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EXHIBIT N

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Expert Perspectives on the Role of Social Media in Mental Health

Qualitative findings from the mixed methods clinicians study

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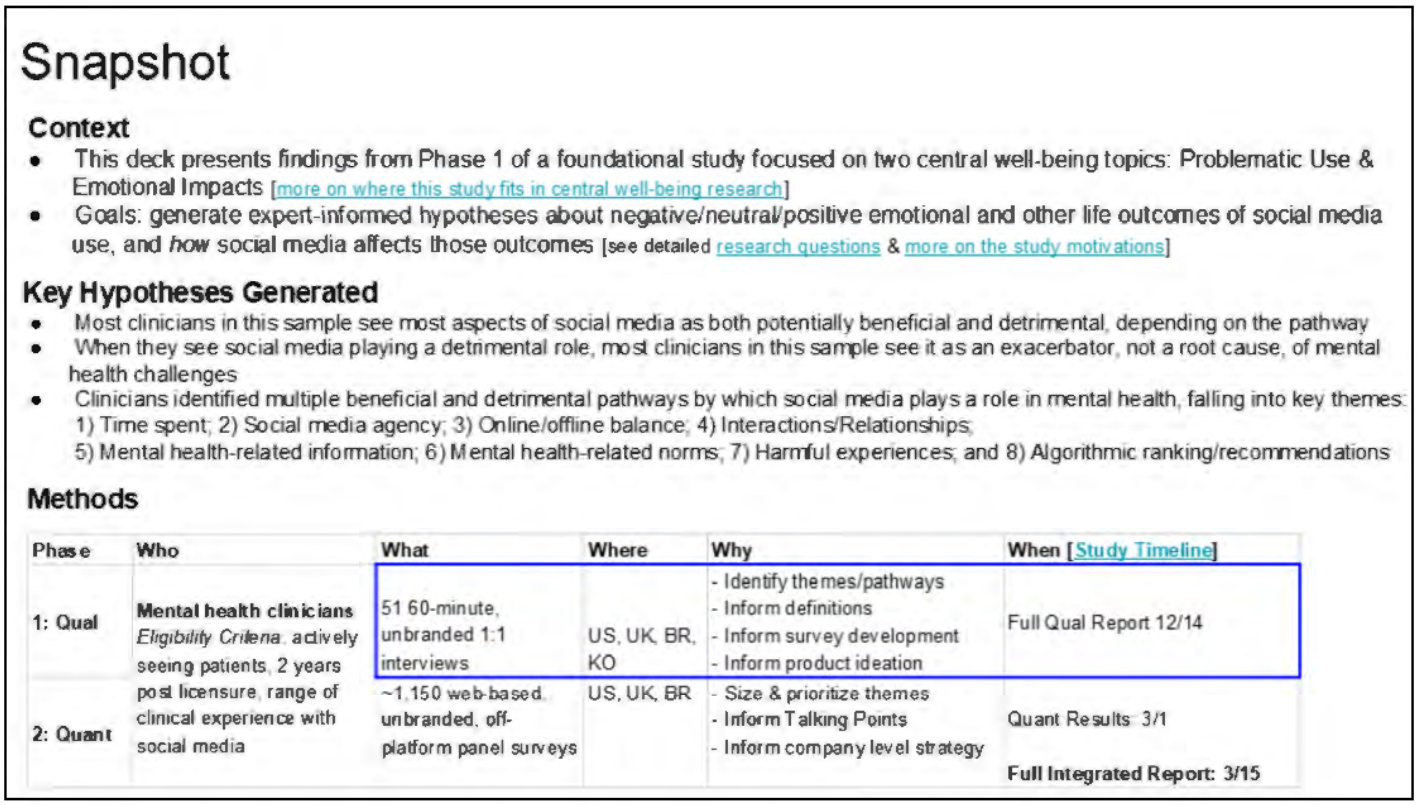
Thank you for the opportunity to share with you the qualitative findings from Phase 1 of an exploratory mixed methods study of mental health clinicians. I'll walk through the deck, leaving time for discussion and questions at the end, but please feel free to speak up if you have questions as I'm going through. I also want to acknowledge my amazing colleagues from DSS, [redacted] and [redacted] who are leading this work as well.

Contents



Snapshot

Context

- This deck presents findings from Phase 1 of a foundational study focused on two central well-being topics: Problematic Use & Emotional Impacts [more on where this study fits in central well-being research]
- Goals: generate expert-informed hypotheses about negative/neutral/positive emotional and other life outcomes of social media use, and *how* social media affects those outcomes [see detailed research questions & more on the study motivations]

Key Hypotheses Generated

- Most clinicians in this sample see most aspects of social media as both potentially beneficial and detrimental, depending on the pathway
- When they see social media playing a detrimental role, most clinicians in this sample see it as an exacerbator, not a root cause, of mental health challenges
- Clinicians identified multiple beneficial and detrimental pathways by which social media plays a role in mental health, falling into key themes: 1) Time spent; 2) Social media agency; 3) Online/offline balance; 4) Interactions/Relationships; 5) Mental health-related information; 6) Mental health-related norms; 7) Harmful experiences; and 8) Algorithmic ranking/recommendations

Methods

Phase	Who	What	Where	Why	When [Study Timeline]
1: Qual	**Mental health clinicians** *Eligibility Criteria*: actively seeing patients, 2 years post licensure, range of clinical experience with social media	51 60-minute, unbranded 1:1 interviews	US, UK, BR, KO	- Identify themes/pathways - Inform definitions - Inform survey development - Inform product ideation	Full Qual Report 12/14
2: Quant		~1,150 web-based, unbranded, off-platform panel surveys	US, UK, BR	- Size & prioritize themes - Inform Talking Points - Inform company level strategy	Quant Results: 3/1 **Full Integrated Report: 3/15**

So, at a glance. This deck includes findings from a 2-phase mixed methods study. The study is one of a suite of foundational research projects currently underway as part of the central well-being strategy. The study is focused on generating expert-informed hypotheses about the negative, neutral, and positive emotional impacts and other life impacts of social media, and specifically, how and why social media use affects those outcomes. We refer to the how and why as “pathways” throughout this deck. I’ll go over the hypotheses we generated through the qual work in Phase 1 in detail later. To get there, we conducted 1:1 unbranded interviews with 51 mental health clinicians in US, UK, BR, KO. In Phase 2, which is currently underway, we’ll survey a larger sample of clinicians in 3 of these countries to get a sense of how the themes we identified generalize to a larger sample of clinicians (though not to the full populations of clinicians in these countries). We expect full results from the survey in mid-March.

Why clinicians?

Clinicians provide **expert, professional perspective** on the role of social media in mental health, which is the focus for one of the primary external critiques directed at Meta.

This is the first study to solicit clinicians' perspectives at scale.

You might be wondering, why study clinicians? In our review of the internal and external literature, we found that the majority of research in this space asks people to self-report their own mental health and other life outcomes, as well as their social media use. We also know that people's assessment of the role of social media use in their own lives is biased by their view of social media in general (e.g., if i think it's bad, I'll be more likely to think and say it negatively affects my mental health). So we wanted to speak with clinicians to get their professional perspective.

Sample Characteristics

Key Definitions

	US	UK	KO	BR
# of Clinicians	15	12	12	12
Specialty (more on Specialty differences)	73% Psychiatrist 7% Psychologist 20% Therapist	50% Psychiatrist 17% Psychologist 33% Therapist	33% Psychiatrist 33% Psychologist 33% Therapist	25% Psychiatrist 42% Psychologist 33% Therapist
Gender	60% Female / 40% Male	50% Female / 50% Male	67% Female / 33% Male	58% Female / 42% Male
Range of Years in Practice (Mean)	3 - 31 years (22 years)	4 - 25 years (15 years)	5 - 26 years (14 years)	8 - 20 years (15 years)
% Use social media personally	80%	58%	100%	83%
Practice Setting[1]	40% Academic 60% Community	17% Academic 83% Community	67% Academic 33% Community	0% Academic 100% Community
% see at least 20% youth patients	33%	58%	75%	50%

Data based on interviews conducted with a convenience sample of 51 clinicians in the US/UK/KO/BR in Oct-Nov 2021; data not generalizable to all clinicians in each country

[1] Where clinician typically sees patients; academic: university-based or affiliated clinic, hospital, or office; community: non-academic location

The types of clinicians we spoke with varied somewhat across countries, but we aimed for a mix of different types of clinicians in each market. This is important because different specialities - like psychiatrists vs. psychologists - can have different training, different ways they approach diagnosing their patients, and different methods of treating them. We had a range of clinical experience in our sample (everyone had at least 2 years). Most clinicians in the sample use social media personally, though somewhat fewer did in the sample of clinicians in the UK. We also were able to speak with clinicians who see patients in a range of different age groups, including about 50% who see at least some youth patients - in total we had about 30% of the sample that specializes in youth populations and another 20% who see both youth and young adults.

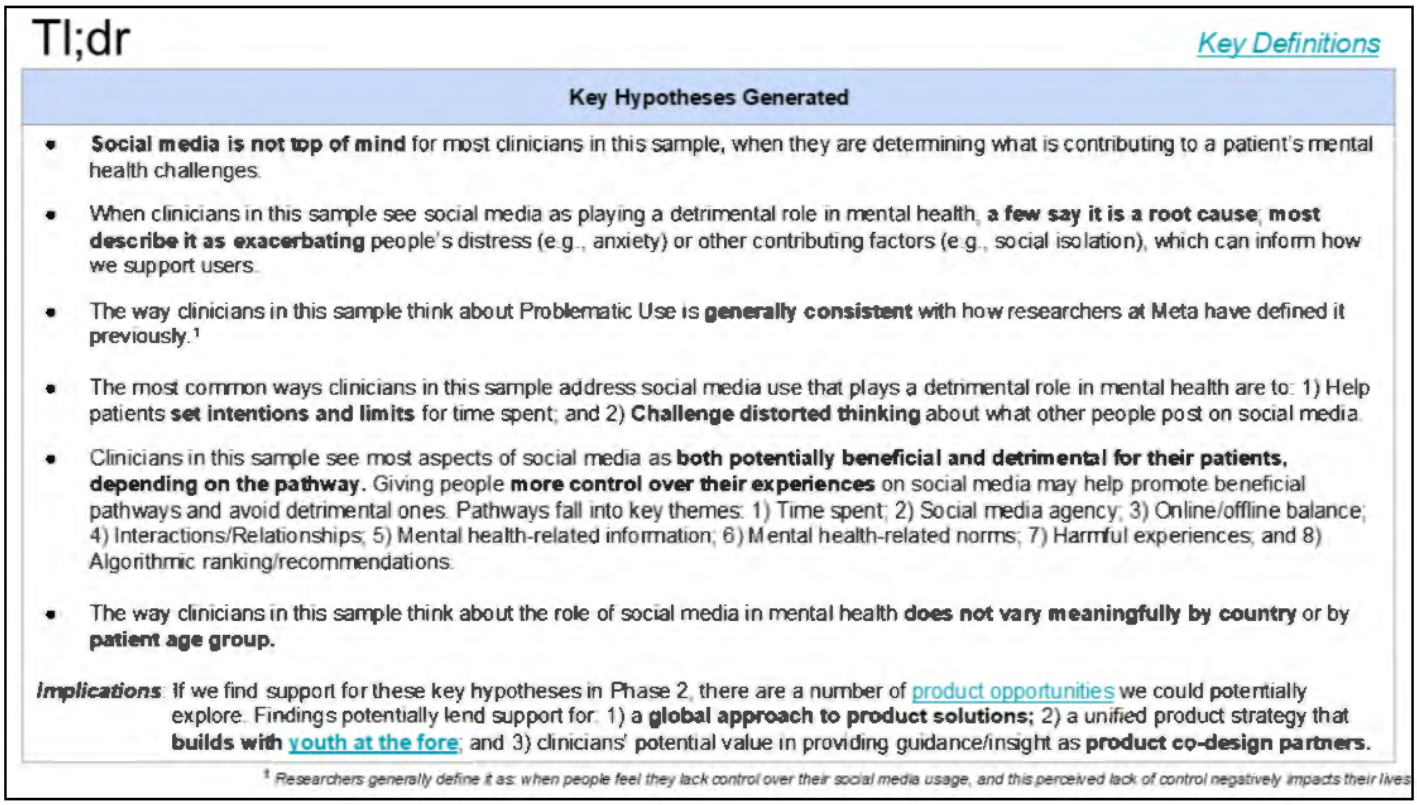
These data have limitations; some will be addressed in Phase 2 (survey)

What We Can Say	What We Can't Say	Covered in Phase 2
• Major themes we learn about what clinicians in this sample think about their own patient populations • Major themes we learn about from clinicians in this sample who mostly see patients for whom social media is playing a role	• Inferences about patient populations as a whole • How themes generalize to all mental health clinicians, globally • How themes generalize to clinicians in US, UK, KO, BR who mostly see patients for whom social media plays a role • Precise estimates of the size of themes • How themes generalize to people with mental health challenges who do not see clinicians	• How themes generalize to a surveyed sample of clinicians in US, UK, BR who have a range of clinical experience with social media • More precise estimates of observed themes and opportunities

More on how we accounted for potential clinician bias throughout the study

A word on study limitations. We can use this data from Phase 1 to identify themes, specifically among clinicians who mostly see patients for whom they see social media as playing a role in mental health, which was an eligibility criterion. We can't make generalizations about clinicians' patient populations as a whole, or to all clinicians in each country, or to people who don't go to clinicians. BUT, in Phase 2, we will get a better sense of how the themes we identified generalize to a larger sample of clinicians, and we'll be able to make more precise estimates of the themes and therefore how we might prioritize product opportunities.

