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Citation (APA)

Figuroa, C., Marin, L., Jaff, M., & de Reuver, M. (2026). Translating the value of well-being into design features of social media platforms: a value sensitive design approach. *Ethics and Information Technology*, 28(1), Article 14. <https://doi.org/10.1007/s10676-026-09889-y>

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Translating the value of well-being into design features of social media platforms: a value sensitive design approach

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Abstract

Mental health problems are increasing among young adults, and growing evidence points to social media platforms as a potential influence. Design decisions made by platform developers have the potential to fundamentally impact mental well-being. However, translating abstract values such as “well-being” or “mental health” into concrete norms and design features is challenging. We explore the potential of using a value sensitive design approach towards redesigning a social media environment that promotes mental well-being. We interviewed social media experts, held a focus group with adolescent users, and created a values hierarchy that translates abstract well-being values into norms and design requirements. Results reveal that mental well-being is negatively impacted by the inherent value tensions found in the design of social media platforms, tensions such as authenticity and connection, personalization and autonomy, and control and autonomy. We propose a value-sensitive design approach, informed by involving young users and other stakeholders, to show how to integrate key values into social media redesign.

Keywords Mental health · Value-sensitive design · Adolescents · Values · Digital platforms

Introduction

Mental health issues such as depression and anxiety are increasingly prevalent among adolescents and young adults. Social media may be an important contributing factor to the ‘mental health crisis’ (Twenge, 2019); (Braghieri et al., 2022). Overuse of social media, sometimes resulting from social pressures, has been shown to negatively impact mental well-being (Büchi et al., 2019; Petropoulos Petalas et al., 2021). Social media usage impacts sleep, and can lead to cyberbullying, stress, sadness, and isolation, which have all been linked to depression, self-harm, and suicidal thoughts

(Yu et al., 2024; Zsila & Reyes, 2023). Social media platforms can exacerbate harmful gender norms and racism, which can especially influence the well-being of girls and adolescents of color (Tao & Fisher, 2022).

Policy responses to mental health impacts of social media generally advise the removal of certain features or discontinuing the use altogether for vulnerable populations such as adolescents and young adults. Recently, several countries (such as Australia or New Zealand) have entirely banned the usage of social media for teenagers under a certain age (16) because of the documented detrimental effect of social media platforms on teenager’s mental well-being. For instance, the Australian government amended the ‘Online Safety Act 2021’ to ban some social media platforms for adolescents under 16 in 2025¹ and other countries, such as Malaysia and Denmark announced plans for similar bans². Overall, there is a global push towards stricter age restrictions. It seems that researchers and policymakers will focus on harmful effects of social media, rather than their potential beneficial effects (Schønning et al., 2020).

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¹ <https://www.esafety.gov.au/about-us/industry-regulation/social-media-age-restrictions>.

² <https://www.washingtonpost.com/world/2025/12/05/australia-social-media-ban-teen-world-policy/>.

While policy attention mostly focuses on the negative impacts of social media on mental well-being, some research has also linked social media use to increases in user's well-being (Bekalu et al., 2019; Kross et al., 2021; Lee & Hancock, 2023). For instance, qualitative research shows that social media fosters connection and support and enables teenagers to learn from others about dealing with difficult situations and mental health problems (Popat & Tarrant, 2023). Further, many adolescents use social media as a source of health information, as a US-based report found that around 2/3rds of young people turn to social media to find well-being resources (Nathan & Haven, 2024). However, although online connection can be deemed positive, it may result in the need to stay informed about others' lives, which led to compulsive use of the platforms in fear of missing out (Kross et al., 2021).

Given the complex relationships between social media and mental well-being outcomes, blocking and removing social media features may create unexpected adverse effects. Similarly, focusing on interventions that only address one specific aspect of well-being (such as autonomy) creates the risk that competing values are adversely affected. Therefore, we argue that there is a need to develop a robust understanding on which social media *design features* can promote the value of mental well-being. We use a systematic review conducted by Orth and van Wyk. (2022) as a foundational reference, which operationalizes mental well-being into 24 conceptions, including concepts such as autonomy, connectedness, and happiness (Orth et al., 2022). Such understandings should incorporate suggestions from adolescent users themselves on how they understand the impact of social media on mental well-being conceptions.

We propose the use of value-sensitive design (VSD) as an ethical and methodological framework to the context of social media in view of maximizing users' mental well-being. VSD focuses on integrating values of societal importance in the design, or the redesign of existing technologies, to align it with the user's values (Friedman et al., 2002). VSD can help identify how certain social media design features can support or conflict with mental well-being as a value based on how stakeholders perceive this. In line with previous studies, we define social media as a multifaceted concept consisting of various online platforms and services that enable users to create and share content, engage in social interactions, and often participate in social networking (Hall et al., 2020; White & Miller, 2021).

In this paper, we aim to show how VSD can help uncover some of the main design features of social media platforms that could promote mental wellbeing. We explain how to translate these design features into norms and design requirements for social media platforms. One could ask why we need a more thorough understanding of how the

value of mental well-being gets translated into design, and why specifically mental well-being, given that social media platforms are seen as undermining this very well-being in the first place. Existing policy responses to social media and mental harm are primarily restrictive - forbidding and curtailing use - yet the social media platforms' effect is not unilaterally negative, and such responses risk removing potential beneficial uses. Our study asks: what if we included the voice of the end-users in the platform (re)design? Could user participation provide new ideas and perspectives that traditional design approaches have missed out on?

This is important because a body of work shows that including the perspectives of young people leads to services for young people, such as healthcare, education, and technology platforms, that are better aligned with their needs and improve the outcomes (Ozer et al., 2020; Sprague Martinez et al., 2020). Young adults are experts in their experiences regarding technology use such as social media. They can anticipate potential ethical dilemmas that could arise, and identify youth-specific values, in areas of research that might not be immediately obvious to adult researchers. At the same time, young people may hold varying biases regarding mental health and technology (Bailey et al., 2024; Figueroa et al., 2025). Therefore, it is vital for health and technology experts to contribute their knowledge regarding empirical research and the psychological concepts that shape the relationship between social media and well-being. This approach requires a careful examination of the diverse interpretations of mental well-being and a systematic connection of these understandings to potential design interventions.

One of the four ethical commitments of VSD is precisely stakeholder involvement and iterative design (Friedman & Hendry, 2019a), yet we notice that the mainstream platform's design decisions have been pursued often without user input, and this input, when sought, was from older adults. To put it simply, the opinions of young adults and teenagers have been ignored in the design process of social media, although they are the most frequent users of such platforms. Thus, the perspectives of different stakeholders, particularly young adults, should have a central crucial role in unpacking design features of social media platforms that could help better align with mental well-being values as they understand it.

