TA, including practical delivery of each phase in relation to this study, are outlined in Table 2. Analysis was led by JHD and EB and supported by members of the wider team (MP, LB, OD, and YRs). JHD, EB, MA and PN first spent time becoming familiar with the transcripts, followed by independently and systematically work through the transcripts to develop codes. MA and PN coded the transcripts of the focus groups they facilitated. Therefore all transcripts were coded by three members of the team. Coding was done through tagging and commenting on words/sections of text on the transcripts on a shared Microsoft Word file. JHD, EB, MA and PN met eight times throughout the coding process to collectively review coding and agree upon initial codes and definitions. These regular meetings created important space to explore existing or evolving thoughts and ideas, develop and define new codes, and revise existing ones, ensuring that they were grounded in the data. Regular meetings also enabled codes to be produced in an iterative and collaborative way. The final list of draft codes (*N* = 94, including the code name, definition and indicativedatabite) was circulated with the wider team for review and comment before moving on to the theming process. The codes can be found at https://osf.io/g7fkh/.

Following coding, JHD, EB, MA and PN met a further six times to generate and review themes and sub-themes. This process was undertaken on Trello, where the draft codes were ‘physically’ moved around to sit under sub-themes. During these meetings various codes were also condensed, collated or revised. The final meeting focused on generating and reviewing the overarching themes. This was followed by independent review and feedback between JHD, EB, MA and PN to ensure themes and sub-themes were appropriate and coherent, and there was team agreement. A thematic map showing themes and sub-themes, plus an overview of final codes was then circulated to the wider team. A wider team meeting was held to facilitate discussion and feedback. analysis process has been documented The final themes and sub-themes are presented as a thematic map and in a table including codes to exemplify sub-themes (more details can be found in <https://osf.io/g7fkh/>).

Table 2

*The phases of reflexive thematic analysis*

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| **Phase** | **Description** | **Delivery** |
| Phase 1: Data Familiarisation | Immersion in the data and capturing ideas relating to the research questions and broader themes, as well as wider questions and ideas | JHD, EB, AM and PN read through the transcripts and noted down any immediate thoughts or questions. |
| Phase 2: Generating initial codes | Systematic line-by-line coding to organise interpretation of data at a granular level.  | JHD and EB systematically worked through each transcript to identify codes within the text. MA and PN systematically worked through their allocated transcripts. Eight online meetings were held to discuss identified codes, and generate/review/revise initial codes and definitions. Draft codes were captured and stored in a shared Excel file. The final list of codes were circulated with the wider team for feedback. |
| Phase 3: Constructing themes | Examining coded and collated data to generate sub-theme within overarching themes; develop hierarchies in themes. Consider the need for new themes. | JHD, EB, MA and PN met five times to identify sub-themes and potential new themes and begin to assign codes to these. This took place in Trello. |
| Phase 4: Reviewing themes | Reviewing draft themes to consider how coherent they are internally and in relation to each other. Creating a theme hierarchy to organise into themes and sub-themes.  | JHD, EB, MA and PN met once more to generate overarching themes, followed by a final independent review of themes and sub-themes, and feedback to each other via email. This took place on Trello. This process included moving sub-themes around, renaming and redefining themes. |
| Phase 5: Defining and naming themes | Delineate a theme’s boundaries and place it within context of the broader study. | JHD created the final thematic map and shared it with the wider team for review and feedback. |
| Phase 6: Reporting | Report on analytical interpretation and importance; illustrate with quotes | The Stage 2 registered report has been written collaboratively across the research team. A report has been shared with participating schools and on the study website. |

**Ethics**

Full ethical approval for this study was received by the University of Manchester Research Ethics Committee (Ref: 2023-16353-28116). Informed opt-in consent was sought from participants’ parents/guardians and informed assent was sought from participants prior to the beginning of the focus groups. The focus group transcripts have been published as ‘safeguarded data’ (UK Data Service, 2022, February 23b) for future scientific use via the UK Data Service. We have elected to restrict access of the published data (as opposed to make it ‘open data’) due to our safeguarding duty to adolescents and given that full anonymisation in qualitative data is challenging, with potential for indirect identification (Harris et al., 2020; Tamminen et al., 2021). Explicit parental consent and participant assent was obtained for the depositing of data.

Transcripts were anonymised by the research team in a four-step process, guided by the UK Data Service (2022, February 23a), Karhulahti (2022), and Tamminen et al. (2021). First, the focus group transcripts were reviewed and pseudonymised to remove any direct identifiers (e.g., names). Second, indirect identifiers (e.g., locations) were reviewed to assess the extent to which a participant or third party can be identified in through the transcripts. Third, indirect identifiers were blurred, redacted, or replaced (e.g., “location X” instead of named location) as appropriate.

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# **Findings**

The aim of the current study was to inform the development of a measure of adolescent social media *experience*, by focusing on those experiences that relate to mental health and wellbeing. The focus groups provided rich perspectives from 26 adolescents that led to the development of five themes (A – E) and 10 sub-themes (see Table 3).