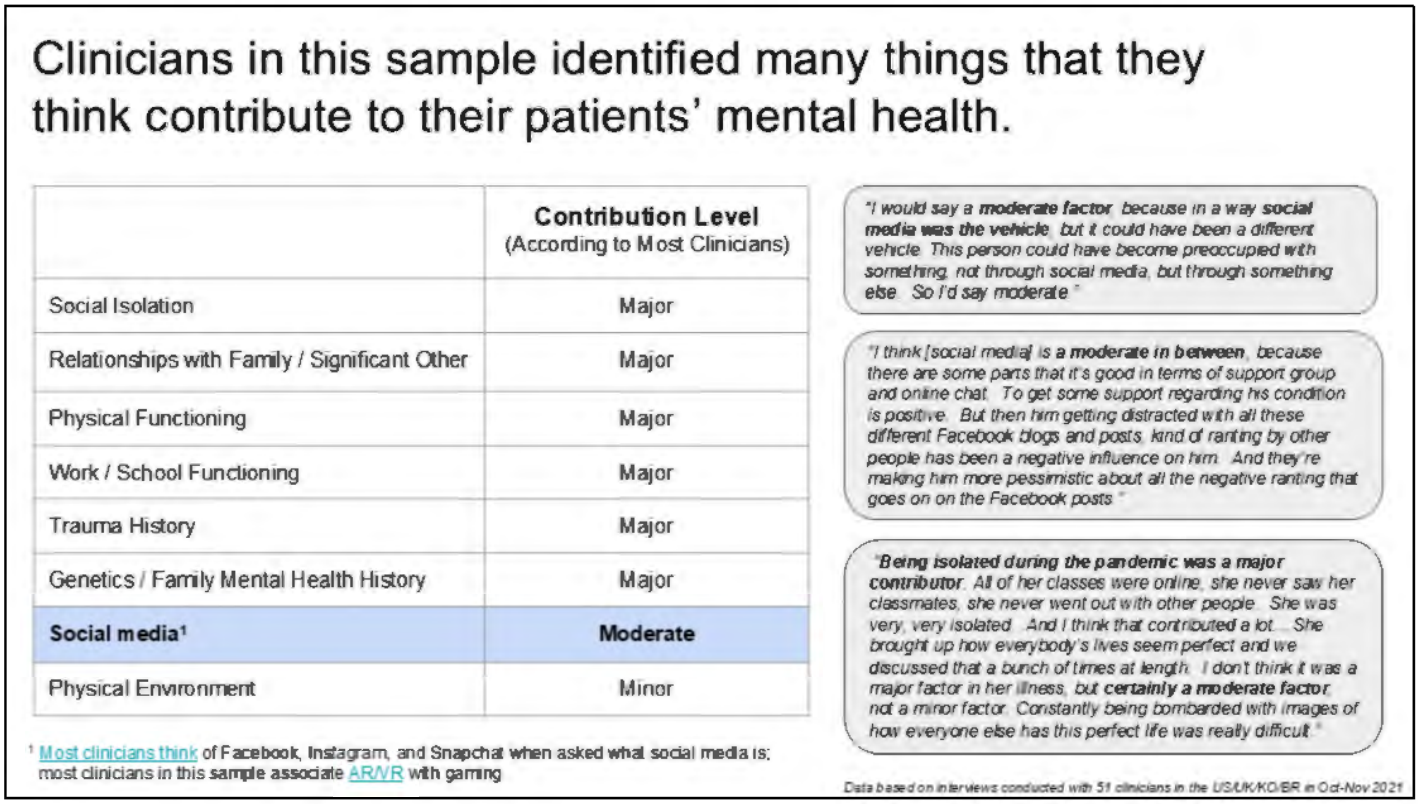
So, what did we learn from these interviews, that we can further test in Phase 2? Importantly, and interestingly, we did not find meaningful differences by country or by age group, comparing clinicians who treat at least some youth patients to those who see only adults. If we don't find differences in Phase 2, this may lend support for a global well-being product strategy (though we should also explore these findings in developing countries and other large Asian markets). They also lend support for the idea that the mental health implications of social media may not necessarily be categorically different, but rather a well-being strategy that builds with youth at the fore, and according to developmental needs, can actually serve adults as well. We'll explore this hypothesis further in Phase 2.



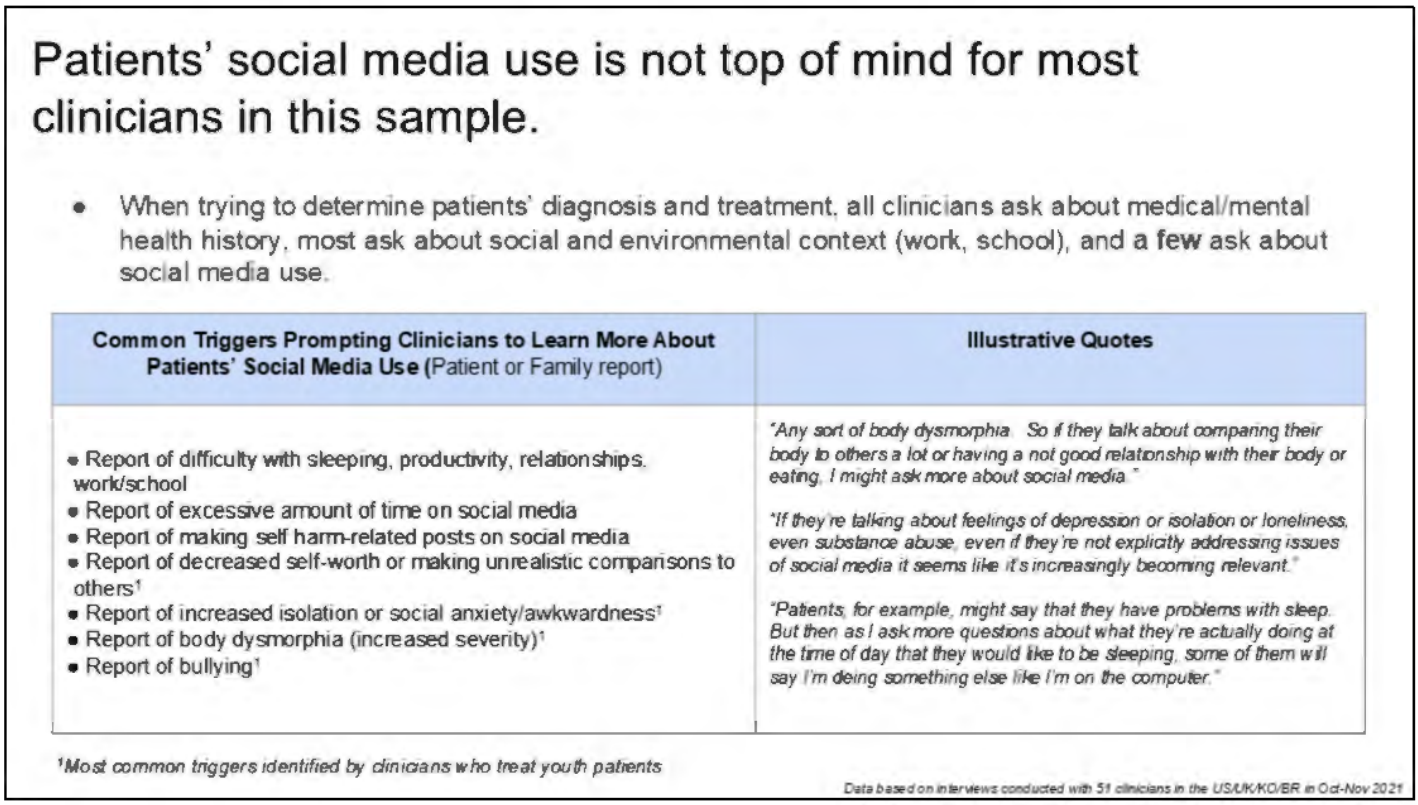
This slide summarizes the key hypotheses we generated through this work. I'll talk through these in detail on subsequent slides. A note on definitions. As I said previously, pathways refers to the "how" and "why" social media plays a role in mental health. Product affordances refer to specific aspects of social media and what they allow people to do (e.g., join a group for people who experience mental health challenges).

Clinician Perspectives on Social Media's Role in General

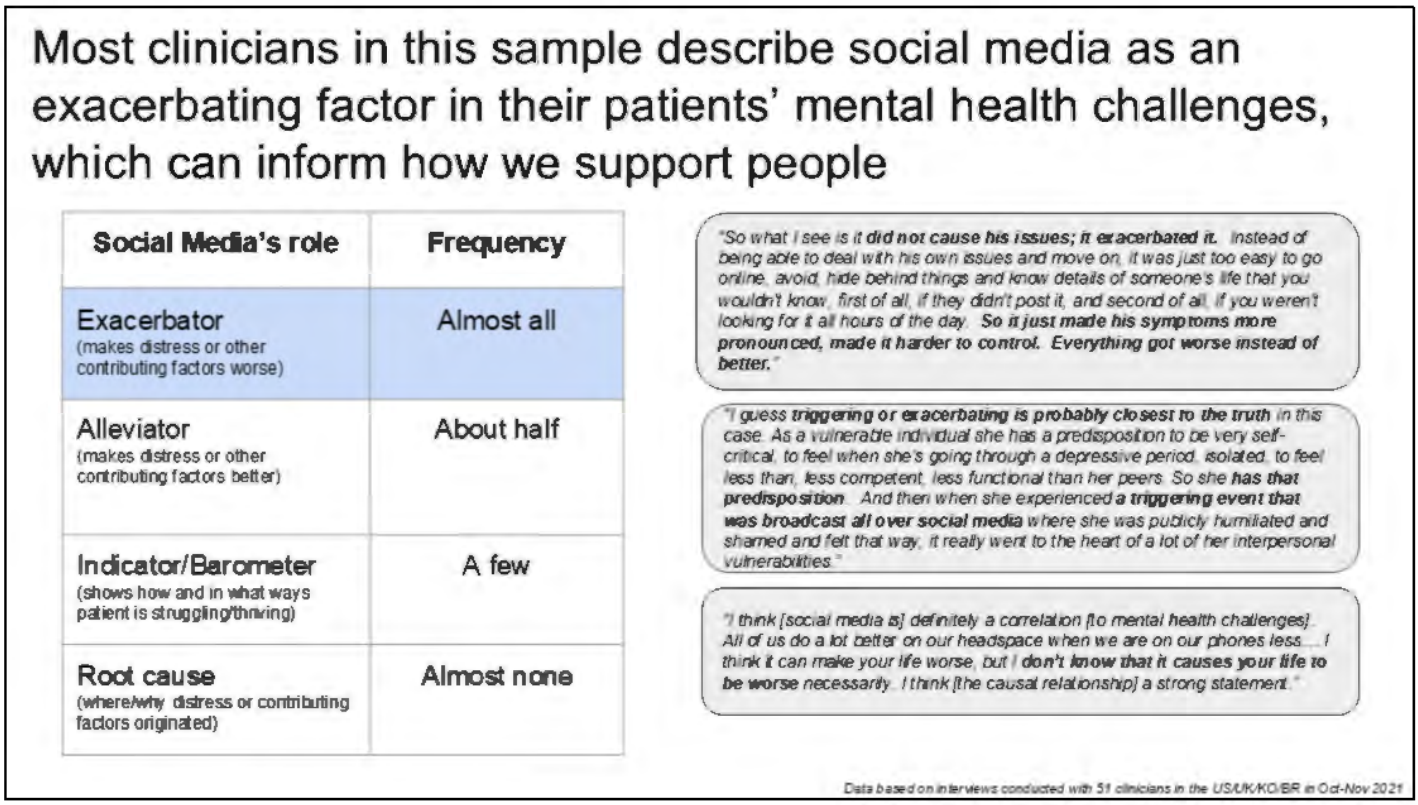
Let's start with how clinicians view the role of social media in mental health more generally.