The study was conceived as follows: For the empirical backing of VSD, we conducted interviews with social media experts, and a focus group with young adults focusing on mental well-being values in the context of social media. We prioritize an empirically-driven approach, recognizing the young people have diverse conceptions of what well-being entails in relation to social media, which likely diverge from existing ethical theory. We show how VSD is a suitable method to achieve this because designing for a

value such as mental well-being, which consists of several different understandings of this value (with various prioritizations between the value's norms), requires a robust approach to embedding values in design. We conclude the paper by identifying future research priorities for continuing this exploration of the role of social media in the mental well-being of teens and young adults.

Theoretical background: Value-sensitive design

VSD is a method of ethical (re)design which has been used since its inception (around the 1990s) to assess the values embedded in emerging digital technologies. As a method, VSD is already used in human-computer interaction studies to propose and then test design changes that will be experienced by users as value embedding. Value sensitive design is a method that allows designers to embed values either from the inception stage already, bypassing the wait-and-see approach that many digital platforms take, or in a post-hoc deployment (Friedman et al., 2002, 2003). In this study, we took the post-hoc approach: social media platforms exist already and have been in use for decades, so we wanted to apply a VSD analysis retroactively to see which of their user interface features impacts the young user's mental health the most.

A major insight inherent in the VSD methodology is that societal values are abstractions that have various meanings for multiple stakeholders. How stakeholders understand an abstract concept such as well-being will vary depending on their context, needs, desires, culture and education. This means that we cannot appeal to a universal definition of well-being, no matter how well we would ground it in existing scholarship, to embed it in design. Instead, VSD prescribes that researchers need to study stakeholders to get their very particular understanding of the value at stake. To do justice to the multiple stakeholder meanings and experiences of a certain value, VSD starts by investigating the meaning of the value for a specific group of stakeholders.

VSD translates the abstract value into concrete norms: actionable statements about what stakeholders need or expect for the value to be realized in their context. These norms then inform design features that allow the targeted stakeholder group to experience the technology as supporting their well-being. This step is essential precisely because mental well-being is neither uniform nor universal: it is understood and experienced differently by different users, and these differences vary across cultural, socio-economic, developmental, and age-related contexts.

The method of VSD is classically pursued in three iterative phases: conceptual investigation, technical

investigation, and empirical investigation (Friedman & Hendry, 2019a). In the *conceptual phase*, the values at stake are identified within the specific context as a theoretical hypothesis. Values encompass what individuals or groups deem important, as described by Friedman and co-authors (Baty Friedman et al., 2020; Friedman et al., 2013). In our study, we identified the values at stake within the context of social media platforms and mental well-being. Through a survey of key scientific articles, we assessed how existing features and mechanisms of the mainstream social media platforms either support or impede values related to mental well-being.

In the *empirical phase*, the theoretical hypotheses about the values are supplemented with empirical research to fully grasp the human context surrounding the technical artifact and the understandings. Further, the empirical phase helps understand potential conflicts between values. We conducted semi-structured interviews to gain key stakeholder opinions, and a focus group to gain insights into user perspectives on social media design, in accordance with (Friedman et al., 2013). Sometimes, in the empirical phase, stakeholders are presented with actual technical specifications of the studied artefact and asked to evaluate them. In the technical phase, the researcher examines technological properties and mechanisms - using the empirical insights about the concrete understanding of values - and then proposes re-designing systems specifically to uphold the identified values and, most importantly, the understandings that stakeholders elicited.

As our aim is to identify ways to redesign social media platforms, our technical phase consisted primarily in the *redesign phase*. This phase focuses on understanding the interrelationships between values and design requirements. To facilitate the translation from values to design requirements, a values hierarchy was borrowed from design for values, as proposed by Van de Poel (2013a; (van de Poel, 2013). This hierarchy spells-out and translates the relationship between the abstract level of values, the somewhat more concrete norms, and ultimately into the concrete design requirements, ensuring alignment between ethical considerations and design decisions (van de Poel, 2013). In our study, we create a values hierarchy and use it to develop recommendations for design requirements and future research priorities.

Figure 1 provides a graphical overview of the VSD phases including a values hierarchy, with the specific steps taken in our illustrative study.

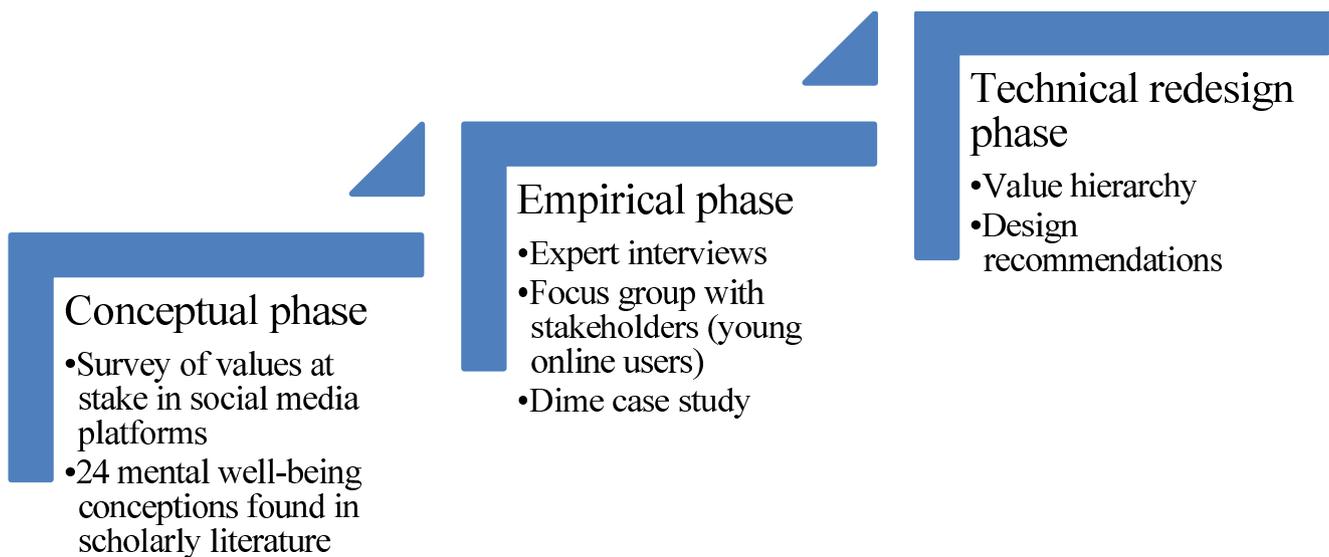


Fig. 1 A mapping of the VSD phases in our study

On the methodological challenge of value deliberations

VSD as a method for evaluating existing and emerging technologies assumes that one can find out and define the values, as the broad general ideals that groups of stakeholders align their actions to (Friedman & Hendry, 2019b). The existence of these values is unproblematic, the main challenge for researchers being to uncover these values and their relative ranking for a group of stakeholders, and then, widening the picture, to argue for value tensions and solving value conflicts between various groups of stakeholders. One of the preferred ways of solving these value tensions among stakeholder groups is to give priority to the most vulnerable group (Friedman & Hendry, 2019b).