Table 3 *Focus groups themes and sub-themes as potential dimensions of social media experience that are relevant for mental health and wellbeing*

|  |  |
| --- | --- |
| **Theme** | **Sub-theme** |
| 1. Being present and connected
 | Space for social connections |
| Feeling (dis)connected |
| 1. Identity formation and self-presentation
 | Self-expression and presentation management |
| Validation and reassurance |
| To fit in |
| Social comparison |
| 1. Enjoyment and managing moods
 | Enjoyment and supporting a sense of self |
| Mood management |
| 1. Exposure to risky content and relationships
 | Platform risks |
| Social conflict |
| 1. Self-control
 | - |

In addition to these themes, throughout the focus groups, young people discussed their use of social media as ever present, not only as a key source of information (accessing global, local, and social news, and searching for information that they wanted or needed) but also as a ‘default activity’, to fill their time over other things, because it was convenient and tailored to them. These two facets of use underscore the ubiquity of social media in young people’s lives and represent the backdrop against which young people’s discussions around social media experiences are set. The rest of this section discusses these experiences through the five themes, which cut across the research questions of this registered report; to understand motivations, perceptions of, and experiences of social media in relation to mental health and wellbeing. Each theme is presented with a table describing the sub-themes and offering indicative databites (Tables 4 – 8), followed by an overview of the theme.

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# **Theme A: Being present and connected**

Table 4: *‘Being present and connected’ sub-themes and indicative data*

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| **Sub-theme** | **Description** | **Example data** |
| **Space for social connections** | Young people described social media as the way they connect with others, including close friends, ‘mutuals’ (friends of friends), and people they might not know. This included directly connecting and talking to people through social media, and indirectly connecting through viewing other people’s activities and posts. It also included connecting to wider society through consuming news and keeping up-to-date with popular culture. | *“I think it’s something that you both enjoy, so you both just like – ‘cos if we’re like having a chat, you always like what you – if you all had your phones out, you’d be like, “Oh, look at this, look at this,” just like something fun to talk about.”* (F, year 10)*“And like even if you don’t post, even just having an account sort of like makes your presence kind of there and like you’re still connected with like other people, and you can still see what they post and like see what’s going on for them. But like not having it just makes you kind of like not including yourself in any of that.”* (F, year 10)*“Like in a way, on Tik Tok, it’s kind of like you learn more about what’s going on around you and stuff. And even though it sounds weird, it’s like you’ll learn about obviously like what people are doing and kind of like – I learn more from watching Tik Toks about like the news than I would from watching the news.”* (M, year 10)*“We started sharing [TikTok] videos with each other and talking with each other. Then she got my Discord and we video like chatted with each other.”* (F, Year 8)*“[I use] Tik Tok, I follow my friends, but that’s only so I can send them a video.”* (M, year 8) |
| **Feeling (dis)connected** | Being able to connect to others on social media helped young people to feel socially connected and maintain their relationships. For example, through planning activities with friends, chatting to relatives who live far away, sharing funny videos or showing appreciation or support for someone else’s achievement/social media post. Conversely, using social media could also make young people feel disconnected from others, Young people described this happening, for example, if group chats were created without them. | *“Like for example your friends or something that you find funny, or they’re enjoying themselves, you’re obviously – you’re going to enjoy yourself as well.”* (M, year 10)*“I use social media but more because I’m not allowed to play out because – I’m not allowed to play out, so like when all my friends play out and stuff they send me snaps so I feel like I’m there.”* (F, year 7)*“when they [a friend] put up a video or something and you like it and you comment on it, and then like I show some support”* (M, year 9)*“And like the community you’re in in social media can feel like a loving one, so like a community that you fit in. It’s really positive, so you don’t find any negative stuff.”* (F, year 9)*“When I was trying to find who my friends were, I had massive FOMO, fear of missing out. If I’d go onto like Tik Tok and see they’d posted a Tik Tok together and they’re together, I’d get so upset that like I didn’t know about it. That’s not the case now, but like it can be – if you’re feeling alone or whatever and then you see people having fun together, it makes you feel way worse.”* (F, year 10)“*– you’re like, ‘Oh my gosh, I don’t really want to touch my phone’, but you start feeling like you’re going to miss out or something.”* (F, year 10) |

Young people described social media as a tool through which they connected with others in various ways. For example, things seen on social media often generated conversations in friendship groups, they chatted to family and friends, and could find out what other people were up to. Friendships were made and maintained with those who they had close off-line relationships with, as well as their ‘online-only’ connections. More than a communication tool, social media activity was also a way of demonstrating or enacting friendship. For example, it could be used to give and receive social support, allow someone be included in activities with peers, and be a central feature of young people’s time spent together. Some young people also spoke about making new friends with people they met on social media.

Alongside directly connecting with people, using social media provided an opportunity for young people to find out what was going on in the world easily and quickly, and played a role in social inclusivity because it allowed them to be part of shared experiences through being ‘in the know’. In this way, for some young people, social media could also contribute to feelings of stress and anxiety if they couldn’t access this information, as a result of worrying that they might miss out on something. Having constant access to what is going on in their social worlds could also be problematic. For example, as in Table 4, one young person observed that seeing that her friends had *“posted a Tik Tok together and they’re together, I’d get so upset that like I didn’t know about it”.* Given that social media activity was a marker of friendship, seeing their friends doing things without them could make young people feel lonely and upset.