Clinicians in this sample think many different things contribute to their patients' mental health challenges, including their relationships, their work or school, and their family history. Social media is one of the things they think can contribute to mental health challenges. When they see it playing a role, most clinicians in this sample say it is a moderate contributing factor, compared to the other things they think contribute, like genetics, which most of them classify as major.



Clinicians report that social media is not top of mind for them when they're trying to figure out what a patient's diagnosis is and how they might treat them, though almost all do end up discussing social media over the course of their relationship with their patients. There are several common triggers clinicians report that make them ask more about social media. Neg social comparison, social anxiety, body dysmorphia, and bullying were the most common triggers for clinicians who treat youth patients to learn more about their patients' social media use. These triggers track well with the central well-being topics (bullying and harassment, emotional impacts, PU). They also lend support for work on NAC, as negative social comparison and body dysmorphia were common triggers. If we find support for these triggers in Phase 2, we might explore ethical ways of tracking more of these triggers on platform (e.g., how might we track whether people are experiencing difficulty with their sleep, work/school, or relationships, as a result of the time they're spending on platform?)



So if a clinician determines that social media IS playing a role in their patient's mental health, how do they describe the nature of that role? Most clinicians in this sample describe it as an exacerbator - meaning, it can make a person's distress (like their anxiety) worse, or it can make some other contributing factor (like the fact that they recently broke up with a long-term partner) worse. Almost no clinicians in this sample saw social media as the root cause of their patient's mental health problems. I recall one clinician from the UK who, talking about a college-age female patient of his, said "Did being on social media make her symptoms worse at times? Yes. Would she have had depression if she never went on social media? Of course." Some clinicians also described social media as an "alleviator" , in that it made some people's distress (e.g., social anxiety) or other contributing factor (being socially isolated) better. As I'll discuss in the next section, the fact that many clinicians see social media as an exacerbator and/or an alleviator means we should find ways to interrupt or limit detrimental pathways and amplify or create more beneficial ones. For example, many clinicians said that push notifications don't cause their patients' anxiety, but they can make it worse, so we should find ways to limit them and make it easier for people to control them.

"Casual" Quote:

[Re: Social media's role in body dysmorphia and anxiety]
"I would say probably it's more causal... But it's certainly social media exposure from early on really having a sort of big impact about 'how I should look,' how other people

look, how perfect other people are."

Almost all clinicians in this sample see social media as playing both positive and negative roles in their patients' mental health

	Social Media is ONLY Positive	Social Media is ONLY Negative	Social Media can be BOTH
Frequency	A few	A few	Almost all
Illustrative Quotes	"[My headline would be] *'Social media and depression. Is social media really to blame?' And then just go through the article and talking about it's easy to blame these big companies but we all have agency. And also, we can look at the use of social media as a barometer to our own feelings of ourselves and how much of it is really the big bad social media companies versus anything we will utilize."* (reacting to headline exercise)[1]	*"What has concerned me for a long time is lack of accountability on social media. It's simply harmful to people's mental health because I can write a post saying something bad about you and the consequences on your psychological health could be horrendous when I post it. Simple as that."* (reacting to headline exercise)	*"[My headline would be] "Common Things Are Common,' so the more commonly an individual engages in anything, which could include social media, the more likely there is to be a downside as well as an upside. And therefore, psychological problems involving social media, either directly or tangentially, are increasingly common, simply because social media is increasingly common."* (reacting to headline exercise)

[1] We asked clinicians to create their own, and then react to existing, news article headlines about social media/mental health

Data based on interviews conducted with 51 clinicians in the US/UK/KO/BR in Oct-Nov 2021

Overall, most clinicians in this sample see social media as generally playing both positive and negative roles in their patients' lives.

When asked how they would define "problematic use", most clinicians in this sample identify four overlapping themes

- While clinicians in this sample don't always use the term "problematic use," the essence of how researchers at Meta have historically defined it (i.e., lack of control over or guilt about social media use, and interference with other areas of life functioning) is aligned with how clinicians think about problematic use of social media.

Theme (Clinicians' Opinion)	Definition *[Illustrative Quotes]*
Interferes with other aspects of regular functioning	Clinician views social media use as diminishing or interfering with patients' relationships, school, work, sleep, or social functioning
Inability to control time spent on social media or stop use	Clinician determines that patient has become unable to control time spent on social media (e.g., compulsive checking, mindless scrolling, excessive gaming)
Contributes to emotional suffering or distress	Clinician views social media as having a negative effect on patient's self-worth or mood (e.g., negative impact on self worth through constant negative social comparison)
Signs of dependence on social media	Clinician observes that patient exhibits signs of withdrawal - emotional distress, intense desire to use social media - when attempting to stop using social media

Note: When asked, almost all clinicians in this sample think social media can be addictive

Data based on interviews conducted with 51 clinicians in the US/UK/KO/BR in Oct-Nov 2021

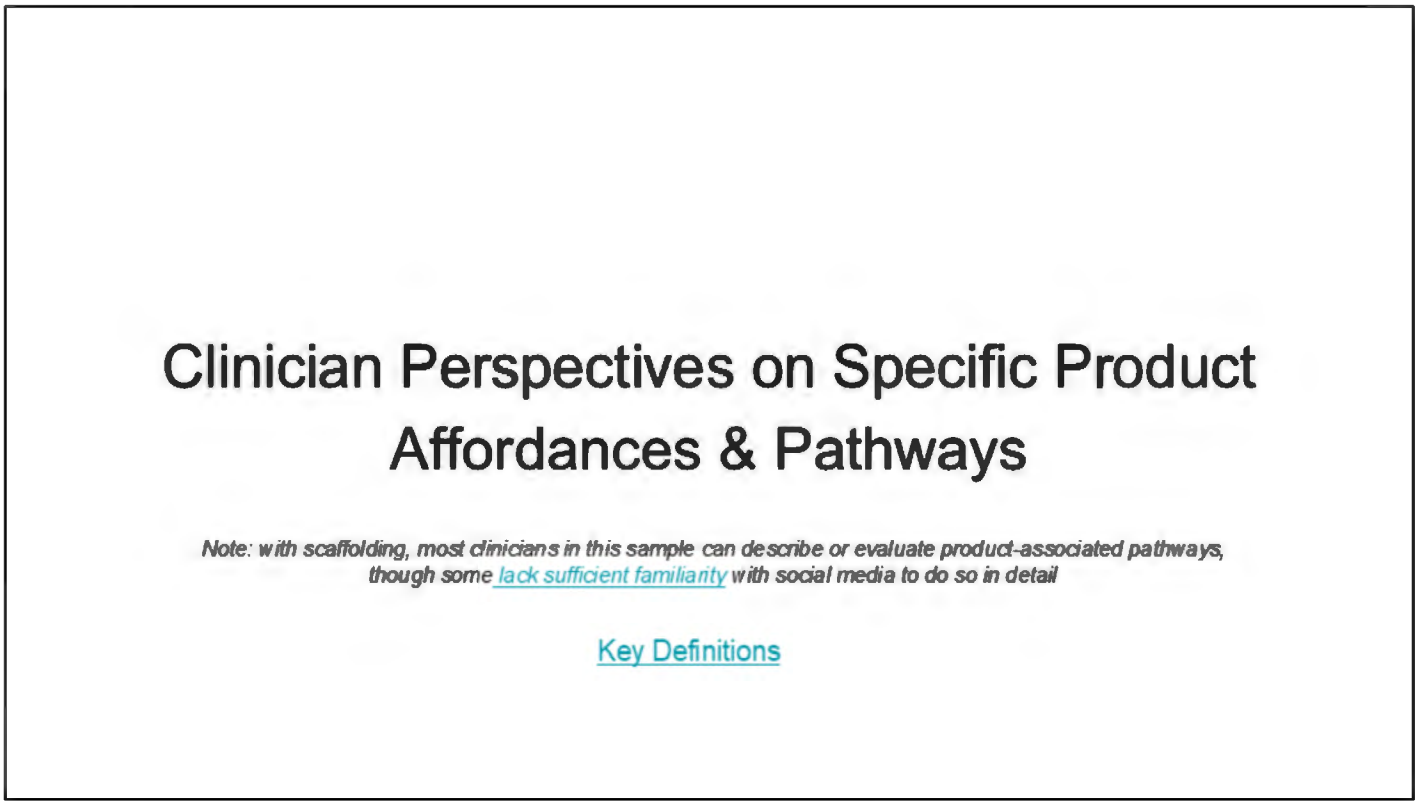
We also asked clinicians how they define and identify problematic use of social media in their patients. Most clinicians in this sample identified 4 overlapping themes that define problematic social media use, which generally align with our internal definition of Problematic Use. Themes include clinicians' impression that social media is interfering with their patient's life in some important way; that they are showing an inability to control time spent on social media, that their social media use contributes to emotional distress, and that they exhibit signs of dependence on social media. It's also worth noting that almost all clinicians in this sample thought social media can be addictive, but many pointed out that social media differs from other addictive behaviors or substances in that it can also be beneficial.

Clinicians in this sample described several ways they address social media use that plays a detrimental role in their patients' mental health; most encourage time limits.

Method / Approach	Frequency	How the Method/Approach Helps	Illustrative Quotes
Encourage patient to set social media time limits; use social media time management tools	Almost all	Helps people set intentions about amount of time they want/should spend; helps patient monitor/build awareness about time spent; proactively reminds patient about time spent; reduces exposure to and influence of detrimental pathways (e.g., repeated negative social comparison)	*"What we had to do was we had to come up with a rather concrete plan for him to get some guidance about how much time to reasonably invest in the online activities. So, for example, when we started what he was telling me is that he spent at least five hours per 24 hour day in that regard. So what we did was we put together a schedule that he agreed to wherein he decreased that by one hour per week until he had gotten down to one hour per day, not five."*
Challenge patient's cognitive distortions	About half	Challenges negative thinking and unrealistic comparisons triggered by social media	*"Well, obviously just a little bit of reality testing and trying to talk to her about 'Do you really think that people are posting the good and the bad if everything seems good? Certainly, during a pandemic, it'd be hard to imagine that everything is good."*
Encourage patient to take a break from social media	Some	Implements break for patients with compulsive use to decrease dependence; reduces exposure to and influence of detrimental pathways (e.g., repeated negative social comparison)	*"She did delete all her platforms, and she said she was going to give it the week and see how she does. And I'm seeing her tomorrow. So, we're just sort of starting this process, and just putting it on the treatment plan as a goal to go from probably 90 percent of her free time down to maybe 20 percent of her free time on, or less on social media."*
Encourage offline experiences/relationships	Some	Supports patients' ability to seek out and experience benefits of offline interactions and relationships	*"Also importantly encouraging her to reach out to people outside of social media and actually start having more in person interactions and even calls. Phone calls as a way to humanize these people on the web, friends."*
Encourage patient to set social media use intentions	A few	Helps patients monitor/build awareness around why using social media; helps patients think about why they're using social media, what it's for	*"So even just having Instagram is fine sometimes if you're not following certain people, or can you look at some of the pictures that are posted but not look at all the stories, you know just trying to give yourself your own boundaries with it and see if certain things make you feel more left out versus they're just kind of fun to look at."*
Encourage patient to exercise control over social media settings	A few	Helps create boundaries on social media use and gives patient agency over who, what, and when they interact with on social media	*"So put her on more of a schedule of using social media so she's not being bombarded 24 hours a day. Having her turn off the alerts, the buzzers and beeps that people get to say they've gotten a message so, again, she's not having these constant alarm and triggering reactions."*

Data based on interviews conducted with 51 clinicians in the USA/UK/CA/BR in Oct-Nov 2021

So how do clinicians approach treatment for patients when social media is playing a detrimental role? Clinicians identified several ways, falling into several main buckets. Of note, these approaches apply not only to patients where clinicians see social media use as problematic. Almost all clinicians encourage patients to set limits for how much time they spend on social media. Clinicians described that these limits help people set intentions for how much time they want to spend, monitor and build awareness of how much time they want to spend. Notably, limiting time spent also helps people limit their exposure to any detrimental pathways they're experiencing on social media. So if they find they're experiencing a lot of negative social comparison due to monitoring reactions to their posts, then limiting the time they spend monitoring those reactions can reduce how much negative social comparison they experience. In this way, time limits aren't really about "time," necessarily, but about bounding the influence that detrimental social media pathways have on people's mental health.