However, complications arise when different stakeholder groups ascribe markedly different meanings to the same value label. In such cases, it becomes uncertain whether stakeholders are even referring to the same value at all. This is an epistemic shortcoming for VSD and, more generally, for any value-theoretic approach. To address this issue, we adopt the philosophical distinction between *concepts* and *conceptions* of a value. A value such as *mental well-being* is a single concept, but it can give rise to multiple conceptions - meaning how the value is understood and applied by people in how they talk about the concept in day to day language (Lalumera, 2014). Prior work illustrates this diversity: Orth & van Wyck (2022), for example, articulate 24 distinct conceptions of mental well-being. This helps explain how genuine disagreement about a concept's content can exist even when people are referring to the same underlying idea: the disagreement often concerns the conception and its scope

of application (Lalumera, 2014). Many of these differences can be understood teleologically: stakeholders identify different pathways through which the higher-order value of well-being can be realized in practice. In our study, we thus assumed that a concept of a value (mental well-being in our case) has multiple conceptions; it can be legitimately claimed and described by various understandings. We also assumed that teenagers and young adults have different conceptions of well-being than older adults, hence we did not want to impose our own understanding of the variety of conceptions of well-being on the young social media users.

A second assumption, which is already mentioned by other researchers working with VSD (Pommeranz et al., 2012) (Manders-Huits, 2011), is that eliciting the values by asking stakeholders directly is bound to fail because values are abstractions which are easy to misinterpret (Longo et al., 2020). Simply put, in natural language people will not use the value-words such as well-being, even though an in-depth interview might get exactly that meaning from them. To avoid this problem, we worked with a more basic assumption, already at play in Design for Values (van de Poel, 2013), that norms are what shows the values at stake. Norms are desired actions or behaviors that the designers try to elicit or that the stakeholders would like to be the case. While conceptions are interpretations of what a value aims for, norms are the concrete expectation of what needs to be realized for that conception. Any value conception, in a particular context, will be fully described by the sum of its norms. Hence, our study aimed primarily at eliciting the norms at stake for the social media users that we discussed with in our focus group. By eliciting the norms and arriving at norm-saturation, and by comparing these norms with

the existing conceptions of mental well-being, we were able to then select the meanings of well-being at stake in social media design. Our contribution is to work with norms and raise the level of abstraction by inferring value connections from them, but also using the same norms, to infer design specifications - continuing the tradition of Design for Values while addressing the epistemic limitations of traditional value elicitation in VSD.

Methods

Conceptual phase

In the Conceptual phase, we used the systematic review conducted by Orth and van Wyk. (2022) as a foundational reference for conceptualizing mental well-being (Orth & van Wyk, 2022). Orth and van Wyk. (2022) synthesized existing literature on mental well-being instruments published between 2000 and 2020, establishing operational definitions and indicators of mental well-being beyond the absence of mental illness. They break down mental well-being into a list of 24 conceptions, which we also used towards adapting it in the context of social media platforms.

We conducted an exploratory literature search using Google Scholar to assess the impact of social media platform design features on the mental wellbeing of young adults. We used the following primary key words as search terms: mental well-being, social media, design features, young adults. During the initial screening, articles focusing on specific aspects of mental well-being, such as psychological well-being or subjective well-being, were excluded to ensure the research encompassed mental well-being in its entirety without limiting the scope to dimensions or interpretations. Additionally, articles that discussed design features without detailing their specific impacts were likewise eliminated from consideration.

The Conceptual phase produced an initial set of design features that was used as input for the Empirical phase. These are: the news feed, interactive features, notifications, direct messages (DMs), algorithmic recommendations, privacy settings, groups and communities, and lastly multimedia integration (*Addictive Features of Social Media/Messenger Platforms and Freemium Games against the Background of Psychological and Economic Theories*, n.d.; White & Miller, 2021).

Empirical phase

The empirical phase aimed to understand the views of both experts and adolescent users of social media platforms. By integrating the views from these diverse populations of

interest, our aim was to gather a comprehensive understanding from both a holistic perspective (i.e. experts) and the lived experiences perspectives of users (i.e. adolescents). The empirical phase took place between September 2023 and February 2024.

To understand expert views on design features, design interventions, and mental health impacts, semi-structured interviews were done via the online platform Teams. We targeted individuals with demonstrable expertise in both well-being and digital platforms. To solicit interviewees, we used public LinkedIn posts and direct outreach to an institute that focuses on values and technology design (anonymized for peer reviewing purposes). On their expert page, we reached out to individuals. Additionally, we interviewed the co-founder of the specific social media platform Dime, which promotes itself as being targeted at well-being.

We conducted 6 interviews with experts (2 women and 4 men, with backgrounds in academic research in youth mental health and social media use, developmental psychology, ethics of technology, and an industry representative). Initially, interviewees were asked about their views on the connection between social media usage and the mental health of children and adolescents. We then inquired about the influence of design features on mental health. Subsequently, we showed them a list of design features for further discussion, asking whether they thought any of these features particularly negatively impacted mental health. The questions then shifted to the objectives of social media developers, exploring possible design interventions and recommendations that prioritize mental well-being. Participants were not reimbursed for their participation in the interviews.

To understand the experiences and well-being understandings of adolescent users, a focus group was done. As the diversity of social media platforms may make it difficult to compare answers, especially in discussions with users, we focused on one specific instance: Dime (<https://dimenetwork.io/>). Dime is a recently launched social media platform, incorporating interventions with specific features they claim are aimed at enhancing user mental well-being. Using Dime as an example also helps us tackle a practical consideration for VSD research: it may be challenging for users to conceptualize hypothetical design interventions within the familiar context of existing social media platforms. Further, we selected Dime as a focal example since we were able to receive material on Dime's design from the co-founders, thus enabling us to show examples during the focus group.

The focus group included 6 people (3 female and 3 males, mean age 24.0) aged 18–25 years old who regularly use social media platforms. Participants were recruited through posters spread amongst the authors' university campus, LinkedIn and Instagram postings. This approach aimed to diversify the group beyond just students. As a result, two of

the six participants were not university students. The focus group took place in-person at Delft University of Technology. Participants were not reimbursed for their participation in the focus groups, though the facilitator (the third author) prepared a home cooked lunch for the participants. Participants provided online written informed consent for their participation in the focus groups and interviews. The study was approved by the Human Research Ethics Committee.