# **Theme B: Identity formation and self-presentation**

Table 5: *‘Identity formation and self-presentation’ sub-themes and indicative data*

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| **Sub-theme** | **Description** | **Example data** |
| **Self-expression and presentation management** | Young people described social media as a space where they could engage in and develop their hobbies and interests, and a forum through which they could express themselves, their thoughts or their ideas. This also encompassed considering how they wanted others to view them, and managing who they shared (parts of) their online selves with.  | *“On TikTok, I make videos about my art, because I do draw quite a lot.”* (F, year 8)*“I do, I use Instagram ‘cos I do music, so I use Instagram to kind of – Yeah, promote myself.”* (M, year 10)“*I follow like a bunch of professional footballers and stuff.”* (M, year 9)*“The thing with Snapchat though, like unless you save the messages, they kind of disappear, so it’s almost feels less permanent like what you say and stuff. It doesn’t matter as much almost, so you can just text. Like I feel like psychologically it’s like better, ‘cos you can just type and you’re not really like – you don’t have to overthink it too much, whereas like if it’s saved then you have to think, ‘Oh, you know, someone could look at this again’.”* (F, year 10)*“I don’t post on anything apart from like – if I made like a really private account with like only a few of my friends then I might post, but still it just scares me. I wouldn’t want to.”* (F, year 10)*“Yeah, even if it’s one person that can just put something like – even like a vomiting emoji under your post, it’s just like – it makes you feel so bad, like more than you expect”* (F, year 9). |
| **Validation and reassurance** | Social media was a place when young people described having their thoughts, feelings or opinions recognised. This included when they stood up for something and others agreed with them, or shared a post that received positive interactions. Young people also described using social media to search for others who may have had the same experiences as them. | *“like a video, or like when you comment on someone else’s video, and it’s like they’re doing – or you feel like they’re doing something […] or whatever, or like you don’t support that, and you like comment on it and like loads of people like agree with you, it just like feels really good, like you’re not the only one who doesn’t feel like that.”* (F, year 9)*“But it’s gotten much better now, like people are able – different races, brown, black, white, to express themselves. Before, it was like, ‘Oh, let me straighten my hair before I take a Tik Tok’. Now it’s like I can wear my afro, I can do everything. So, it would be like, ‘Oh, you’re so beautiful’.”* (F, year 9)*“I would say like when you post something and you get views or like people have commented on it, it can just like boost your ego but in like a positive way.”* (F, year 9)*“Yeah, sometimes, I can’t lie, I use Tik Tok [laughs] for – like something’s happened to me throughout the day and I want to relate to someone, I like search up like – let’s say I’ve tripped over in front of people, so I’ll search up, ‘POV, you’ve tripped over in front of people’, so like you can relate to people, and it’s like not as awkward.”* (M, year 9) |
| **To fit in** | Young people described the need to be on social media, and conduct themselves in certain ways, to fit in with their peers. This included using certain apps or making sure they had lots of followers. | *“Lots of my friends pay for Snapchat Premium, which I think is just ridiculous ‘cos I don’t agree with it, but like they care so much about where they are in people’s best friend lists, like how much other people talk to other people on Snapchat, and it’s just – it’s so ridiculous.”* (F, year 10)*“They [friends] care so much about where they are in people’s best friend lists, like how much other people talk to other people on Snapchat.”* (F, year 10)*“But I feel like it’s just maybe to fit in, ‘cos everyone has Instagram and they all have – I don’t really know. I don’t know why it matters, because I wouldn’t post on it, but I just – that was the done thing, to like have lots of followers on Instagram, so I do, but I’d never post on it or anything.”* (F, year 10) |
| **Social comparison** | It was difficult for young people not to compare themselves to others online. This was often appearance-related, for exampling, worrying that their photos were not getting the same positive reactions as those of others. It could also be related to seeing others achievements or other activities and feeling that they were not doing as well as their peers. | *“Also like beauty standards, I feel like that – especially like when you see someone pretty and you’ve just posted something, and it’s like, “Oh, why am I not going viral like them?” So it’s kind of just like –…”* (F, year 9)*“And then that’s someone that’s – not ugly, but someone that doesn’t fit the beauty standards is overly confident and they’re like – they just bash them.”* (F, year 9)*“If you’re feeling really unproductive or like you know there’s things you want to do, and then you go onto Tik Tok and it’s like, “Just did a 10K run,” or something, like, “Well, I could have done that but I’ve been sat here on my phone, so thanks for making me feel even better about that.”* (F, year 10)*“Last night I was upset about something, don’t remember what, then I was on Instagram and it was like seeing people – it was like signing day at a football club, and I was just like getting annoyed, and it’s like I shouldn’t be getting annoyed because they’re just signing like everybody else is, but ‘cos I was already in a mood, I was like annoyed.”* (F, year 10) |

For many participants, social media was a way of exploring and expressing their identity. They spoke about using social media to both develop and demonstrate their hobbies and interests, included connecting with specific communities through social media platforms or publicly displaying their skills. Social media was also a way of validating this, through getting feedback or endorsement from peers to affirm their ideas or actions, which made young people feel good about themselves. As captured in Table 5: “*it can just like boost your ego but in like a positive way”.* Self-expression was a complex process, however, not just about sharing parts of themselves and cultivating an online persona, but also managing this in line with social norms and expectations – that were constantly shifting. This meant that young people often aimed to present themselves in a certain way in an effort to ‘fit in’. They also suggested that they did not regularly create content to share on social media with a wide audience, as it worried them who might see it and pass judgement.

Seeing others on social media could also make young people feel like they were not good enough. Female participants in years 9 and 10 spoke about this the most, and it was often connected to physical appearance. They also discussed feeling upset when they saw negative comments about someone else, especially if they felt they identified with that person. There was some variation in discussion of these experiences, however. Young people in years 7 and 8 did not discuss feeling a pressure to use social media as a way of fitting in, indeed one year 7 participant actively chose not to use Snapchat because she found it annoying. More broadly, some young people spoke less about feeling pressured into using certain platforms, and more about using platforms that they found most useful and enjoyable. Further, whilst some spoke about feeling bad about themselves when they thought they didn’t match up to others, one participant spoke about using this as motivation to work towards his own goals: *“seeing people like playing for like rugby academies and getting signed at young ages, I got like so annoyed, so I wanted that to be me”* (M, year 10).