Now, what about specific aspects of social media? How do clinicians in this sample evaluate the role of product affordances in their patients' mental health?

For clinicians in this sample, social media is neither "either/or" nor "one size fits all": findings suggest that many product solutions may lie in enabling people to have more agency over when, why, how, with whom, and how long they spend on social media

Overall, clinicians in this sample don't see social media as either wholly detrimental or beneficial. Additionally, they made it clear that what's beneficial for one patient, in their context and with their predispositions, might be detrimental for another. If we find support for these hypotheses in Phase 2, our findings suggest that product solutions may lie in making it possible or just much easier, for people to have a lot more input into their social media experience - what they do, what they see, who they interact with, how much time they spend.

Almost all clinicians in this sample were able to evaluate the role that specific product affordances play in their patients' mental health

- Clinicians identified product-specific pathways in two ways:

    1. Discussion of specific patient cases

    1. Review of specific product affordances, rooted in their clinical experiences with their patient population

Discussion Guide

Overall, most clinicians in this sample could evaluate how specific product affordances play a role in their patients' mental health. We asked clinicians to do this when they discussed specific patient cases and through a standardized review of product affordances.

Most clinicians in this sample think most aspects of social media can play both a beneficial and detrimental role, depending on the pathway

More on Affordances & Pathways

Product Affordance[1]	Example Pathways [see full list of pathways]	
Internal Name	Beneficial	Detrimental
Groups	Facilitates give/get of support/validation for patients' mental health challenges	Enables encouragement of unhealthy eating disorder-related behaviors
Reactions	Positively affects patients' self-esteem via facilitating positive feedback	Negatively affects patients' self worth when don't receive pos/"enough" feedback
Public comments/ posts	Offers anxious patients ability to communicate more easily	Enables public bullying/harassment
Tagging	Enables lightweight way for patients to connect with friends / family (esp. for anxious patients)	Detracts from patients' ability to control the amount of time spent
Filters/Photo- editing	*(seen as beneficial, but no product-specific articulated pathway)*	Creates unrealistic appearance expectations that facilitate repeated negative social comparison
NUF Signals (blocking)	Enables patients to feel in more control over their online experiences/relationships	Negatively affects patients' sense of self worth when blocked by others
Push notifications	*(seen as beneficial, but no product-specific articulated pathway)*	Interferes with offline social functioning via interruption of offline interactions
Private comments/ posts	Facilitates patients getting support related to their mental health	Interferes with offline social functioning via spillover from online conversations
Screen-time controls	Helps patients set intentions/build awareness/monitor/structure for time spent	*None identified*
Autoplay	*None identified*	Detracts from patients' ability to control amount of time spent
Swipe-ups	Reminds patients to, and/or elicits interest in, taking psych medication	Facilitates compulsive shopping
Ephemeral content	Enables lightweight/low-pressure way for anxious patients to connect with friends / family	Hinders ability to report/document bullying/harassment
Re-posting	Enables lightweight way for patients to connect/reconnect with friends and family (esp for anxious patients)	Enables bullying/harassment

[1] Ordered by frequency: # of clinicians who reported the affordance was clinically relevant

Data based on interviews conducted with 51 clinicians in the US/UK/KO/BR in Oct-Nov 2021

Clinicians in this sample report that most aspects of social media can be both beneficial and detrimental, depending on the pathway - the how and why a specific product affordance, like the ability to join groups - affects mental health. This slide shows example pathways for each product affordance that was clinically relevant to at least a few clinicians in the sample. In this sample, only 2 product affordances were evaluated as only beneficial or only detrimental. Autoplay was only evaluated as detrimental, and screen-time controls were only evaluated as beneficial.

Clinician-identified pathways fall into several key themes, informing opportunity areas

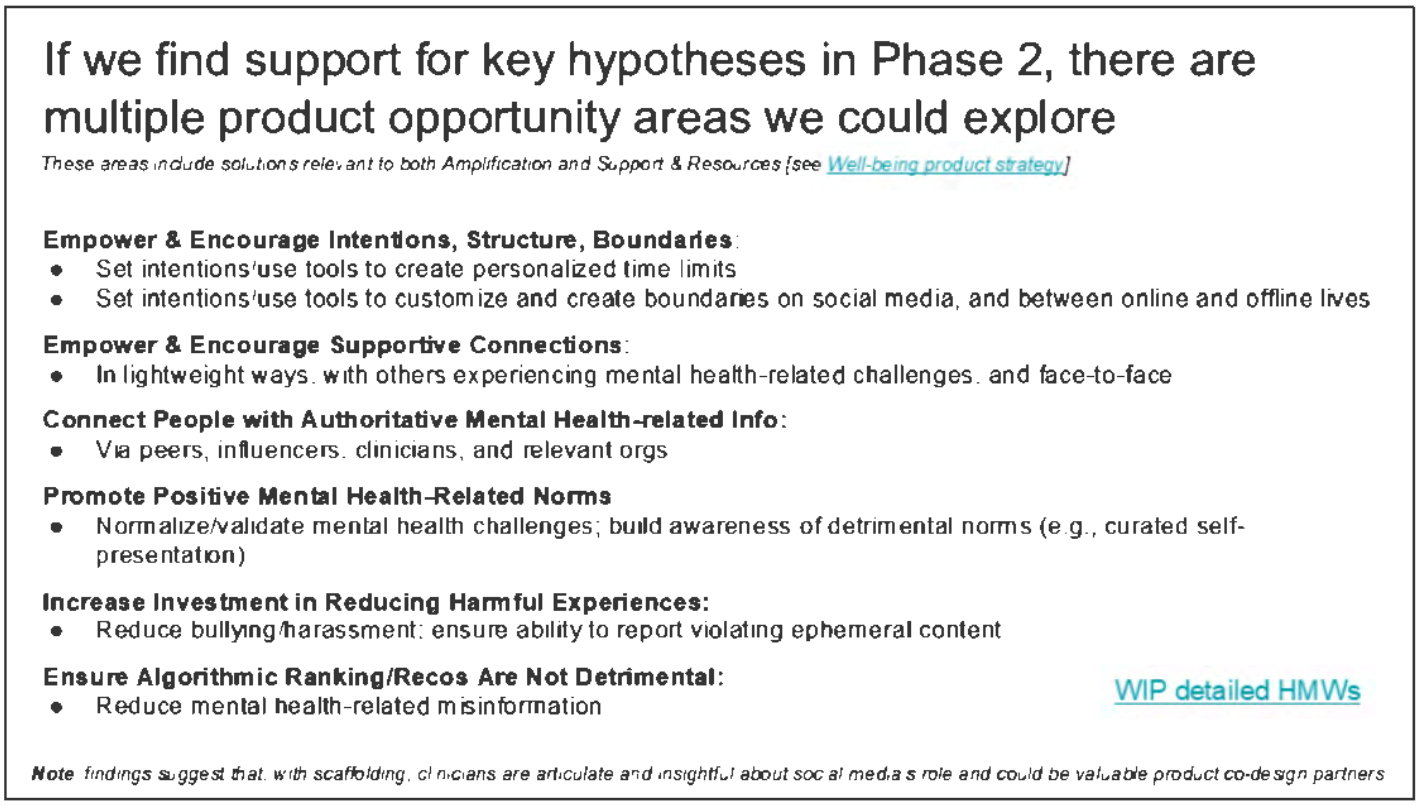
	Themes [Full list of pathways by theme]							
	Time Spent	**Social Media Agency**	**Online/Offline Balance**	**Interactions/ Relationships**	**Mental Health-Related Info**	**Mental Health-Related Norms**	**Harmful Experiences**	**Algorithmic Ranking/ Recos**
Example Pathways (example associated product affordances)	Helps patients set intentions, build awareness, monitor, and provide structure for time spent (Screen time controls)	Enables patients to feel more in control over, and create healthy boundaries for, their online experiences/ relationships (NUF signals)	Using online experiences/ relationships to facilitate offline interactions supports patients' ability to seek out and experience benefits of face-to-face interactions and connections (Groups)	Increases patients' self-esteem/ confidence via positive feedback (Reactions, Public comments/ posts)	Enables access to information about diagnosis, treatment for mental health challenges (Groups, Public posts/ comments)	Normalizes mental health challenges and associated experiences (Groups, Public comments/ posts)	Enables patients to feel more in control over, and create healthy boundaries for, their online experiences/ relationships (NUF Signals)	Enables spread and facilitates engagement with positive mental health-related information (Public comments/ posts)
	Detracts from patients' ability to control amount of time spent (Push notifs, Autoplay)	Negatively affects patients' sense of self worth via FOMO and repeated negative social comparison (Reactions, Tagging)	Interferes with offline social functioning via interruption of offline interactions, and disconnect between structure/ boundaries of offline and online relationships (Push notifs)	Exacerbates offline anxiety by creating over-reliance on private messaging for communication (Private comments/ posts)	Enables spread of mental health-related misinformation (Groups, Public comments/ posts)	Creates unrealistic appearance expectations that facilitate repeated negative social comparison (Filters/Photo-editing)	Makes it more difficult to report/ document bullying/ harassment (Ephemeral content)	Enables compulsive buying (Swipe-ups)

Data based on interviews conducted with 51 clinicians in the US/UK/KO/BR in Oct-Nov 2021

Looking across product affordances, we were able to group pathways by theme. This is useful because it can help us identify the pathways we might amplify and activate or try to reduce across our platforms, irrespective of specific product affordance or platform, and looking to the future as we build the Metaverse. This slide shows example pathways that fall into each of the themes.

Agency: the way clinicians described pathways in this category was to talk about how particular product affordances, like reactions and tagging, can make the social media environment feel out of patients' control and unstructured, prompting FOMO, neg soc comparison, and general distress because the experience feels like something that's happening to them, rather than something they are actively doing and creating and choosing for themselves.

So, what do these findings mean for us? We triangulated across the pathways clinicians identified, as well as the treatment approaches they reported taking with their patients, and brainstormed How Might We's. We're exploring the product affordances that are top of mind in a larger sample of clinicians in Phase 2 of this study. We can use those results to help prioritize pathways and associated product solutions to focus on.



If we find support for our hypothesis in Phase 2, we've identified several WIP opportunity areas we could explore. These areas harness beneficial pathways (like giving and getting validation and support from other people struggling with mental health challenges) AND seek to disrupt or limit detrimental pathways (like affordances that interrupt people's offline social functioning).

In general, our findings suggest that clinicians may be highly valuable as product co-design partners, and we can help identify who and what characteristics of a clinician to partner with for that purpose. We may be also be able to partner with clinicians, or clinical professional organizations, to help them figure out how and when to ask about social media use with their patients. Some clinicians we spoke with ended the interview saying they planned to ask more patients about their social media use in the future, and that the interview had spurred them to think about how to incorporate social media more as part of assessment and how to help their patients.

"With him, it was very much applauding the difference. We're more on finding his tribe, finding more the groups that works for him, rather than getting pulled into comparing himself to people who are really not him, really out of reach. There was a very powerful video, so we did in this case sort of turn his social media use around, so we found a very powerful video by Ed Sheeran where he stood up and said, "I'm weird. I love being weird." So it was it was more about applauding his difference, applauding his quirkiness, seeing as a positive and finding those tribes, the people that made him feel good about himself, rather than being part of those tribes of people that didn't."

"Again, I think she's on a path of progress in general, so she's trying harder to not incorporate things that make her feel worse. So even just having Instagram is fine sometimes if you're not following certain people, or can you look at some of the pictures that are posted but not look at all the stories, you know, just trying to give yourself your own boundaries with it and see if certain things make you feel more left out versus they're just kind of fun or they really resonate with you."

I'll leave you 2 quotes that help to exemplify some of findings among clinicians who treat youth patients. The 1st is from a psychiatrist in the UK, talking about how he treated a 15 year old male patient with anxiety that was exacerbated by social media use. She said [read quote]. And the 2nd is from a psychologist in Brazil, who was treating a 14 year old female patient for body image-related challenges and depression. He said: [read quote].

Discussion Questions

1. Do you have any questions about the findings or implications?
2. Is there anything that particularly resonated with you or with the team's current/planned vision or goals?