Technical redesign phase

For the Technical redesign phase, we analyzed the findings from the empirical phase. Results from interviews and focus groups were analyzed iteratively, such that the diverse viewpoints could be integrated coherently. Transcripts from interviews covering broad aspects of social media use and mental well-being, alongside focus group discussions specifically focusing on design features, were collectively analyzed using a grounded theory-inspired approach (Charmaz, 2015) and using the ATLAS.ti software.

We started with an open coding approach, where individual quotes were labeled based on discussed topics. Subsequently, axial coding facilitated the grouping of quotes into categories, distinguishing between “design features,” “interventions,” and “values.” Selective coding then categorized the identified values into higher and lower levels based on their frequency of mention, enabling a focused approach on those values critical for desired outcomes. Coding was conducted by the third author and verified and refined by the first and second author. Across the study, 72 unique codes were gathered, yielding a total of 1820 quotations.

To enhance the comprehension of how various values are interconnected and to establish the dynamics of these values, we then analyzed the frequency with which these values were discussed together. A higher co-occurrence number indicates a stronger or more frequent association between the values, suggesting they are interconnected or influence each other in the context of this study. Subsequently, the context of these mentions was analyzed to understand the nature of the relationship. For instance, when “engagement” and “sustainable design” were discussed together, the relationship was determined to be contradictory based on the context provided by quotes.

Results

The main findings of the empirical and technical redesign phase are visualized in Fig. 2. In the remainder of this section, we provide an overview of the main values conceptualized, their interrelationships and the value hierarchies that relate the values to design recommendations.

Overview of mental well-being conceptions

The qualitative analysis identified 13 conceptions related to social media platforms, each scored for how often they were discussed, divided into ‘lower level’ (discussed less often) and ‘higher level’ (discussed more often). Among these 13 conceptions, six were common to both social media design and the mental well-being framework. Our analysis primarily focuses on the conceptions that intersect between these

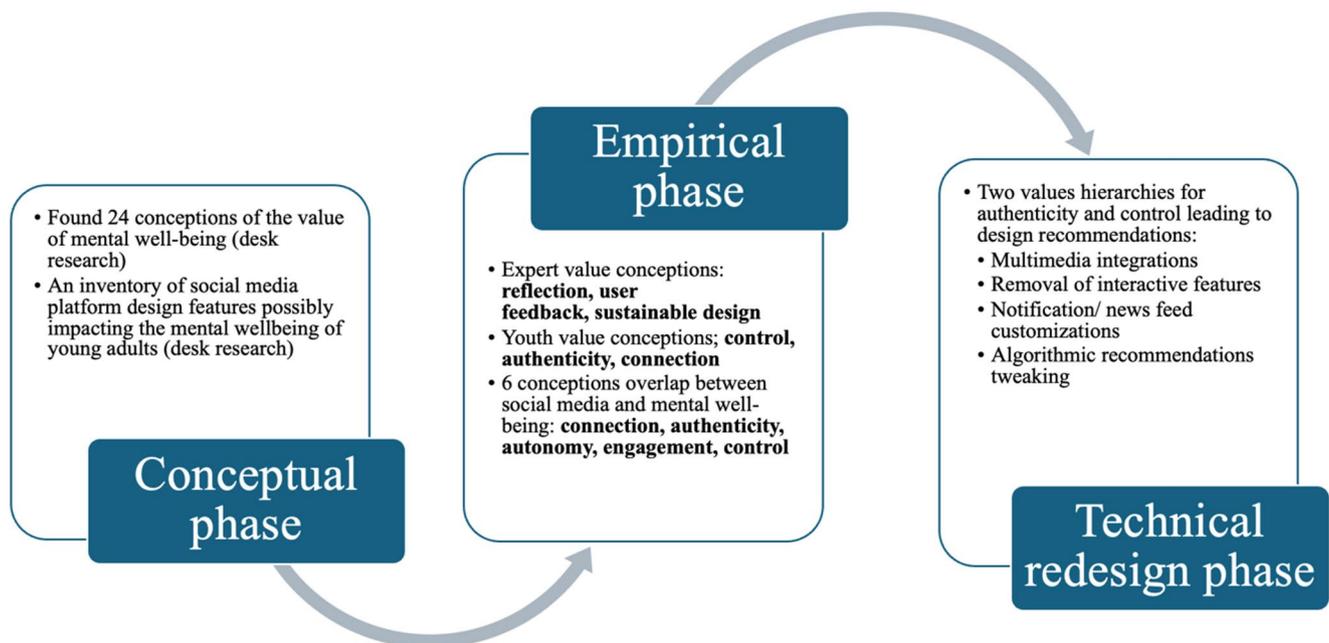


Fig. 2 A diagram of the main findings in each phase of the VSD process

two domains: connection, authenticity, autonomy, engagement, and control. See Table 1 for an overview.

A key observation from the analysis is the divergence in emphasis on certain conceptions between youth participants and experts. Specifically, conceptions like control, authenticity, and connection were more frequently mentioned by the youth, whereas reflection was more prominent in expert interviews. Additionally, user feedback and sustainable design were exclusive to the expert discussions, indicating a professional focus on the long-term impact and iterative nature of social media design.

Interplay between values

The analysis uncovers a significant interplay of conceptions that consistently emerged in both interviews and focus groups. For instance, the pairing of authenticity and connection, autonomy and personalization, and autonomy and control were often mentioned together. These pairings suggest that conflicts between conceptions do not arise from direct opposition but rather from the absence of complementary conceptions. For instance, the lack of authenticity can weaken connection, while the absence of control can diminish autonomy.

Connection & authenticity

Connection was the most frequently mentioned across both focus groups and expert interviews. This theme underscores the role of social media in facilitating new connections or maintaining existing friendships. Experts highlighted the positive mental health impacts of reconnecting with friends online, as well as the potential for social media to be a space for self-disclosure and communication.

Every child kind of goes to social media for social connection, so there are of course also all of these other

Table 1 Identified conceptions and their relation to mental well-being

Level	Found conceptions	Mental well-being conceptions
Higher level	Connection	✓
	Reflection	
	Authenticity	✓
	Autonomy	✓
	Personalization	
	Engagement	✓
	Control	✓
Lower level	Mindfulness	✓
	Awareness	
	Sustainable design	
	Communication	
	Comparison	
	User feedback	

things like escapism or entertainment or looking up information or for inspiration. But we also asked them before, like, what if you can only pick one platform, then it's always a platform at which they can communicate with others. So that need for social connection is very strong.

Another expert emphasized that learning more/different things about others through social media than in real life:

You tend to see more people online than in person, and you also tend to learn more about people online than in person, cause unless you are sort of engaged in personal conversations or parties or something like that, it means you just don't get to learn that much about people.