# **Theme C: Enjoyment and managing moods**

Table 6: *‘Enjoyment and managing moods’ sub-themes and indicative data*

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| **Sub-theme** | **Description** | **Example data** |
| **Enjoyment and supporting a sense of self** | Social media was something young people got enjoyment and pleasure from. It was a source of entertainment, and could also provide inspiration and be a place to deepen knowledge and interests through tailored content.  | *“You use it to upload things like that have happened in your own life as well, so other people can do – you can use it to entertain other people as well as be entertained.”* (M, year 9)*“Yeah, I’ve learnt a lot of like just cool, fun facts [laughter]. No, but like interesting things, like kind of – it can spark an interest in something. Like you didn’t really realise you had an interest in space or something, and then you see a video about it and you’re like, “Actually, that’s really interesting.” So, you can like learn new things.”* (M, year 10)*“Basically, to just chat and have a bit of fun, but most of them, like YouTube and Roblox, I just go on Roblox for the game mechanism.”* (M, year 7)*“[…] it’s just there for you. So like when you go on Tik Tok or whatever, you just scroll and you’re just happy, like you don’t have to think of something else that’s going to maybe offend you or something”* (F, year 9). |
| **Mood management** | Young people described using social media as a means of dealing with moods or other feelings. it was something they described turning to if they wanted to relax, including not having to talk to anyone else, or, conversely, chatting with close friends to cheer them up. They also used it as a distraction to divert their attention away from other stressors. This was sometimes described as a conscious decision, and sometimes as more automated behaviour. | *“If I’m having a bad day then I won’t go on like – I’ll just go on TikTok and like chill out. I wouldn’t really go on anything and like talk to anyone.”* (F, year 7)*“[…] ‘cos let’s say you’re really like miserable and stuff, and like – I feel like if you’re like in a more down mood, like you just tend to like spend more time on it and like unconsciously.”* (M, year 9)*“I think if I’ve had a bad day and I have no motivation to do all the things I want to do then social media’s just an easy option.”* (F, year 9)*“I think if I was like – not if I was sad, like if I was in a little bit of a bad mood, I might go like watch someone that like - Yeah, like I’d just be like, “Oh, let’s see…” Like I follow quite a few like women who like do like vlogs of like their life and stuff, like – just watch them.”* (F, year 10) |

For many participants social media was a source of pleasure in their everyday lives. It was easy to access, entertaining, and could provide inspiration and learning opportunities. Some young people also described using it as a way of coping with low moods, choosing to browse their feeds or searching for content that they liked and avoiding interacting with others, or, alternatively, seeking support from friends. Other young people described how, rather than consciously using social media to cheer themselves up or ‘relax’, it was more of a subconscious process, whereby they were simply more likely to spend time on social media when they were in a low mood because they lacked the motivation to do anything else. Some young people also pointed to social media possibly making them feel worse if they were in a low mood: *“But I’ve noticed that like if I’m in a bad mood and then I go on social media, I’ll just get in an even worse mood ‘cos I’m mad at myself for just aimlessly scrolling when I don’t really care about it”* (F, year 10).

# **Theme D: Exposure to risky content and relationships**

Table 7: *‘Exposure to risky content and relationships’ sub-themes and indicative data*

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| **Sub-theme** | **Description** | **Example data** |
| **Platform risks** | Multiple potential risks were identified by young people in relation to the way social media platforms functions. These were related to coming across or being ‘fed’ unwanted content, and not being able to trust the content or people they engaged with. | *“I think it’s scary how influential it can be, especially to like younger people. ‘Cos I don’t think I’d be influenced at my age, or maybe I would, but I think it’s scary that younger people could get their opinions based off social media, which isn’t always factual.”* (F, year 10)*“'For You' page might get really depressing and then the next morning it’s still really sad, and it’s like, “That’s not the vibes” [laughter]. No, but it never really should be the vibe that it’s sad, but if you like one Tik Tok that’s sad then they all become sad and it’s quite annoying.”* (M, year 10)*“You never know what’s going on. You never know who’s chatting* [behind the screen]*”* (M, year 7)*“There was a time when I found someone while I was scrolling on TikTok and it really – like it really irritated me, because they were slandering not only my family’s nationality but my nationality, since I’m mixed race. Like they were just kind of insulting where I was from. Even if it wasn’t directed at me, it still – you know…”* (F, year 8) |
| **Social conflict** | Young people described the potential for social conflict on social media as a key challenge. This could happen in multiple ways, including receiving criticism or negative comments, engaging in arguments with others, misinterpreting what someone has said in a message, or acting in a way that is not in line with how you should act on social media. | *“And if you have like an argument in school, it’s not like you go home and you come back – like in primary school, you come back the next day and it’s like you talk to them. It carries on. So, it’s like you might have an argument at school, but then like you then like text them or something, but, you know, it can like escalate really quickly, and there’s not really a break from it.”* (F, year 10)*“Like for example, you might start getting panicky if they don’t text in the normal manner which they do, which is just ridiculous ‘cos like they didn’t have time to then send you a quick text, but it can come across to you like they’re mad.”* (F, year 10)*“‘Cos like if someone texts you and that and you don’t respond for like ages then you’ll be like, ‘Oh no...’”* (M, year 9)*“Like there’s just people that bully people. Like I actually experienced racism on Roblox, like how is that even possible?”* (F, year 9)*“If you don’t allow people to follow you then it’s like you’re being horrible.” (F, year 10)**“Like some people take it differently, so depending on their mood, they might make a Tik Tok that’s making fun out of something else, or they just maybe post something on their story that’s offensive.”* (F, year 9)*“I’ve stopped commenting though because I feel like that’s – have you heard like the people that like argue in comments? It’s crazy.”* (F, year 9) |