Appendix

Key Definitions

Term	Definition	Examples
Clinician	Professionals who actively treat patients for mental health challenges	Psychiatrists, psychologists, therapists, general practitioners
Mental health challenges	Wide range of emotional and psychological problems people experience	Anxiety, Depression, Behavioral Addictions, Substance Use Disorders, Eating Disorders
Product Affordance	A characteristic of social media platforms and what that characteristic enables people to do with the technology	• Ability to join a group for people experiencing a specific MH challenge • Ability to edit videos or images to change one's or others' appearance (e.g., use of photo filters)
Pathway	The mechanism (how and why) through which a product feature plays a role in a person's MH challenges	The ability to join a group for people experiencing MH challenges (*affordance*) enables people to provide and receive validation and support regarding experienced challenges (*pathway*)

While the small number of interviews (n=51) precludes precise estimates, we use standardized terms throughout this deck to help provide a sense of how many clinicians in this sample each finding applies to:

- Almost none = 0% - 5%
- A few = 6% - 25%
- Some = 26% - 45%
- About half = 46% - 65%
- Most = 66% - 90%
- Almost All = 91% - 100%

Context - Core well-being topics

More on well-being strategy

Leveraging data from key stakeholders (everyday users, policy insiders, academics, the media, and internal leadership), and a strategic exercise with leaders, we focused the company well-being efforts on the topics listed below.

1. **Problematic Use [*primary study focus*]**
2. **Emotional Impacts [*primary study focus*]**
3. Bullying & Harassment
4. Connections

	Description	Example Projects	Timeline
Strengthen internal foundation	Understand recent social science on each topic to ensure that the company's communication, research, and product work are guided by the strongest evidence.	-Literature reviews and FAQs -1-pager + FYI Live series -Company best practices - Roundtables	Executing, mostly complete
Foundational research	Conduct foundational research based on gaps in the literature to steer product strategy, comms, and future research.	-Research on practitioners' perspective about our platforms' positive and negative impact - Global survey focused on the state of social connection and the role of social media (e.g., Small Business Report)	Executing, to be *partially* complete in 2021
Special Collaborations	Engage with academics to collaborate on research related to the 4 core well-being areas as well as teen mental health	- First Accounts Longitudinal study - Deep dive with vulnerable teens - Chronological vs. Curated Feed - Digital Citizenship	Planning; studies to be complete in 2022+

Context - This study is part of a suite of foundational research projects

Study	Topic focus	Short Description	Research Lead(s)	Status
Bullying interventions	Bullying	A series of on-platform experiments on Facebook, Instagram, and Messenger to evaluate and publicize the impact of products intended to reduce bullying and harassment.	Bryce	Executing
Bullying policies	Bullying	A survey experiment evaluating the impact, effectiveness, and interpretation of publicly accessible resources to prevent bullying and harassment, including things like our Community Standards and resources in our Bullying and Harassment Prevention Hub.	[redacted]	Executing
Clinicians study	-Problematic Use -Emotional Impact	An exploratory, sequential mixed-methods study focusing on the experience of licensed clinicians (e.g., psychiatrists, clinical psychologists, family therapists, etc.) to better understand the role of social media in the lives of the people they support.	Anya & [redacted]	Executing
State of connections	Connections	A global survey that captures the current state of social interactions around the world.	[redacted]	Executing

- These are some of the other foundational projects we're conducting. Might not reflect most up-to-date info on all studies, but this is the broader context

Motivation

- Reviews of the literature show some (mostly non-causal) evidence of a link between social media use, especially use that is problematic, with negative life outcomes, including but not limited to on people's emotional lives and their social connections and interactions.
- Gaps we want this study to fill:

  Get signal on how **objective** clinical experts assess social media use and life impacts;
  Help us better understand both **positive and negative** life impacts of social media; and
  Provide data on the specific, **product-related pathways** contributing to life impacts.

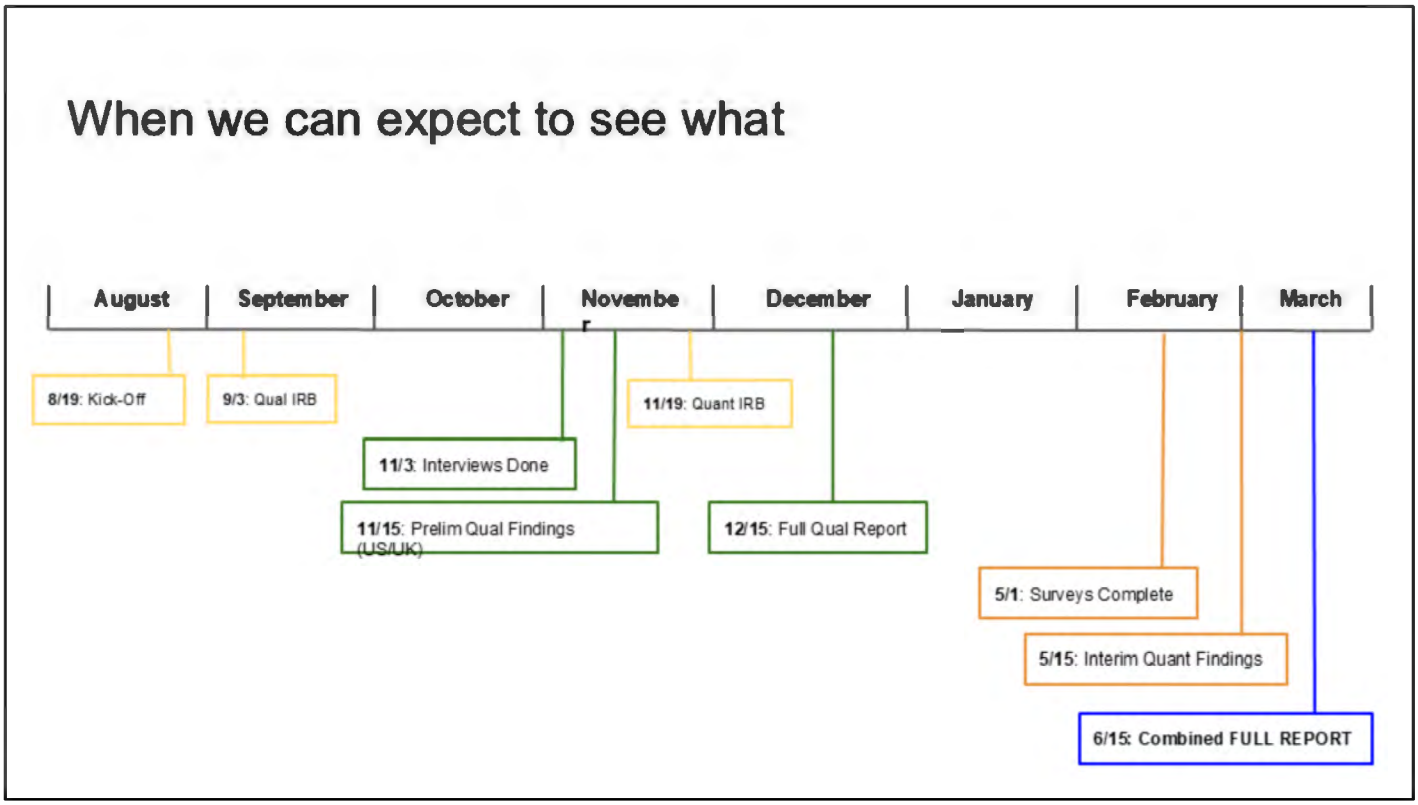
- Potential Impacts:

  Inform our company strategies for Problematic Use and Emotional Impacts
  Identify and test hypotheses about the primary product pathways that contribute to positive and negative life impacts - both for specific product teams and more broadly, across platforms
  Develop expert-informed talking points for use both internally and externally, to help us engage in existing critiques

Research Questions

1. From a clinician's perspective, what role does social media play in the lives of the people they support?
2. How (and how often) do clinicians determine if social media use is playing a problematic or helpful role in people's lives?
3. In clinicians' observations, what are the specific mechanisms by which individual-specific and platform-specific factors help or hinder in the lives of the people they support? How often do they encounter these factors?
4. How do clinicians address challenges when they see social media playing a negative role? How (and when) do they determine if social media can help?

**Do the above vary by population (e.g., age group, gender)?*
**Do the above vary cross-culturally?*



- This is our estimate as of now
- Can share interim qual findings in mid-November if helpful

Key differences by clinician specialty

Specialty	Training	Patient Management
Psychiatrist	MD, residency in psychiatry	• Ability to prescribe medication • In many countries, focus on medication mgmt because they are in short supply and only ones able to provide this service • Also provide therapy of different kinds, depending on training and theoretical orientation
Clinical Psychologist	PhD / PsyD, clinical internship	• Provide therapy • Can conduct psychological and neuropsychological assessments
Therapist	MA, MS in clinical psychology, counseling,	• Provide therapy
General Practitioner	MD	• Ability to prescribe medication • In some countries, treat many patients for mental health problems

Clinicians are human: during interviews, most bring personal experiences to their evaluation of social media

➔ At some point in their interviews, most clinicians evaluated social media product affordances as beneficial or detrimental while also stating they had never discussed that affordance with their patients.

We addressed this bias in 2 ways:

1. In DATA COLLECTION: continually grounded clinicians in their own patient population, via case discussion and follow-up questioning.
2. In ANALYSIS: only counted clinicians' evaluations of social media if they were rooted in clinical experiences.

Data based on interviews conducted with 51 clinicians in the US/UK/BR/KD in Oct-Dec 2021

Will be teasing this out more systematically in Phase 2 (survey)

Findings did not vary by country for clinicians in this sample

- No major thematic differences were identified for clinicians in the US, UK, BR, or KO[1]
- US and UK clinicians largely had similar perspectives towards social media assessment, product affordances, pathways to patient's mental health, and treatment

Country	Main Differences (Directional Only)
US/UK	• Directionally more likely to consider almost all product affordances to be both beneficial and detrimental • May be more likely to incorporate time limits and challenges to cognitive distortion in treatment plan, compared to BR and KO counterparts
BR	• Directionally more likely to consider more product affordances to be mostly detrimental (e.g., photo filters, reposting, push notifications, swipe up links), compared to US, UK, and KO counterparts • Most sampled clinicians had a strong familiarity of social media • May be more likely to have patients set intentions for using social media in treatment plan
KO	• Directionally more likely to not consider any product affordances to be mostly beneficial • Most sampled clinicians had a strong familiarity of social media • May be more likely to have patients restrict use of social media during certain times of the day as part of a treatment plan

[1] Note: there are differences by country in the extent of mental health-related stigma and mental health treatment-seeking and utilization

Data based on interviews conducted with 51 clinicians in the US/UK/BR/KO in Oct-Dec 2021

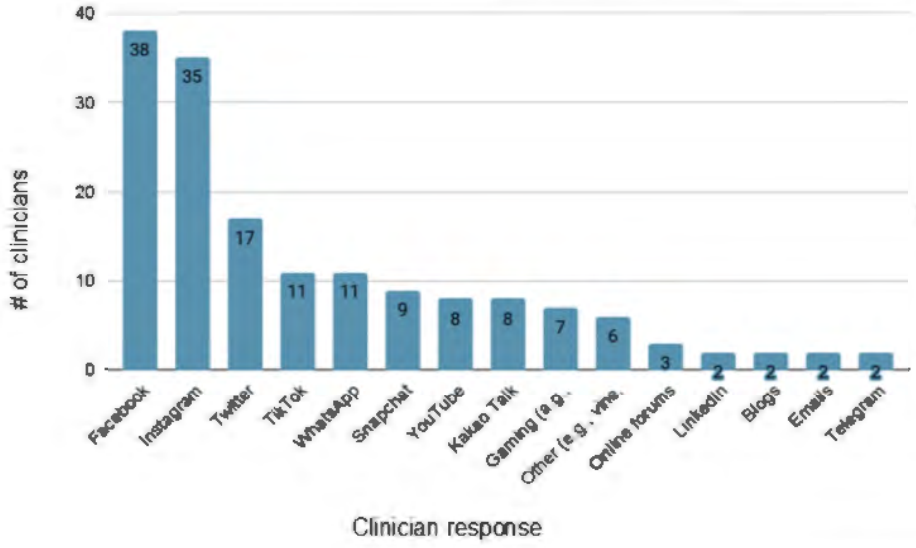
Findings did not differ by age of the patients clinicians in this sample treat

- Clinicians who treat youth patients vs. those who only treat adults had largely similar perceptions of social media's role in their patients mental health. Minor directional differences are noted below:

Role of Social Media	Frequency	Illustrative Quote
Major Factor	Some (Youth)	*"In some ways [social media] was the driving factor that prompted her to seek treatment in this particular case, so it was major in this particular case"*
	About half (Adult)	*"It's more a major factor actually. [Social media] was really feeding the insecurity and make things worse."*
Moderate Factor	About half (Youth)	*"I would say a moderate factor, because in a way that social media was the vehicle, but it could have been a different vehicle. This person could have become preoccupied with something, not through social media, but through something else."*
	Some (Adult)	
Exacerbator	About half (Youth)	*"Because it exacerbates some symptoms in particular that ADHD already causes, such as irritability and anxiety. The child becomes more hyperactive, more impulsive, and this disrupts social care, disrupts activities — exacerbates symptoms."*
	Some (Adult)	
Root Cause	Almost none (Youth)	*"As a vulnerable individual she has a predisposition to be very self-critical, to feel when she's going through a depressive period isolated, to feel less than, less competent, less functional than her peers. When she experienced a triggering event that was broadcast all over social media where she was publicly humiliated and shamed and felt that way, it really went to the heart of a lot of her interpersonal vulnerabilities."*
	A few (Adult)	

Data based on interviews conducted with 51 clinicians in the US/UK/BR/KD in Oct-Dec 2021

When asked what social media means to them, most clinicians in this sample say Facebook, Instagram, and Twitter.