Youth participants also expressed the value of connection, particularly in maintaining long-distance friendships:

It's easier to stay in touch through social media, especially for my friends back in India.

However, youth also recognized the limitations of digital connections, noting that while social media can prevent feelings of loneliness, it may not provide the same level of emotional fulfillment as in-person interactions:

You can either be alone and feel very fine with it, but it's sometimes also that you feel like you're never alone because you always have your phone with you and people want stuff from you, and sometimes you just want to be like in close proximity of people, like actually feeling their warmth, so to say.

Regarding the example of Dime as a new social media app, participants particularly appreciated the ability to use social media mainly as way to connect with friends:

I would definitely be hooked on to the app if more of my friends are using the app. That would give me an opportunity to use this app and substitute it over Instagram. And rather than go for that dopamine hit from Instagram, I've just started to stay on this app and figure out what my friends are planning.

These quotes illustrate how online engagement can both enhance and complicate social connections.

Authenticity

Both experts and focus group participants raised concerns about the inauthentic nature of social media. Experts particularly highlighted how the portrayal of authenticity on social media—especially by influencers—can blur the lines between genuine self-expression and commercial interests, leading to confusion about one's identity. The clarity and confidence with which people present themselves online, often for promotional purposes, can make an individual question their own identity and how they fit into this digital landscape.

This is also illustrated by the following point:

It's very difficult - the way that authenticity is manipulated so effectively [...] so I think it can make a person sort of confused about their own identity because they see all these other identities presented, which seem so clear. And then it just gets a little bit confusing what you yourself are all about.

Focus group participants mainly discussed how individuals present themselves differently on social media than in real life (e.g. inauthentic posts).

I dislike I think that I measure things differently through social media. So there's like pictures I would tag on my phone as my favorite pictures, but I wouldn't post them on Instagram because they're not Instagram worthy or something like that. So I measure in like pictures I will post and pictures I won't post.

The app BeReal was cited as an example of a more authentic social media platform, valued for its unfiltered content, limited time engagement, and its use in small friends groups.

Autonomy & control

The themes of autonomy and control were highlighted by both experts and youth participants, particularly concerning the frustration users feel due to their limited control over the content they encounter on social media platforms. This lack of control is primarily attributed to the opaque algorithms that curate and control users' feeds.

Now they (users) feel like they cannot control their own content enough because the whole algorithm behind it is still so vague. Like we don't know how it works. So we cannot really tweak it and there aren't any filters that we can adjust.

Youth participants expressed feeling trapped by the endless scrolling and influence of social media, often getting pulled in without intending to:

I just keep scrolling for like hours. And yeah like I still need to do so many things but I just keep scrolling.

Participants also mentioned the impact of social media on their awareness, with content influencing their thoughts and actions in ways they might not consciously recognize:

I probably don't like how, like, you can be kind of easily influenced by everything. Like, sometimes you'll be like if I did not like even see this on Instagram, I will have never even thought about it. It's like if you saw it in like, I don't know, in another platform you're like ohh OK whatever. But then sometimes, like with certain platforms, you get more influenced.

The discomfort of realizing that one might be misinformed, only to discover the truth later in a different context, further highlights the lack of control users feel over the accuracy of the information they consume. Users highlighted confusion on knowing what is true or false information, leading to discomfort.

Participants also expressed a desire for more control over notifications, which they found disruptive and often unmanageable:

Yeah, but also a lot [of notifications] are so useless. And this I don't understand because I turned them [the notifications] off, but still I get like there's one person when they post a story every time they send a notification to me and I don't know why and I can't turn it off and I don't even know this person so well. Or a notification like look at what you missed or something. This I don't like when you see a sentence like that. It's like you have to take a look at it.

Reflection

In this theme, both experts and youth participants emphasized the importance of self-awareness regarding the impact of social media on their lives. Experts focused on the need for introspection, e.g. users should critically assess how these platforms influence their thoughts, emotions, and behaviors. They should also reflect on the importance of having conversations on ethics, including how social media may be used to prevent ill mental health.

Youth participants, on the other hand, focused more on practical measures, such as limiting screen time, to mitigate negative feelings associated with prolonged social media

use. This was illustrated by a participant's positive feedback about the idea behind Dime:

Yeah, I like how, they [Dime] don't wanna, like, have us keep on scrolling. Because sometimes when you scroll too much, you're like, "I wasted my day", and then you start feeling bad. So I like this is hoping you find something and then it also doesn't make you feel bad about spending time on it.

Participants also suggested the value of screen time limits. Some suggested this could be a governmental policy, whereas other participants highlighted that it should be self-imposed.

I think it'll just be nice if you have that choice. Maybe you just have an option to limit your screen itself in the app. Maybe you can change that whenever possible. So yeah, maybe not the government doing it, but some type of screen limit, screen time usage limit.

Engagement

Engagement was viewed by both experts and youth participants as a double-edged sword in the context of social media. Experts noted that design features such as novelty and constant notifications keep users engaged, which can have negative implications for mental health.

So I think one thing that comes to my mind is novelty. So they always show new things. So when you get onto Instagram, when you get on to Facebook, when you get on to social medias. They try to prioritize things that are novel, things that are new, so you always feel like you're seeing something new. And I think that is one thing that can keep you hooked into a platform like that, and that could potentially then lead to issues with mental well-being, of course.

However, experts also acknowledged that engagement can be positive depending on the context, particularly within supportive communities and in small circles.

...if you have a nice group of people that you're in with and people are responding really well to each other than doing something and posting something and having other people be really positive about it, or at least engaging with it in your own. Maybe a smaller circle. Then it can be very positive and. Yeah. So, the same thing that can be very negative could also be very positive in a different setting.

Youth focused mainly on the negative aspects in relation to engagement, that the design of social media platforms can make it difficult for users to engage with content mindfully and intentionally. Notifications were mentioned as an important aspect of this:

I think maybe for me notifications because I don't automatically open Instagram and every time I see, "oh somebody posts something new", then you click on it and you don't just log off when you click on it. Then you are on the platform again for a few minutes.

So, I think that really affects like how much time I spend on my phone, because every time I think, "oh, I'd have to look again" or something."

Value hierarchies and proposed design features

Below, we discuss intervention options as discussed by participants during the focus groups, with corresponding design features, leading to design requirements. Then, we construct a value hierarchy, visually displaying the value, norms, and proposed design requirements. In our analysis, we focus on those design features that can resolve conflicting values as identified in Sect. "[Interplay between values.](#)"

Authenticity versus connection

To understand ways to resolve these value conflicts, we construct a value hierarchy, inspired by design for values methodology, a refinement of VSD (van de Poel, 2013). The value hierarchy translates the abstract value into norms that could concretely achieve it (based on the findings from the interviews and the focus-group), and design features that would implement these norms (van de Poel, 2013).