Despite the use of algorithms to curate personalised feeds based on their engagement, young people still highlighted how easy it was to get unwanted and inappropriate content, and the risk of ending up in a downward spiral, whereby one ‘depressing’ video could lead to another. They also spoke about not being able to trust the content or people they came across online, for example, it was difficult to know if content was genuine or just created for attention. In addition, young people noted that the way people engage online is different to face-to-face, and social media normalises behaviours that would not be tolerated in-person, which could lead to offense or upset. This meant that problems such as bullying, ‘catfishing’, and witnessing or experiencing discrimination or offensive content were easily enabled by social media. Young people could also be the target of this criticism and inappropriate behaviour, or feel upset or worried by the content they saw, and at least one participant had deleted an app because of this. Some young people did suggest that they could just ignore negative content, or were desensitised to it: *“you get used to it now, so it’s kind of like you don’t care”* (F, year 9).

Participants also discussed the heightened risk of social conflict as a constant risk. This was in part due to the ease at which users could share their opinions and the breadth of individuals they were exposed to on social media. Miscommunication was also a problem because of the absence of visual and verbal cues. This had the potential to cause tension with friends and was also a source of anxiety because of the real or imagined consequences. Female participants also described expectations of how to act on social media, for example, responding quickly to messages, accepting a follow request, or interacting with friends content were all important parts of social media ‘etiquette’. Adhering to these rules added a layer of stress and had the potential to cause conflict if they were not followed. The permanency of social media was highlighted as a related issue, because things that were ‘said’ could not be ‘taken back’.

# **Theme E: Self-control**

Table 8: *‘Self-control’ indicative data*

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| **Theme** | **Description** | **Example data** |
| **Self-control** | Young people described not feeling in control of their own social media use, for example spending much longer on it than they intended to, or using it when they were supposed to be doing other, more important things, like their homework.  | *“When my phone’s going, I just feel like I need to look at it.”* (F, year 9)*“I still find a way to go on my phone when I’m at sports. It’s like I can’t escape it. It’s like once you’re there, you’re there.”* (F, year 9)*“Yeah, it’s so addictive and it’s really annoying. It’s not that I’m thinking, ‘Oh, I love to watch Tik Tok, I want to go on Tik Tok. Now I’ll go on it for this amount of time’. It just happens [laughter]. Like my attention span is short, so I just scroll and then, yeah, it’s really annoying.”* (F, year 10)*“So, if you’re like say sat at your desk and you’re just – you realise you’ve been on your phone for like an hour, then obviously it’s a negative feeling ‘cos you could have done something more productive now. I think that’s the only time I feel negative when I’m on social media.”* (M, year 10)*“It just takes up all your time. And it’s good in the moment, but then after, when you realise you’ve got homework you’ve missed…”* (F, year 9).*“Like wasting like so much unnecessary time – ‘cos like I have like so much better things to do, but for some reason like the urge to just – is like overwhelming, so I just end up wasting time on it.”* (M, year 9)*“And you’ll get like one notification or something and be like, “Oh, I’ll just check what this person said,” and then you’ll end up like going and messaging someone else, and going on doing something else, and it just like carries on, and then after you just feel really bad about yourself and you’re like, ‘Why would I do this? I’m wasting my time’, but then you’ll go and do it again the next time.”* (F, year 10) |

Older young people (years 9 and 10) described sometimes feeling like they had lost control of their social media use. They described their social media use being triggered by factors such as boredom or notifications, and they found it difficult to ignore even when they didn’t want to use it. This led to feelings of frustration that they could not control how much they used it, as captured in Table 5: *“Yeah, it’s so addictive and it’s really annoying”*,but also when their social media use stopped them from doing other things. A few young people said that they were able to actively avoid social media, knowing that spending time on it would leave them feeling frustrated. One young person explicitly spoke about being very in control of their social media use: *“I spend my time like just doing something else, better things, like sports, studying. And then [at] this stage now, I barely use social media*” (M, year 10). Other again did not discuss this as a concern.

# **Discussion**

In this section we discuss the meaning of our findings in terms of social media experiences relating to mental health – that is, those that should be priorities for assessment. We consider ‘direct’ experiences first, i.e., those that young people discussed frequently and directly in relation to mental health. This is followed by a discussion of ‘indirect experiences’, i.e., those that were not directly discussed in relation to mental health, but may still play an important role in shaping mental health outcomes. This distinction between direct and indirect experiences was developed through mapping the individual data codes to mental health outcomes. This mapping is included with the full list of themes, subthemes and codes, accessible on OSF (<https://osf.io/g7fkh/>). Following this, we reflect on the practical implications of our findings for the development of our social media experience measure.

## **Direct social media experiences relating to mental health**

Young people’s social media experiences were nuanced and multifaceted, and were discussed within three interlinked mental health and wellbeing outcomes: social aspects, anxiety, and self-esteem. Emotional aspects cut across these three outcomes, within instances of ‘feeling good’ most often related to self-esteem or social connection, and ‘distress’ commonly intertwined with anxiety. Consistent with others, we recognise that it is difficult to disentangle these mental health experiences from each other (Foulkes, 2021; Rapee et al., 2019). In particular for example, intensity, duration and ability to cope often mark the difference between anxiety, and anxiety that leads to emotional distress. Therefore, and as a starting point for our measure we focus on the three overarching experiences here.