"When you say social media, I think of Facebook, Instagram, Tik Tok, following bloggers, people posting about what's going on with their life, people following certain people, reading up on what's going on in other people's lives. That's what I think of."

"Social media is the use of websites like Facebook, Twitter, Instagram, and various postings that patients will do often including photos and emojis at times."

Data based on interviews conducted with 51 clinicians in the US/UK/KO/BR in Oct-Nov 2021

Most clinicians in this sample associate AR/VR with gaming; a few clinicians currently use AR/VR therapeutically

- Most clinicians typically associate AR/VR as a component of gaming
  - Some clinicians are concerned that AR/VR will exacerbate gaming addiction
  - A few clinicians are concerned some patients may struggle to parse out the difference between VR and reality, which they think may lead to distress or social isolation

- A few clinicians currently incorporate AR/VR in their clinical practice

Current therapeutic Uses	Illustrative Quotes
• Calming exercises and emotional regulation	*"I had one patient - an older gentleman - [using VR to] look at different photos of peaceful scenes, and then peaceful noises. So, that I encouraged."*
• Desensitize patients with anxiety and panic disorders	*"Virtual reality is being used in therapy to desensitize patients with anxiety disorders, etc. We actually have just presented at a virtual hybrid presentation about impact of virtual reality in treatment of mental health, and which is mainly anxiety, panic disorder."* *"I try to use VR to treat panic disorder patients."*
• Treat alcohol dependence	*"I am trying to treat alcohol with AR. I can show AR to alcohol patients. It will arouse the desire for alcohol for this person, and I can continue to train them to overcome this desire. There are things that can be done with VR, but it causes dizziness so there is a limitation to this. I am trying to use it as a treatment tool." - SK007*

Note: In KO, about half of clinicians in this sample are open to using AR/VR therapeutically in the future

Data based on interviews conducted with 51 clinicians in the US/UK/KO/BR in Oct-Nov 2021

About half of clinicians in the South Korean sample are willing to use AR/VR therapeutically in the future; Most currently associate AR/VR with gaming

- When asked, most South Korean clinicians were familiar with AR/VR, though a few were less confident about their understanding of AR
  - A few clinicians have seen or currently have patients who struggle with gaming addiction related to AR/VR
  - A few clinicians have discussed AR/VR with patients who experience dizziness during use

- When asked, about half of South Korean clinicians shared that they would be open to trying AR/VR therapeutically in the future

Ideas for Future Therapeutic Use of AR/VR	Frequency
•Assist in anxiety and emotion regulation	A few
•Use as meditation or sleep assistance	A few
•Help in exposure therapy to address trauma or fears	A few

Data based on interviews conducted with 12 clinicians in KO in Nov 2021

Although most clinicians in this sample think social media plays a moderate role in their patients' mental health, and can articulate that role, some don't have the technical knowledge to determine *why* and *how* it is playing a role.

	Lack of familiarity with social media *(stated or observed during interviews)**	**Mentioned need/desire to assess social media more in future**
Frequency	Some	A few
Illustrative Quotes	*"I wish I could tell you [how he was using social media]. I'm **so not familiar with it** and I don't remember what were the ones that they were using. They definitely were not on Facebook. This was a younger person, so it was probably Snapchat."* *"I am **not actively involved in Facebook or Twitter** or these things personally. So when I think of [social media], I think of Facebook and of some of the things that kids use, but I'm **not well versed** in all of the social media platforms."*	*"There are so many other things for me to ask and focus on that are more of that standard clinical interview that I don't focus on [social media] a lot. I do see that changing in the coming years when this is just going to turn into more of an issue and it's probably going to end up being in the DSM-6 or whatever comes out next."*

**Clinician familiarity on social media was assessed throughout the interview (e.g., ability to react to certain product features during the patient case exercises, self-reporting of social media use and familiarity, etc.). Data based on interviews conducted with 51 clinicians in the US/UK/KO/BR in Oct-Nov 2021*

Clinicians' perspectives: how they know social media use is problematic

Theme [Clinicians' Opinions]	Definition	Illustrative Quotes
Interferes with other aspects of regular functioning	Clinician views social media use as diminishing or interfering with patients' relationships, school, work, sleep, or social functioning	*"His wife is very frustrated with him because he spends every evening on either a computer looking at the Facebook posts, YouTube, video games, or ESPN games of different things. He could be laying down in the bed with the wife, but he's still on his mobile phone, so that is affecting his interpersonal relationship."*
Inability to control time spent on social media or stop use	Clinician determines that patient becomes unable to control time spent on social media (e.g., compulsive checking, mindless scrolling, excessive gaming)	*"But she told me that she felt she does too much time on TikTok. It takes away from her family, from her friends. She's always on TikTok. And she has felt it, her family, they felt it. She's addicted. She has to post on TikTok, and see all those videos. And things like this."*
Contributes to emotional suffering or distress	Clinician views social media as having a negative effect on patient's self-worth or mood (e.g., negative impact on self worth through constant negative social comparison)	*"So, slowly, I watched her become more isolated, and more addicted to the social media. Where she finally had brought it up to me that she's using it too much and she feels it's making her more depressed. The feeling of being left out, she calls it FOMO."*
Signs of dependence on social media	Clinician observes that patient exhibits signs of withdrawal - emotional distress, intense desire to use social media - when attempting to stop using social media	*"There is a sense of anger or suffering or irritability when you force them to stop, like withdrawal. Like if you cut the internet off or if you force them to stop, they will become very irritable, some of them become really angry and aggressive or violent."*

Data based on interviews conducted with 51 clinicians in the US/UK/KO/BR in Oct-Nov 2021

Most clinicians don't use social media professionally; for those that do, they mostly use it to connect with the general public

	Frequency	Product Affordances	How they use the product affordances	Illustrative Quotes	Opportunities *How Might We?*
Connect with general public	A few	Public comments/posts	Provides platform for clinicians to share evidence-based information about mental health risks, prevention, diagnoses, treatments, wellness; helps decrease stigma; provides counterpoint to misinformation	*"I have an Instagram account as a therapist, so sometimes I share things that are insights or I teach about concepts in mental health through my Instagram account. I don't actually tell my patients about it, but sometimes some of them find me."*	• Provide forums for clinicians to post authoritative information • Surface vetted clinician-produced content for people who need and/or want it • Reduce the reach of mental health-related misinformation
Connect with other clinicians	A few	Public comments, identity-based groups (e.g., clinician networks), private communication, reposting, like button/reactions	Provides a platform for communication and interaction with other clinicians to share and learn about new approaches, assessments, diagnoses, treatment modalities (including through case discussions)	*"I do belong to various psychiatric-related websites, like Psychiatric Times, Sermo, Doximity where I'll review articles, at times post comments if it's relevant or if I can contribute meaningfully, but I don't use those apps to communicate with patients at all."*	• Provide private and secure forums for clinicians to discuss cases and seek advice • Promote clinician groups to more clinicians

Data based on interviews conducted with 51 clinicians in the US/UK/KO/BR in Oct-Nov 2021

Illustrative quotes :

Quote 1:

Quote 2:

Almost all clinicians think social media can be "addictive," and some mentioned that a related diagnosis is likely to be included in the next editions of prominent diagnostic manuals (DSM-6; ICD-11)

	Said that social media can be "addictive"	Said Related Diagnosis* is Likely
Frequency	Almost all	Some
Illustrative Quotes	*"However, having worked in a dual diagnosis treatment setting for so many years and being particularly focused on addictive disorders, in my thinking, I think so much of it, it is so consistent with other forms of addiction. Typically, it's the loss of control of use of something with respect to social media. Typically, it's checking. It's checking, repeated checking of phone, of email, of text. The immediate gratification that comes or the need to respond in real time immediately. So the loss of control, it's a lot of times spent on the device or coping with the consequences of their use. Sometimes guilt associated with their use. It's fundamentally a loss of control and then, sometimes a negative impact on their functioning in other life areas. Giving up other role obligations because they spend all the time on the internet or with social media. It's the fallout from their use in their relationships lots of times because of overuse. A lot of the symptoms are consistent with a lot of the DSM criteria for alcohol and other addictive drug use and problems."*	*"So we don't have one now, in (DSM) 5, but there is a proposal, for internet use disorder, and I think by the time we get to (DSM) 6, it'll be in there, for social media, yeah, or probably more likely, internet use. The research will catch up by then."*

*Either social media-specific or related to internet use more generally; data based on interviews conducted with 51 clinicians in US/UK/KO/BR in Oct/Nov 2021

Most clinicians in this sample think most aspects of social media can play both a beneficial and detrimental role, depending on the pathway (1 of 2)

Affordances & Pathways

Product Affordance[1]		Pathways	
Internal Name	*Description*	**Beneficial**	**Detrimental**
Groups	*Ability to join interest or identity-based groups*	- Facilitates give/get of support/validation for patients' mental health challenges - Normalizes mental health challenges and associated experiences - Enables connection with others with similar mental health challenges - Encourages patient to seek mental health care - Enables access to information about mental health diagnosis/treatment - Enables patient to meet/connect with others who share similar interests - Positively affects patients' self-esteem via learning (info, skills)	-Enables encouragement of unhealthy eating disorder-related behaviors (i.e., pro-ana/pro-mia groups) -Enables spread of mental health-related misinformation -Interferes with offline social functioning via over-identification with group peers -Enables bullying/harassment -Negatively affects patients' sense of self worth via problematic groups
Reactions	*Ability to give/get reactions/feedback*	-Positively affects patients' self-esteem via facilitating positive feedback -Enables lightweight way for patients to connect w/ (esp for anxious patients)	-Negatively affects patients' self worth when don't receive pos/"enough" feedback -Detracts from patients' ability to control the amount of time spent
Public comments/ posts	*Ability to communicate with others publicly*	-Enables patients to find/meet/connect w/ others over shared passions/interests -Offers anxious patients ability to communicate more easily -Provides patient with employment/income opportunity -Increases the patient's self-esteem/confidence via positive feedback	-Encourages negative comparison of patient with others -Negatively affects patients' sense of self worth via neg. posts about them -Interferes with offline social functioning -Enables public bullying/harassment -Contributes to patients' feeling of not belonging and missing out -Allows patient to act out obsessive following of others' lives (e.g., stalking) -Facilitates unhealthy, online, relationships via constant availability -Detracts from patients' ability to control amount of time spent
Tagging	*Ability to reference others/be referenced*	-Enables lightweight way for patients to connect with friends / family (esp. for anxious patients)	-Contributes to patients' feeling of not belonging and missing out -Negatively affects patients' feeling of self worth via FOMO -Enables bullying/harassment -Detracts from patients' ability to control the amount of time spent
Filters/Photo-editing	*Ability to edit videos/images to change appearance*	*(seen as beneficial, but no product-specific articulated pathway)*	-Negatively affects patients' sense of self worth via repeated negative social comparison -Creates unrealistic appearance expectations that facilitate repeated negative social comparison -Triggers negative patterns of thinking for patients experiencing body dysmorphia

[1] Ordered by frequency: # of clinicians who reported the affordance was clinically relevant

Data based on interviews conducted with 51 clinicians in the US/UK/KO/BR in Oct-Nov 2021

Most clinicians in this sample think most aspects of social media can play both a beneficial and detrimental role, depending on the pathway (2 of 2)