One prominent value is Authenticity (see Sect. "[Autonomy & Control](#)") which conflicts with Connection (4.2.1). Figure 3 shows the value hierarchy for Authenticity. The visualization shows that Authenticity is composed of norms of promoting sincere expressions and encouraging genuine content sharing.

A design requirement discussed was to 'Remove quantitative aspects of interactive features' such as visible likes and comments. However, the focus group results indicated that likes and comments are not inherently negative; rather, it is the intent behind the post and the significance placed on these metrics that can lead to issues. Posting for genuine celebration is positive, but seeking validation and acceptance through numbers can skew the authenticity of social media interactions.

Another design requirement is to 'Remove beauty or appearance enhancing multimedia integration features'

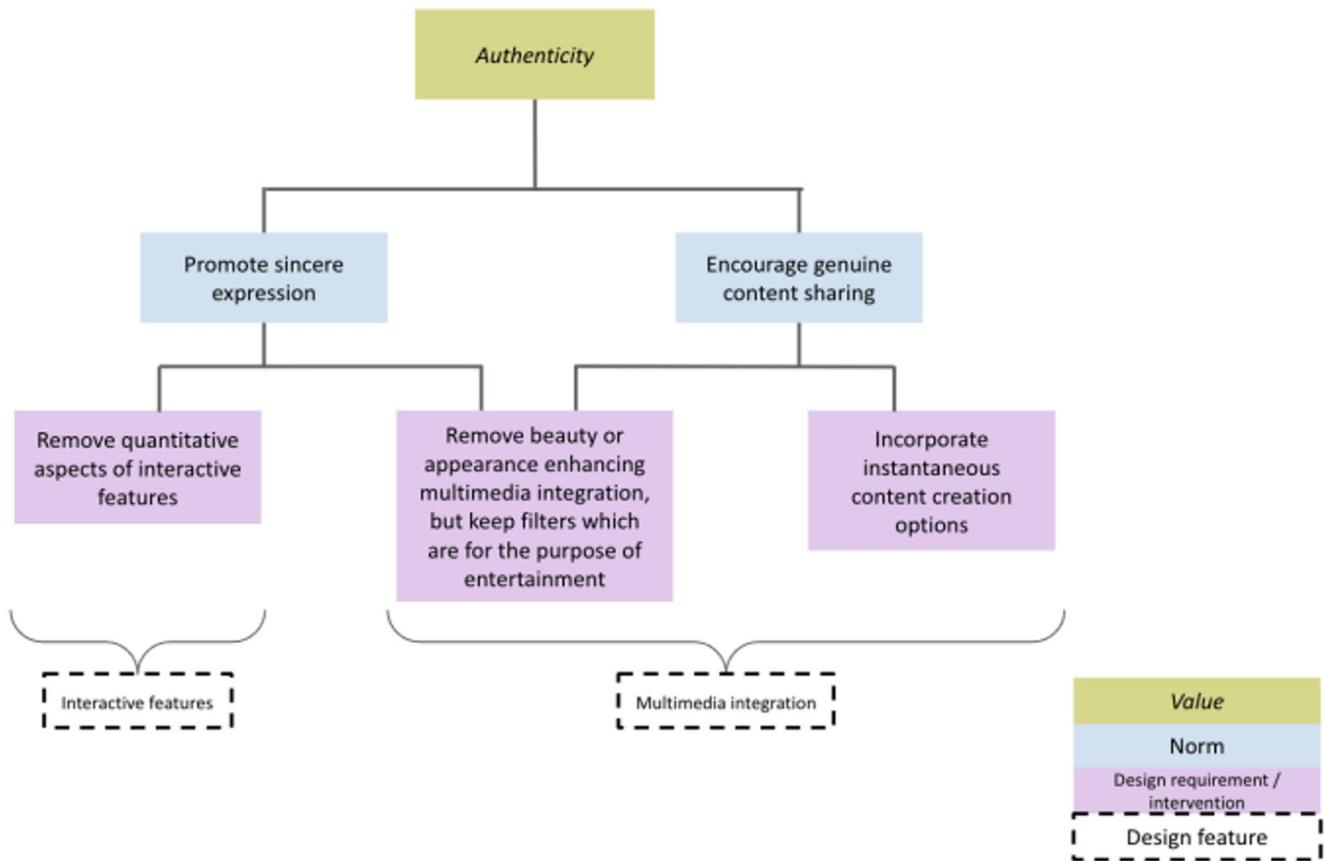


Fig. 3 Value hierarchy—Authenticity

such as photo and video filters, which have the potential to distort reality. These tools can enhance or beautify the subject matter, which may lead to content that is more aesthetically pleasing but less authentic. While these features can enhance user engagement and creativity, they risk creating an unrealistic portrayal of people, places, and events. However, completely removing this can remove the fun and appeal of social media. Another option is instantaneous instead of edited content, such as the BeReal app (take a picture within a 2-minute time window) (Fig. 4).

Personalization and control versus autonomy

Adjustable levels of algorithmic recommendations address two norms: informed decision making and customizability of platform features. Users ask for these interventions as they do not fully understand how the algorithmic recommendation systems work. This lack of transparency means users are unable to comprehend the criteria and mechanisms by which content is presented to them. Users also mention ‘useless’ recommendations (e.g. for adding new friends).

Customizable reminders address the norm of customization, but not the other norms in the value hierarchy. A

rigid control mechanism, like a pop-up reminder after a set amount of scrolling time (e.g., five minutes), may not be effective if it is not aligned with what users are willing to accept or engage with. Such forced interventions might end up being counterproductive, leading to user frustration rather than promoting mindful use of the platform. Participants emphasized that by allowing users to opt-in for usage reminders, and personalized these messages, the platform respects both their autonomy and control over their experience.