***Social aspects****.* As might be expected, social aspects of mental health and wellbeing, e.g., social confidence, functioning and satisfaction, cut across all themes – social media platforms are interactive tools designed to enable connection with others, and are a core part of socialising for adolescents (Pouwels et al., 2021). Young people described their social media use as leading to an array of positive and negative relational experiences, such as feeling included and being able to involve themselves with their peers; building and maintaining friendships that meant they felt close to others; or conversely feeling peer pressure, left out or lonely, consistent with other work. For example, Weinstein (2018) found that the most common positive affective experiences on social media involved relational interactions, and Hjetland et al. (2021) note that, given the role of social support in wellbeing, the opportunities social media provides to stay connected can be a positive contribution to adolescent mental health. On the other hand, it can play a role in straining relationships and experiences of antisocial behaviour (West et al., 2021). Young people in our study clearly highlighted the paradoxical nature of social experiences that social media use can engender.

(Steele et al., 2020; 2021, 2023a)***Anxiety.*** In addition to these positive and negative *social* aspects, anxiety appears as a key facet embedded in social media experiences. Young people described it as externally motivating their social media use, because they worried about what they might be missing out on. Anxiety was also discussed within their perceptions of interactions and content, because they worried how others might, or did, perceive them. Social media is a key medium through which young people can present themselves, and control what and how others see them (Hjetland et al., 2021). However, in a world where self-presentation has never been a more ‘public’ and ‘permanent’ affair (West et al., 2023), our study suggests that anxiety over what others think about them or their lives appears to be a primary social media experience.

Further, the three facets of Steele et al.’s (2020) concept of *digital stress* – *availability stress*, *approval anxiety*, and *fear of missing out* (FoMO) – were explicitly highlighted by young people in the current study(!!! INVALID CITATION !!! (2020)). In particular *fear of judgement*, akin to approval anxiety, was prevalent, consistent with Weinstein (2018) who found stress relating to peer-judgement as the most common negative defining experience. Whilst the constant input from social media (*connection overload*; the fourth facet of digital stress) was discussed in the current study, this was more in terms of it being a distraction, rather than distressing. Steele et al. (2020) theorise digital stress as multifaceted, with the four facets responding differently to the features of social media platforms, i.e., their permanence, publicness, searchability, shareability and interactiveness. It may be that the highly visual nature of the most commonly discussed platforms (TikTok and Snapchat) by the young people in our study, is driving stress related to social comparison (i.e., approval anxiety and FoMO). Further, in agreement with Hjetland et al. (2021) and adding to work by Nesi and Prinstein (2015), we found that many of these relational experiences of anxiety seem to be particularly pertinent for adolescent females.

 ***Self-esteem.*** Social stressors experienced on social media were also closely linked to self-esteem. Positive feedback from peers was sought and valued by young people: the way that some used social media in a promotional capacity suggests that this is a motivator for use, as well as a positive experience. Conversely, negative comments, both from close relations and strangers, or more passive experiences like not feeling like they ‘matched up’ (in terms of physical appearance or otherwise), could make them feel bad about themselves. Young people also discussed ‘vicarious victimization’ (Cohen et al., 2021; Stahel & Baier, 2023), wherein observing hate directed at others with whom they shared an aspect of identity could negatively affect their self-image. It is well documented that the breadth of aggressive online behaviours young people engage in and experience may play a detrimental role in mental health, including distress and social exclusion (Smith et al., 2017), depression, anxiety and poor self-esteem (Xiao et al., 2024). However, in agreement with Stahel and Baier (2023), vicarious online experiences may be a unique aspect of cyberaggression that merit greater attention with implications for mental health.

Weinstein (2018) and Valkenburg et al. (2022a) also identify that browsing can induce feelings of envy, and this may have negative effects on adolescent wellbeing. Other studies have reported that social comparison with ‘ideal bodies’ seen on social media may relate to negative feelings (Hjteland et al., 2021), lowered self-esteem (O’Reilly et al., 2019), and disordered eating (Radovic et al., 2017). While in our study appearance comparison (related to body ideals or otherwise) was more commonly discussed by adolescent females, the internalisation of body ideals has been shown to play a role in reduced body satisfaction and wellbeing for both males and females (Deighton-Smith & Bell, 2018; Vuong et al., 2021).

At the other end of the spectrum, young people also discussed ways in which they used social media to express themselves, often exclusive of interactions with others. Elsewhere it has been demonstrated that adolescents use social media to explore, expand and reaffirm personal values (West et al. 2023b) and it is seen as a safe space where they are free to creatively shape their identities (Bibizadeh et al., 2023). In these instances, young people in our study described a much more organic ‘way of being’ on social media that was not focused on peer approval but on engaging with content that makes them feel good about themselves and supports a sense of self.

## **Indirect social media experiences related to mental health**

The study also points to some social media experiences that young people did not directly identify as central for mental health and wellbeing, but are related or may influence the relationship. Firstly, at times the motivation for using social media was to cope or manage particular moods. For some young people this translated into a positive experience as it provided a way for them to relax or be distracted from other issues. This happened through both solitary digital practices (Kostyrka-Allchorne et al., 2023), as well as through social interaction and support. As identified elsewhere, for young people with pre-existing mental health conditions, social media can play an important role in feeling a sense of support and providing a community where they feel less isolated (Kostyrka-Allchorne et al., 2023; O’Reilly et al., 2022; Strand et al., 2020; Webb et al., 2008). Conversely, using social media as a way of coping could also come about in a more subconscious way, resulting from a lack of motivation to do anything else, rather than a deliberate attempt to improve mood. Yang et al. (2021) suggest that turning to social media could be a maladaptive coping strategy leading to a deepening of mood. Our study suggests that this could be a key feature of social media experience as young people suggested being in a low mood meant that they were more susceptible to further worsening of mood by things that they saw online.