Affordances & Pathways

Product Affordance[1]		Pathways	
Internal Name	*Description*	**Beneficial**	**Detrimental**
NUF Signals (blocking)	*Ability to customize who can see/engage with one's content*	-Enables patients to feel in more control over their online experiences/relationships -Enables patient to remove self from toxic environment (e.g., block toxic person), and create healthy online boundaries	-Increases rumination after being blocked by others -Negatively affects patients' sense of self worth when blocked by others -Interferes with offline social functioning via disconnect between online/offline boundaries
Push notifications	*Ability to receive pop-up messages re: new activity*	*(seen as beneficial, but no product-specific articulated pathway)*	-Triggers anxiety (i.e., FOMO) -Detracts from patients' ability to control the amount of time spent -Interferes with offline social functioning via interruption of offline interactions
Private comments/ posts	*Ability to communicate privately with family/friends*	-Enables patient to connect/reconnect with friends and family with greater ease and privacy -Facilitates patients getting support related to their mental health challenges	-Enables bullying/harassment -Negatively affects patients' sense of self worth via negative posts about them -Interferes with offline social functioning via spillover from online conversations -Creates over reliance on private messaging for communication -Gives patient a sense of being excluded/left out/"FOMO" -Enables unhealthy online relationships via constant availability
Screen-time controls	*Ability to see/set limit for time spent*	-Helps patients set intentions/build awareness/monitor/structure for time spent -Helps patients interrupt long periods of time spent	*None identified*
Autoplay	*Ability for videos to play automatically*	*None identified*	-Detracts from patients' ability to control amount of time spent
Swipe-ups	*Ability to easily click on ads to buy things*	-Reminds patients to, and/or elicits interest in, taking pharmacologic treatment	-Facilitates compulsive shopping
Ephemeral content	*Ability to create content that disappears after set time*	-Enables lightweight/low-pressure way for anxious patients to connect with friends / family	-Enables bullying/harassment -Hinders ability to report/document bullying/harassment
Re-posting	*Ability to share and circulate others' content*	-Enables lightweight way for patients to connect/reconnect with friends and family (esp for anxious patients) -Offers patients distraction from challenges/stressors	-Negatively affects patients' sense of self worth when posts are negative/disparaging -Enables bullying/harassment

[1] Ordered by frequency: # of clinicians who reported the affordance was clinically relevant

Data based on interviews conducted with 51 clinicians in the US/UK/KO/BR in Oct-Nov 2021

[WIP] Triangulating across primary clinician-identified product affordances, pathways, and treatment approaches, key potential opportunity areas emerge (1 of 2)

Potential Opportunity Area	Existing Products	*How Might We? [mapping to the well-being product strategy framework]*	
		Amplification	**Support & Resources**
Help people set intentions/use tools to create personalized limits for how much time they spend on social media	• Your Time on Facebook • Your Time (IG) • Take a Break (IG)	• Consider restricting autoplay or defaulting it to "off" for youth	• Upsell existing time management tools • Educate users and clinicians about existing time management tools • Help people set and/or reflect on intentions for why they are using social media and what they're getting out of use • Nudge people to take breaks from social media use • Introduce friction to interrupt long periods of use • Help people get positive social feedback for taking breaks • Enable people to turn off autoplay
Help people set intentions/use tools to create boundaries on social media and between online and offline lives	• NUF Signals: block, unfriend, restrict, mute, etc • Daisy controls • Notifications settings • Privacy settings	• Consider restricting notifications or defaulting them to "off" for youth	• Upsell notifications settings • Educate users and clinicians about existing tools to customize notifications • Educate users and clinicians about the existence of NUF signals • Educate users and clinicians about the existence of Daisy controls • Encourage people (via opt-out settings) to restrict notifications at certain times (e.g., at night) • Encourage people to set a "do not disturb" status • Enable people to control whether they can be tagged in others' posts • Encourage people to control whether or not they receive and/or see others' reactions to their posts (expansion of Daisy controls) • Encourage people to control whether others can share their content • Make NUF signals easier to access and use • Enable people to control whether they see/can engage with swipe-ups

Data based on interviews conducted with 51 clinicians in the US/UK/KO/BR in Oct-Nov 2021

[WIP] Triangulating across primary clinician-identified product affordances, pathways, and treatment approaches, key potential opportunity areas emerge (2 of 2)

Potential Opportunity Area	Existing Products	*How Might We? [mapping to the well-being product strategy framework]*	
		Amplification	Support & Resources
Help people connect: in lightweight ways, with others experiencing MH challenges, and face-to-face	Groups		▪ Provide low-effort (non-evaluative) tools for people show others they are thinking about them • Facilitate face-to-face interactions and activities • Help people find and connect with others who share similar MH challenges
Connect people with authoritative information about MH via clinicians/others	Emotional Health Hub		• Upsell and educate users and clinicians about existing informational resources ▪ Help people find MH clinicians who are providing information about MH prevention and treatment • Help people find authoritative information about MH prevention and treatment
Promote beneficial norms (e.g., normalize/validate MH challenges) and build awareness of detrimental norms (e.g., curated self-presentation)		• Promote body positivity or appearance-neutral content and creators	• Educate users about curated aspects of social media (e.g., filters on images) • Help normalize the experience of having MH challenges ▪ Help people be more aware of curated aspects of social media (e.g., filters on images) • Limit low-effort, in-app image-editing capabilities associated with body distortions ("waist-slimming")
Continue to invest in reducing bullying and harassment; ensure violating ephemeral content is documentable/reportable	Restrict	▪ Enable people to document ephemeral content that they report as bullying or harassment	▪ Educate users that bullying/ harassment policy applies to ephemeral content
Ensure algorithmic ranking/recommendations don't promote MH-related detrimental content		• Identify when people are engaging problematically with ads and add friction ▪ Ensure ranking/recommendations do not promote MH-related misinformation	

Data based on interviews conducted with 51 clinicians in the US/UK/CA/BR in Oct-Nov 2021

Deep Dive by Product Affordance

BENEFICIAL

Clinicians primarily discussed the ability to see and monitor time spent on social media as having a beneficial effect on their patients' mental health challenges

Product Affordance	Pathway (why/how) to affecting mental health	Frequency of pathway*	Illustrative Quotes
The ability to see and/or set a limit for the **amount of time spent** on social media (e.g., screen time controls)	• Helps patients set intentions, build awareness, monitor, and provide structure for social media use • Helps patients interrupt long periods of use	Almost half	*"I've worked with adult patients who like that control, so that they can stop themselves from doing anxious searching or stop themselves from spending too much time on it."* *"It is a gentle way of helping them to regain a sense of structure. For example, it's well know that in casinos there is never a clock. You never see a clock in a casino. That's done by design because the casino owners do not want people timing themselves or having the idea I've been in here too long. My thinking is that [screen time control] is positive because it adds structure."*
	• Generally beneficial (no articulated pathway)	Some	

Summary slide of affordances & pathways

** Among clinicians who evaluated the product affordance based on clinical experiences; data based on interviews conducted with 51 clinicians in the US/UK/KO/BR in Oct-Nov 2021*

Detrimental

Clinicians primarily discussed autoplay as having a negative effect on patients' mental health challenges

Product Affordance	Pathway (why/how) to affecting mental health	Frequency*	Illustrative Quotes
Ability for **videos play automatically** without pressing a play button (i.e., autoplay).	• Detracts from patients' ability to control amount of time spent	Most	*"I had a client who was really involved with TikTok and she got sucked into this hole of videos and hated it. It feels hard. She didn't have a social media addiction per se. She said, 'if I'm in a sad mood, sometimes it's okay for me to just watch a couple of TikToks and feel better'. But she's like, 'then it will feel like an hour or two hours have gone by because these videos are just playing automatically"*
	• Generally harmful (no articulated pathway)	A few	

Summary slide of affordances & pathways

** Among clinicians who evaluated the product affordance based on clinical experiences; data based on interviews conducted with 51 clinicians in the US/UK/KO/BR in Oct-Nov 2021*

BOTH

While most clinicians perceive the ability to join identity-based groups as having a positive effect on their patients' mental health challenges, a few identified negative effects

Summary slide of affordances & pathways

Product Affordance	Pathway (why/how) to affecting mental health	Frequency*	Illustrative Quotes
The ability to search for, join, and participate in **groups or forums that are organized around a specific topic**, or **characteristic** (e.g., a group for people who experience a mental health challenge or a hobby)	• Facilitates give/get of support and validation for mental health challenges patients face • Normalizes mental health challenges and associated experiences • Enables connection with others with similar mental health challenges • Encourages patient to seek mental health care • Enables access to information about diagnosis, treatment for mental health challenges	About half	*"So how it came to be was that patients have been using this [Facebook group] prior to coming to get seen in our office and ultimately, meeting with me, but basically, it seems like one of the other people have been mentioning on the group that maybe they should go to the healthcare professional, mainly a psychiatrist to evaluate things and consider pharmacologic agents just because she was experiencing a bit more distress in her life, like I said, both at work and in the social sphere."*
	• Enables patient to meet/connect with others who share similar interests • Positively affects patients' self-esteem via learning (info, skills)	Some	*"He told me that he was involved in a Facebook group that's related to the history of a city, and he told me that he was very involved in the site and became kind of a leader. He was very well known on the site and contributing to the content in a way that was meaningful to him."*
	• Generally beneficial (no articulated pathway)	Some	
	• Enables encouragement of unhealthy eating disorder-related behaviors (i.e., pro-ana/pro-mia groups) • Enables spread of mental health-related misinformation • Negatively affects patients' sense of self-worth via problematic content • Interferes with offline social functioning via overidentification with group peers	A few	*"The chatrooms, so the ones I know about, pro-ana and pro-mia. I'm well aware of those sites and they are really detrimental promoting very seriously anorexic young people as having positive body image and encouraging young people to be anorexic. So I think they're highly detrimental."*
	• Enables bullying/harassment • Negatively affects patients' sense of self worth (or adds distress)	Almost none	*"A young person, an adolescent with autism who has a very specific interest, who got onto a chat room about that interest and then became distressed about some of the things that was said in the chat room."*

** Among clinicians who evaluated the product affordance based on clinical experiences; data based on interviews conducted with 51 clinicians in the US/UK/CA/BR in Oct-Nov 2021*

Quote 1:
Quote 2:
Quote 3:
Quote 4:

Quote 4:

BOTH

Clinicians discussed the ability to provide quick reactions/feedback as having both positive and negative effects on their patients' mental health

Product Affordance	Pathway (why/how) to affecting mental health	Frequency*	Illustrative Quotes
The ability to give and receive **quick reactions**, or feedback on, people's posts, comments, videos, and pictures (e.g., click "like" or "angry face" on a picture someone posts)	• Negatively affects patients' sense of self worth when negative/not "enough feedback received	Some	*"If a patient doesn't get a lot of likes and not a lot of messages, they can consider it a failure that nobody likes them, so it can be negative connotation."*
	• Detracts from patients' ability to control the amount of time spent	Almost none	*"With so many of my patients who have problems of this nature, it's a matter of explaining to them that delayed gratification is always better. If you respond automatically, then that way, problems lie."*
	• Generally harmful (no articulated pathway)	A few	
	• Positively affects patients' self-esteem via facilitating positive feedback	A few	*"I've talked about it in a positive way other than maybe in the case of the individual that I told you about where part of the way she monitors her progress is how people contribute back either with likes or with comments about how well their products and services are helping them."*
	• Enables lightweight way for patients to connect / reconnect with friends and family (esp for anxious patients)	Almost none	*"There are some people who might be a little more shy or nervous to react to people or to interact with people. And being able to just send a little smiley face or a fire emoji or something, it's like as a way of initiating the social contact in a very low-stakes way I think is beneficial for those people."*
	• Generally beneficial (no articulated pathway)	Almost none	
	• Both harmful and beneficial (no articulated pathway)	A few	

** Among clinicians who evaluated the product affordance based on clinical experiences; data based on interviews conducted with 51 clinicians in the US/UK/KO/BR in Oct-Nov 2021*

Clinicians discussed tagging as having both negative and positive effects on patients' mental health challenges