Engagement and reflection

To strengthen reflection, we recommend social media literacy initiatives that encourage young people to engage in conversations about ethics, mental well-being, and the ways digital platforms can either support or undermine mental health. This could be paired with greater transparency from platforms. For example, providing accessible in-app analytics on usage patterns to help users better understand and manage their online behavior. For engagement, participants emphasized the value of fostering meaningful, positive interactions. Platforms could prioritize features that support

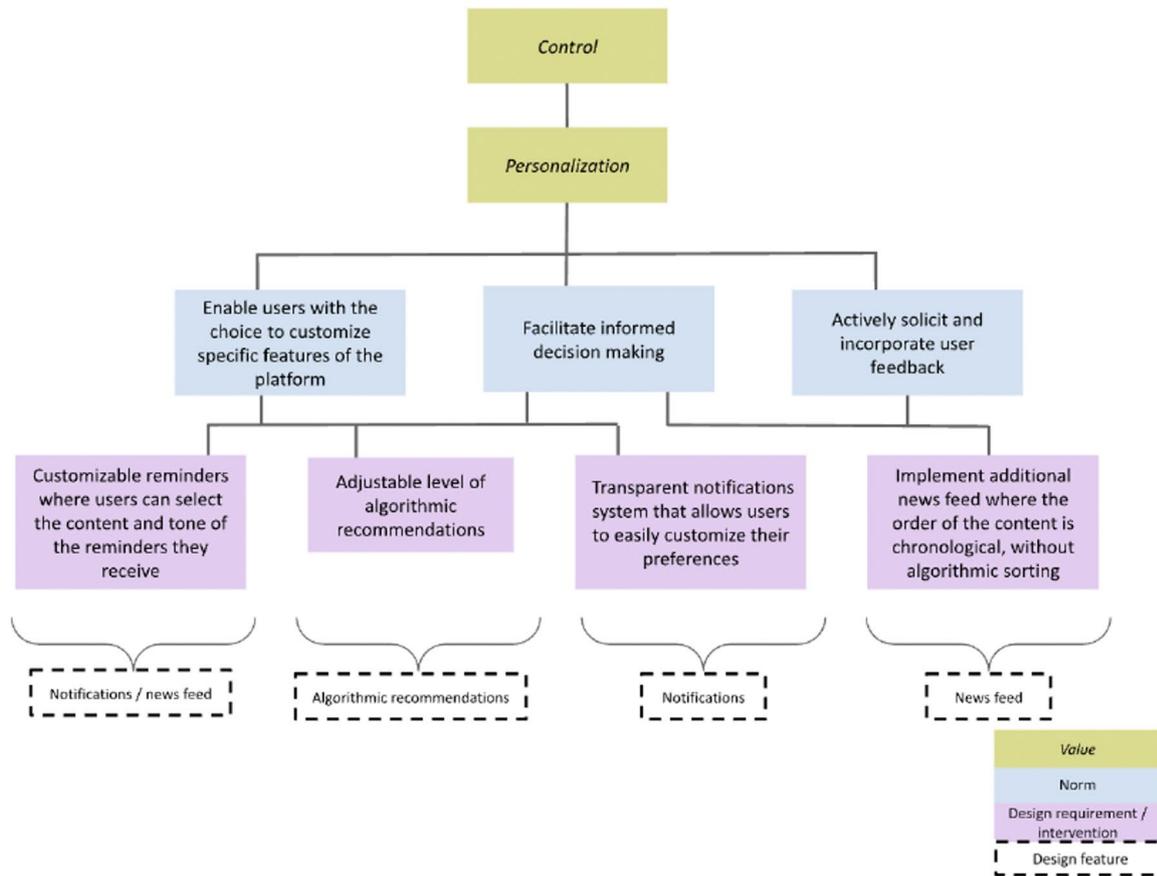


Fig. 4 Values hierarchy—Control and Personalization

smaller, trusted networks and promote online exchanges that naturally translate into offline connection.

Discussion

Main results

In this study, we illustrate the use of a Value Sensitive Design approach to identify how the value of mental well-being is predicated and understood in a variety of conceptions in the context of social media design features. Through our investigation we show that certain features of this value-concept are more important than others, and hence certain norms come to the fore, thus triggering certain tailored design recommendations. The concept-conceptions distinction helps us explain why teenagers and young adults are speaking about the same concept, even though they do select some very specific features of it.

Key findings suggest that tensions between values arise when interdependent values are not jointly supported in social media design. Imbalances make it difficult to realize one value without compromising another. For example, users prefer self-expression for authenticity, yet for achieving connection (e.g. likes) performative or curated content are incentivized. Features like notification and feeds lead to values of engagement but conflict with the need for reflection. To address these tensions, design interventions should support complementary values together rather than optimizing for one value at the expense of another. In other words, to promote mental well-being, we advocate for a focus more on solving these conflicts through design interventions. This marks a shift away from the current focus on banning social media for young people of certain ages, or focusing on increasing adolescents’ capacity to self-regulate their use of SM through educational interventions, which has been the main focus of prior research(Sala et al., 2024).

As argued by Sala et al. (2024), the responsibility has been put on young people and families, instead of platform

redesign(Sala et al., 2024). For future social media design, it is important that multiple user groups, including young people (12–25), who are the most frequent users of social media, should be involved in the redesign towards platforms that can better foster well-being. We show that a VSD approach, in which both young adults and experts contribute, can lead to valuable insights on how to redesign social media for mental well-being from a user-centered perspective.

The differences in values emphasized by youth participants and experts are notable. Overall, youth and experts expressed overlapping values for social media. However, we observed that youth are more focused on immediate, practical concerns such as control (of notifications, content, and limiting screen time) and authenticity (e.g. unfiltered pictures), whereas experts bring a broader perspective, considering long-term impacts (sustainable design) and ethical implications (such as manipulation, commercialization and algorithmic control). This highlights the importance of involving both groups in the design process to ensure that platforms address the needs and concerns of all stakeholders.

Youth participants expressed a strong desire for more control and autonomy over their social media experiences. This includes the ability to manage notifications, filter content, and limit screen time. The frustration with the opaque nature of algorithms and the perceived manipulation of content suggests a growing demand for transparency and user empowerment in social media design. This reflects a shift towards more mindful usage of technology, where users want to engage on their own terms rather than being passively influenced by platform design. Further, youth also expressed a wish for social media platforms where they can be their more authentic selves and connect on a deeper, more meaningful level, rather than merely showcasing idealized versions of themselves.

As a result of the found conflicts between value conceptions, we proposed a set of design interventions formulated as design requirements aimed at enhancing the lack of values, which in turn support the identified value conflicts. For instance, enhancing authenticity leads to supporting connection, and enhancing personalization and control leads to supporting autonomy. Many of these recommendations center on providing more control to the users, in terms of notifications, newsfeeds, and algorithmic recommendations. At the same time, they also focus on removing certain features such as likes, shares, and beautifying filters, which affect authenticity and decrease transparency, and may therefore do more harm than good in terms of mental health. In contrast, features like group chats and online communities may promote well-being by enhancing connection, increasing self-esteem, and improving a sense of belonging, though some online communities carry risks such as online hate crimes(Oksanen et al., 2024). The design choices made

by social media developers can shape the digital experiences and interactions that young people engage with daily. Therefore, they can have a significant effect on mental well-being on a large scale.