Secondly, young people discussed different ways of managing some of the risks or drawbacks they associated with social media. For example, as a strategy for managing online presentation, some had multiple accounts that served different interests and audiences or allowed them to create private online spaces. In relation to encountering negative content that may cause distress, upset or overwhelm, some participants said they just scrolled past it and forgot about it, or described a more dynamic process whereby they felt it did not affect them ‘anymore’ and they were now desensitised to it. Indeed, certain content was perceived as distressing by some, but not by others (and in one example, quite controversial content was perceived as entertaining). Choosing not to use social media when they were in a low mood was also a strategy for some.

Finally, and as the theme ‘self-control’ demonstrates, a sense of losing self-control was also present, most commonly in relation to time-spent on social media and being distracted from other activities. Kostyrka-Allchorne and colleagues’ (2023) systematic review suggests that young people with pre-existing mental health conditions find it difficult to regulate their social media use, which may exacerbate existing mental health issues. Whilst our study does not present a clinical sample, it does suggest that for young people more generally, challenges regulating social media use could perpetuate low self-esteem or feelings of anxiety, for example through feeling guilt or frustration for wasting time or not completing other tasks. It also adds complexity to understanding how and when young people might experience similar activities differently, for example, in what context ‘browsing’ shifts from being a relaxing and welcome distraction to one perceived as ‘mindless scrolling’ and a cause of guilt and frustration.

These indirect experiences interplay with Lee & Hancock’s (2024) concept of *social media mindset(Angela Y. Lee & Jeffrey T. Hancock, 2024)s* (SMM), which they describe as the “core assumptions about the nature of their experiences with social media that orient them toward a particular set of expectations, behaviors, attributions, and goals” (2024, p. 14). As Lee and Hancock assert, mindsets act as a lens through which individuals can understand their experiences, and guide how they respond to them. They theorise two dimensions, *agency*, i.e., do I control my social media use or does it control me? And *valence*, i.e., do I feel social media is a tool or a harmful compulsion? Both of these dimensions can clearly be seen in the indirect experiences explored above, for example, through being able to control social media use or not (agency), or through the perspective that social media is a helpful way to spend time when in a low mood vs. feeling like it is a waste of time (valence). Mindsets can therefore relate to psychological wellbeing (Lee & Hancock 2024), and likely have a role to play in understanding when experiences on social media may be positive or negative for adolescent mental health.

## **Social media experience: heterogeneity and multidimensionality**

In our discussions with young people the three direct mental health experiences – social aspects, anxiety and self-esteem appeared to be highly dynamic and interwoven with social media motivations, behaviour, and experiences. Motivations for use were most commonly social in nature – to connect and feel connection, but could also be in response to anxiety. Social media use was discussed in relation to positive social experiences (chatting with friends); and increased self-esteem (lots of people liked your photo); but also negative social experiences (feeling left out if no-one replies); and/or a lowering of self-esteem or sense of anxiety (did no-one reply because your post wasn’t ‘cool’?). Use was also underscored by risks such as miscommunication or problematic content, and this could be a source of anxiety. Overlaying these multidimensional experiences are the ways that some adolescents are motivated to (or habitually) use social media as a way of coping or a distraction, their perception of how much control they feel they have over their use, and their subjective response to content.

Thus, an important finding from this study is that young people vary in their motivations for using, and experiences of using, social media (H1). Indeed, we have suggested that indirect factors may shape how they experience social media in relation to mental health, and these are interwoven with particular social media mindsets (Lee & Hancock 2024). However, extending our understanding of H1, not only is there between-person variation, including some possible differences across age and gender, but there also appears to be within-person variation. Young people described different and often polarised experiences resulting from similar activities, based on, for example, the context within which they were using social media, their mood state, or an anticipated or actual social interaction. Other qualitative studies (e.g., Hjetland et al. 2021; Weinstein 2018; West et al. 2023a) have also demonstrated the interplay between positive and negative experience present in a young people’s social media use.

Further, the multiple dimensions of social media experience (H2) reflected in the current sample were expressed in a complex way. Whilst we designed the focus group schedule to focus one at a time on each of perceptions, motivations, activities, and experiences, discussion of these was overlapping, indicating that for young people, social media experience is not clearly disentangled along such lines. The learnings relating to the study hypotheses show that the relationship between motivations, behaviours and experiences in relation to social media use may therefore not be as straightforward as it is sometimes modelled (e.g. motivation à outcomes; (Stockdale & Coyne, 2020)), and highlight the importance of understanding the underlying mechanisms and wider context of social media use, in order to fully capture social media experience.

## **(2022a)Measure development**

This study is part of a wider research project to understand the construct of “social media experience”, i.e., what (dimensions) it might be underpinned by*,* and develop items (i.e., statements, the observable and measurable components of the construct) to assess this construct (Figure 1). Focusing on a bottom-up consultation with young people as the first stage of measure development has provided important information about the first steps of the conceptualisation of “social media experience”, that is, key domains of experience relative to mental health and wellbeing. Our findings provide three clear dimensions: social aspects, anxiety and self-esteem, plus two less clearly defined dimensions around coping and self-control. These will be triangulated with data from other studies to further develop the conceptualisation of social media experience and inform the next stages of measure development (see Figure 1).In addition, the language of these experiences (i.e. young people’s quotes) will be used to inform item development.