Our results show the importance of considering the positive effects on well-being, alongside potential negative ones. In this way, our paper connects to scholarly debate on social media and mental well-being. By finding concrete design recommendations, we show the practical feasibility of integrating mental wellbeing values into social media platforms to contribute to the creation of digital environments that promote a sense of well-being among users, as argued for in previous studies(*Beyond Age Stereotype: Improving Elderly-Oriented User Experience of Social Media by Value Sensitive Design*, n.d.). In addition to public health benefits, this could also lead to business gains for social media platform providers to gain a competitive edge and foster stronger user trust and loyalty.

Implications for research and policy

Three important research and policy implications follow from our analysis. First, we show the relevance of unpacking mental well-being comprehensively into underlying values, norms and design interventions. A value remains an abstract concept until it is deployed in a specific context and with specific users, and then we may realize that the theoretical value is experienced in different ways by its target population. Our study gives an initial view on how both social media experts and young users experience and understand mental well-being and what it means for them in the context of social media usage. Further filling this gap in our understanding will facilitate designing interventions or interactions that would promote mental well-being for young individuals.

Rather than a reductionist focus on one dimension of mental well-being (e.g. preventing addiction), scholars and policy makers should consider the complex structure of competing values and underlying norms to avoid selecting design interventions that produce unexpected effects. In doing so, policy makers can move beyond the focus on negative impacts alone and stimulate well-being-promoting design features rather than merely forbidding harmful features or forbidding social media use altogether.

As a second crucial implication, we call for including the users' perspectives on the values and interventions in the context of social media in subsequent studies. As argued by other scholars and policy makers (such as in the 2024 American Psychology Association report(Potential Risks of Content, Features, and Functions: The Science of How Social Media Affects Youth, 2024)), youth can easily circumvent policy measures intended to embed mental

well-being as a value in social media design, such as age restrictions or warning labels. However, this is not merely a technical implementation issue (albeit it could be the sign of a faulty translation of values into design features), it could be also the sign of a value conflict or at least tension in how youth understand mental well-being and how they prioritize it when being online. If our conceptual understanding of mental well-being is not shared by the target users, then any attempt to design for well-being will be doomed to fail. This is a reflection that applies to any class of end-users for whom one may want to design or redesign a technology. However, for young adults this holds even more, since their calculations of risk, costs and benefits will be unavoidably skewed by their age.

Youth's conceptions of mental well-being and how they experience it in a specific context such as social media, will be unknown unless we actively look for this understanding. Even if their understanding of mental well-being as a value is the same as the scholarly one, it is possible that the value hierarchy at stake when they use social media platforms may be unpredictable and perhaps, they choose to prioritize other values (such as friendship or visibility) to the detriment of well-being. If there is such a value tension – either because the youth prioritize mental well-being differently than policy makers or designers, or because they understand the concept differently – this needs to be elucidated.

A third implication is to consider the temporal and spatial boundaries within which an analysis, as done in this paper, is valid. We conducted our empirical analysis in the mid-2020s, when mental well-being was high on the agenda and awareness of negative impacts of social media has been growing. Different results would have been obtained in the early days of social media. More importantly, we found that by focusing on one specific instance of a social media platform in the discussions with adolescent users, we could obtain a higher level of comparability of their viewpoints. Such focus on a specific platform goes at the expense of generalizability to other types of platforms. Further, our results illustrate how social media platform features are malleable. Even though a feature may not consciously be designed to promote a certain behaviour, they may afford behaviours that positively or negatively impact mental well-being. To understand the boundaries within which value hierarchies are valid, it is essential to conduct qualitative studies with users to probe into their assumptions, experiences and behaviours.

Limitations and future research

This study had a low sample size, which may not be representative of the wider population. We included young adults (22–25), whereas adolescents of younger ages may have a different understanding of the relationship between

social media and mental well-being. In addition, our sample included an over representation of highly educated users (university students). This sample may thus not capture the full diversity of perspectives among adolescents, leaving out younger teens and less-educated youth who might have different experiences. This is a priority for future research. While we focused on a specific platform as much as possible, it is possible that participants had diverse platforms in mind with distinct features, user demographics, and cultural norms, impacting mental well-being values. Further we did not discuss differences between participants (e.g. male, female). However, despite these limitations, we were already able to unpack the value of mental well-being into a complex system of conceptions, norms and interventions, thus illustrating the potential of our approach.

Practical recommendations point towards the need for further research, particularly in testing the long-term effects of these design interventions and expanding demographic study beyond young adults to gain a more comprehensive understanding of the impact of social media design on mental well-being. In addition, since ongoing research indicates that social media experiences for girls may be more negative than for boys (Scully et al., 2023; Tao & Fisher, 2022), future research should examine these gender differences in experiences and conceptualization of mental well-being. Future research could also explore other interventions that are not centered on design, like offline meetups, for their potential to improve mental health. Furthermore, there is a need for more research on how to engage young people in the re-design and policy recommendation to mitigate the harmful effects of social media. Finally, we need collaborations between social media developers and researchers to empirically test and refine these interventions and for partnerships that effectively navigate confidentiality and proprietary challenges.

Our empirically-driven approach is justified, as we find a high variety of value conceptions and norms for well-being related to social media. Presupposing a theory-informed conceptualization of well-being would likely have led to omitting a proportion of the conceptions that we elicited. Nevertheless, future research would benefit from integrating the unearthed conflicts and norms with ethical theory.

Conclusions

While researchers and policymakers recognize the need to embed more design features that promote mental well-being and remove those that impede well-being for youth on social media, how to do it is a crucial and yet unanswered question. We show how using a value-sensitive design approach can enable the integration of key values into technological

development to create a more well-being focused social media landscape. Our findings illustrate the pivotal role of design decisions made by social media platforms developers for shaping user well-being. Future research should expand this work with a larger and more diverse population, examine whether design changes lead to improvements in well-being, and assess the potential of policies and regulations for mental well-being related to social media design features. The insights from this analysis suggest that the future of social media design lies in a more user-centric approach that prioritizes well-being, authenticity, and control.

Acknowledgements We would like to thank the participants for their time and input. Dr. Figueroa is supported through the ‘High Tech for a Sustainable Future’ capacity building programme of the 4TU Federation in the Netherlands. The funders had no role in the content of the manuscript. Dr. Figueroa is supported through the ‘High Tech for a Sustainable Future’ capacity building programme of the 4TU Federation in the Netherlands. The funders had no role in the content of the manuscript.

Author contributions CAF and MJ wrote the first version of the paper. MJ conducted the interviews and focus groups. MJ conducted the thematic analysis under supervision of CAF, MR, and LM. LM and MJ created the figures. All authors contributed to writing and revising of the manuscript.

Funding The first author is supported through the ‘High Tech for a Sustainable Future’ capacity building programme of the 4TU Federation in the Netherlands. The funders had no role in the content of the manuscript.

Data availability Anonymized data are available upon request.

Declarations

Competing interests The authors declare no competing interests.

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