Through consideration of the qualitative hypotheses, this study has also highlighted some potential threats to the validity of the measure, which will be a priority focus during item development and cognitive interview stages (Borsboom et al., 2004). Firstly, our findings demonstrate the difficulty of categorising items into discrete domains (e.g., motivation vs. experience) – a typical issue in psychological construct development (Black, 2022; Newson et al., 2020). The tendency to over-simplify constructs risks shifting focus away from genuine utility in understanding real-word experiences (Yarkoni, 2020), and this study has cemented an understanding that if we were to only focus on social media *experiences* in our consultation with young people, we would lose the information that would help us to understand that experience in a meaningful way. For instance, we know that questions about motivations effectively elicited responses about experiences in a broader sense. For item development, this means that we will consider how motivations and behaviours can be used, where possible, within items to capture the context within which experiences may occur, to ensure ecological validity for young people. For example, the hypothetical item *‘I feel under pressure on social media’* may not capture enough information to understand the aspect of social media use that informs the experience of feeling under pressure. In contrast, the item *‘I feel pressure to keep up-to-date on social media’* may more effectively capture how aspects of motivation or behaviour precede and affect social media experience.(!!! INVALID CITATION !!! (Borsboom et al., 2004; Jessica K. Flake et al., 2017))

Secondly, the possible group differences observed in our sample will also be considered during item development and cognitive interviews. Differences were subtle and, given the small-scale qualitative nature of the study we are cautious in drawing firm conclusions. However, these provide important preliminary information that can be further explored in subsequent studies. Given that the current measure will be developed for general populations, group differences can threaten the validity and later validation of the measure. Indeed, one of the key issues in adolescent measurement is the lack of group measurement invariance (Black et al., 2024; Stevanovic et al., 2017). For example, our proposed measure would be invariant if it has the same meaning (provides the same score) for young people with the same levels of social media experience, irrespective of whether they belong to different groups, e.g., younger versus older adolescents or across genders (Millsap, 2012). Often, measurement invariance is assumed, however, if not met, we risk assessing a construct that does not reflect the same thing across all young people, thus potentially leading to biased findings (Putnick & Bornstein, 2016). User consultation at early stages of measure development (in this case through cognitive interviews with different groups of young people) (Roberts et al., 2020) can minimise measurement invariance and improve the validity of the measure.

# **Strengths and limitations**

This study has prioritised the views and perspectives of adolescents in developing an understanding of their experiences of social media in relation to mental health. It has taken a purposefully broad approach, which is a valuable first step in capturing the notable breadth of dimensions relevant to social media experience. In doing so, it has contributed further insight to the field, but also what needs to be considered specifically in terms of measure development. However, some limitations of the study should be noted. First, the current work provides insights into the views and experiences of young people from North-West England. Whilst similarities can be drawn between our findings and that in other qualitative studies with different populations of adolescents, adolescent motivations for, and use of social media will vary culturally (de Lenne et al., 2020) and across platforms (Sheldon & Bryant, 2016). Whilst we observed some differences across age and gender, the small sample size with only one focus group per year group and the mixed-gender nature of the groups (with year 10 as an exception on both counts) limits our ability to draw firm conclusions. Further, on average, participants in this study are from above average SES backgrounds and their experiences may therefore differ from adolescents from lower SES backgrounds (Skogen et al., 2022). Our sample did discuss diverse motivations and experiences of using social media, and capture the perspectives of some individuals from marginalised groups. However, given the gamut of platforms and functionality that social media now entails suggests it is likely that not all experiences were captured. This is a limitation we will seek to address in the next stages of measure development. In particular, we will seek to engage with adolescents that were missed in this study, for example LGBTQ+ young people who report varied experiences on social media (Fisher et al., 2024).

# **Conclusions**

Our study provides important insights into adolescent social media experiences and represents the first stage of a wider endeavour for robust measure development through initial conceptual work with the stakeholder population. It has highlighted the multidimensional and complex nature of social media experience and the heterogeneity across adolescent experiences, both of which could be considered as potential threats to validity and will be considered in the ongoing construct conceptualisation and in the final item development. It has also deepened our understanding of critical aspects of experience in relation to mental health: highlighting potential measure dimensions to be triangulated with further data collection, as well as more subtle aspects such as the prevalence of relational aspects of digital stress over non-relational aspects, and the role of vicarious experiences in cyber-aggressions. More widely, our study has demonstrated that social media is ever-present in adolescent daily life, implicated in relationships and social interactions, pleasure and leisure time, hobbies and interests, and sense of self. This points to the importance understanding social media experience. Creating a tool to help us to adequately reflect and understand the diversity of mental health and wellbeing implications for adolescents is paramount, given mounting concerns and rapid policy development in this area.

**Data and materials**

Supplementary information about the study and additional findings can be found at <https://osf.io/g7fkh/>. Data is publicly available at <https://doi.org/10.5255/UKDA-SN-857173> as ‘safeguarded data’ and can be accessed by registering with UK Data Service and agreeing to the terms and conditions. The accepted stage 1 manuscript can be found at [https://doi.org/10.31234/osf.io/erjvz](https://doi.org/10.31234/osf.io/erjvz%22%20%5Ct%20%22_self) (Version 5).

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**Author Contributions**

Conceptualisation: All authors; Design: All authors; Project management: JHD; Conduct of focus groups: JHD, MA, PN; Data curation: JHD; Data analysis: JHD, MA, PN, EB; Interpretation of findings: All authors; Writing original draft: JHD, LB, MP; Writing, review & editing: All authors.

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1. We aimed to recruit four schools. Five were recruited, but two dropped out. [↑](#footnote-ref-2)
2. We aimed to conduct four focus groups (one per school) but two focus groups were conducted in one school due to the large number of participants. [↑](#footnote-ref-3)