BOTH

Summary slide of affordances & pathways

Product Affordance	Pathway (why/how) to affecting mental health	Frequency*	Illustrative Quotes
Being able to **reference** others or being referenced, in posts, images, or videos (e.g., tagging someone, or being tagged, in a photo)	• Contributes to patients' feeling of not belonging and missing out • Negatively affects patients' sense of self worth via FOMO • Enables bullying/harassment	Some	*"It can cause a lot of drama especially for young people. Who posted what? Were they tagged? Why was I not tagged? There could be a lot of meaning attached to it in terms of, am I important to this person or not?"*
	• Generally harmful (no articulated pathway)	A few	
	• Enables lightweight connection with friends / family (esp for anxious patients)	Almost none	*"Again, in some ways, it can be a way that people can have that step in the door. A very easy way to step in the door for social interaction. You don't have to all out start a conversation but it could be a way of showing someone, hey, I'm thinking about you, I like you or I want to be your friend in a low-stakes way. So in that way, it's helpful."*
	• Generally beneficial (no articulated pathway)	Some	
	• Both beneficial and harmful (no articulated pathway)	A few	
	• No effect on patient's mental health	Almost none	

** Among clinicians who evaluated the product affordance based on clinical experiences; data based on interviews conducted with 51 clinicians in the US/UK/KQ/BR in Oct-Nov 2021*

Quote 1:

BOTH

Clinicians discussed the ability to communicate publicly as having both positive and negative effects on their patients' mental health (continued on next slide)

Product Affordance	Pathway (why/how) to impacting mental health	Frequency of pathway*	Illustrative Quotes
The ability to **communicate** thoughts and reactions **publicly** (including with family and friends)	• Generally harmful (no articulated pathway)	Some	
	• Encourages repeated negative social comparison • Negatively affects patients' sense of self worth via repeated negative social comparison • Interferes with offline social functioning when posts are negative/disparaging	Some	*"Her appearance and how she's portraying herself on social media was really important to her in terms of she's always comparing herself to others and always looking to be evaluated by others. Also, who is commenting, who's not commenting, who has seen it, is she getting modeling gigs from it and how it's being received by others. She wanted to prove herself to them."*
	• Enables public bullying/harassment • Contributes to patients feeling of not belonging and missing out	A few	*"But, a relevant piece of the puzzle as to what was causing the suffering that she told me about at the time of presentation was that members of her family who lived in other states were actually posting unflattering information about her on Facebook."*
	• Allows patient to act out obsessive following of others' lives (e.g., stalking) • Facilitates unhealthy, online, relationships via constant availability • Detracts from patients' ability to control amount of time spent via endless content	Almost none	*"So for the last 15 minutes we've been talking about the comments on his page, somebody you don't even know. You know, it just became like it was almost real. So the comments that he would read, because it's all there in public, didn't help anything."*

** Among clinicians who evaluated the product affordance based on clinical experiences; data based on interviews conducted with 51 clinicians in the US/UK/KO/BR in Oct-Nov 2021*

Quote 1:

Quote 2:

Quote 3:

BOTH

Clinicians discussed the ability to communicate publicly as having both positive and negative effects on their patients' mental health

Product Affordance	Pathway (why/how) to affecting mental health	Frequency of pathway*	Illustrative Quotes
The ability to **communicate** thoughts and reactions **publicly** (including with family and friends)	• Increases the patient's self-esteem/confidence via positive feedback	A few	*"Yes, I have some artist patients who are doing Instagram. I think at my encouragement even to make an artist page and can post what they've done since day 1, so like, have a website or sell something so to start posting some of the projects that they're proud of. So in that way, I think it's a really nice thing and it gives them a little job to do and just feel like they're working towards their career and all of that too."*
	• Enables patients to find others who share their passions • Offers anxious patients ability to communicate more easily • Provides patient with employment/income opportunity	A few	*"I have a patient that's a young girl, she has generalized anxiety disorder. And one of the ways that - she doesn't like to go out a lot, she wanted to make some money, she used to dance. And now she does all of these Tik Tok videos. And she's like, I guess, what do you call it, an influencer? And so for her, it's been something positive."* *"There can also be positive ways that people edify and uplift each other and share information publicly. For example, if a well known person has passed on and you want to show empathy and support you can post those remarks on a public platform, and many people do."*
	• Generally beneficial (no articulated pathway)	Almost none	

** Among clinicians who evaluated the product affordance based on clinical experiences; data based on interviews conducted with 51 clinicians in the US/UK/KQ/BR in Oct-Nov 2021*

BOTH

Clinicians primarily discussed communicating privately with family/friends as having a positive effects on their patients mental health, but some identified ways it can have a negative effect on patients' mental health challenges

Product Affordance	Pathway (why/how) to affecting mental health	Frequency of pathway*	Illustrative Quotes
The ability to **communicate privately** with family and friends (e.g., send private messages, share videos and images).*	• Enables patient to connect/reconnect with friends and family with greater ease and privacy • Facilitates patients getting support re: mental health challenges	Some	*"Actually, it has come up as in I've texted or I've sort of communicated with a friend or a family and got support."*
	• Generally beneficial (no articulated pathway)	Some	
	• Enables bullying/harassment • Negatively affects patients' sense of self worth • Interferes with offline social functioning via bullying	A few	*"A young middle-aged male who befriended someone through a chat room a female, and he's in the process of being blackmailed at the moment as a result of thoughts and comments that he shared with this individual. Now, the case has been turned over to the police who are investigating it, but he has been left being actually very sensitive and very damaged by the experience. So I'm treating him at the moment for depression and anxiety related to that encounter. You know, this sort of thing is not uncommon now."*
	• Creates over reliance on private messaging for communication	A few	*"Harmful in the sense that it's kind of potentially impeding their ability to feel like they can trust others to speak out loud and that they can only talk through the social media platform."*
	• Gives patient a sense of being excluded/left out/"FOMO" when recognizing others are communicating without them	A few	*"Sometimes people start having side conversations where they're trashing a family member or a friend member. While they have some privacy in doing that it often ends up making people in the group, including patients at times, suspicious or anxious about whether people are talking about them behind their back, so to speak."*
	• Enables unhealthy, online relationships via constant availability	A few	*"And then, with one of her online friends, she began to take on this caregiving role. It was a guy who's in London... And there would be times he would message her on this app and he would tell her 'I'm feeling really depressed, I'm thinking about killing myself,' and she would talk to him through it and it would be 3:00 a.m. or 4:00 a.m. US time. I mean, it became a really difficult situation for her."*

** Among clinicians who evaluated the product affordance based on clinical experiences; data based on interviews conducted with 51 clinicians in the US/UK/KO/BR in Oct-Nov 2021*

Quote 1:

Quote 2:

Quote 2: "With him, I'm trying to think what particular again, it was that chat was sort of playing a part and being part of groups where there could almost be a sort of bullying element if you didn't conform to a certain behavior, look, mixture of things. So Snapchat more"

Quote 3:

Quote 4:

Quote 5:

BOTH

Clinicians primarily discussed image editing as having a negative effect on patients' mental health challenges, but a few said it can also have a positive effect

Product Affordance	Pathway (why/how) to affecting mental health	Frequency*	Illustrative Quotes
The ability to **edit videos or images** to change one's or others' appearance (e.g., photo filters)	• Negatively affects patients' sense of self worth • Increases emotional distress by creating unrealistic body expectations that facilitate negative social comparison • Triggers negative patterns of thinking for patients experiencing body dysmorphia	Some	*"It gives people a distorted version of reality, which then is what happens with all the pictures in the media that are distorted and made to look so much better than they are. And then people have these inaccurate depictions of body image and then it affects self-image."*
	• Generally harmful (no articulated pathway)	A few	
	• Both beneficial and detrimental (no articulated pathway)	A few	

** Among clinicians who evaluated the product affordance based on clinical experiences; data based on interviews conducted with 51 clinicians in the US/UK/KQ/BR in Oct-Nov 2021*

BOTH

Clinicians discussed the ability to share and circulate others' content as having both positive and negative effects on their patients' mental health

Product Affordance	Pathway (why/how) to affecting mental health	Frequency*	Illustrative Quotes
The ability to **share and circulate** other people's posts, images, and video	• Negatively affects patients' sense of self worth via disparaging/negative posts about them • Enables bullying/harassment	Some	*"I think it's something about, on Instagram and TikTok for example, you get likes and you know how many times you've been shared or content has been shared. So those metrics around interaction actually calling it a metric like measurement about how many people interact with you or not, I think made it a place where she could the more kind of maladaptive aspects of her evaluating herself could jump out more."*
	• Generally harmful (no articulated pathway)	A few	
	• Enables lightweight way for patients to connect/reconnect with friends and family (esp for anxious patients) • Offers patients distraction from challenges/stressors	A few	*"I had a patient who had posted something about their grandmother that died and somebody shared it. And that person was able to - the person that they shared it with was able to give them some information about their grandmother when they were a child, which made my patient super happy."*
	• Generally beneficial (no articulated pathway)	A few	
	• Both harmful and beneficial (no articulated pathway)	A few	

** Among clinicians who evaluated the product affordance based on clinical experiences; data based on interviews conducted with 51 clinicians in the US/UK/KQ/BR in Oct-Nov 2021*

Clinicians primarily discussed push notifications as having a negative effect on patients' mental health challenges, but a few said they can have a positive effect

BOTH

Product Affordance	Pathway (why/how) to affecting mental health	Frequency*	Illustrative Quotes
Receiving **pop-up messages** on one's phone alerting one to new activity on a social media app (e.g., notification that someone messaged you or reacted to one of your photos)	• Contributes to inability to control time spent on social media	About half	*"That's the dangerous thing where it just keeps pulling you back. They want your eyes back on the app, and that can be very distracting. [For] attention deficit disorder patients (kids who are struggling to concentrate), depressed [patients], those things are pulling them away from what they need to do."*
	• Triggers anxiety (i.e., FOMO) • Interferes with offline social functioning	A few	*"She was just generally very anxious, worried, fearful every time she would hear the bell or whatever that she was getting another post on Facebook or another email that would sort of trigger an alarm or a fear reaction."*
	• Generally harmful (no articulated pathway)	A few	
	• Both beneficial and detrimental (no articulated pathway)	A few	

** Among clinicians who evaluated the product affordance based on clinical experiences; data based on interviews conducted with 51 clinicians in the US/UK/KO/BR in Oct-Nov 2021*

BOTH

Clinicians discussed the ability to create and share content that disappears after a set time as having both positive and negative effects on their patients' mental health

Product Affordance	Pathway (why/how) to affecting mental health	Frequency of pathway*	Illustrative Quotes
The ability to create, share, and see posts, images, or videos that **disappear** after a certain amount of time (e.g., 24 hours)	• Allows patient to connect/share information with friends and family, as ephemeral content increases the ease of connection for patients who are anxious about social interaction	Some	*"I think it's good in a way because you know if it's something you don't like, it's going to be gone. I think it pushes people to be more connected."*
	• Generally beneficial (no articulated pathway)	Some	
	• Enables increased bullying/negative behaviors (e.g., inappropriate pictures/ harassment) • Increases emotional distress when trying to report harassment received via ephemeral content, due to lack of documentation	Some	*"I was doing a report on someone for psychological damage because he couldn't prove the allegation against him, because of the disappearance of the image and text. It damaged him."*
	• Generally harmful (no articulated pathway)	A few	

** Among clinicians who evaluated the product affordance based on clinical experiences; data based on interviews conducted with 51 clinicians in the US/UK/KO/BR in Oct-Nov 2021*

BOTH

Clinicians discussed the ability to easily click on ads to buy things as having both positive and negative effects on their patients' mental health

Product Affordance	Pathway (why/how) to affecting mental health	Frequency of pathway*	Illustrative Quotes
The ability to very **easily engage with ads to buy things** (e.g., links that take you to a site to buy a recommended product)	• Facilitates compulsive shopping	Some	*"I suppose that consistently comes up. I can think of it in relation to one client where we're talking about retail buying type addiction and in which case that was very prevalent… This has drawn a lot of people in general during the last couple of years to more impulsive buying, which can lead to even further issues."*
	• Both harmful and beneficial (no articulated pathway)	A few	
	• Reminds patients to, and/or elicits interest in, taking medication related to their mental health challenges	A few	*"It may jumpstart people's interest in potentially taking pharmacologic agents."*
	• Generally beneficial (no articulated pathway)	A few	
	• No effect on mental health	A few	

** Among clinicians who evaluated the product affordance based on clinical experiences; data based on interviews conducted with 51 clinicians in the US/UK/KQ/BR in Oct-Nov 2021*

BOTH

Clinicians primarily discussed the ability to customize who can see and engage with one's content as having a positive effect on patients' mental health challenges, but a few said it can have a negative effect

Product Affordance	Pathway (why/how) to affecting mental health	Frequency of pathway*	Illustrative Quotes
Being able to **customize who can see and engage** with one's posts, images, and videos (e.g., blocking, unfriending)	• Enables patients to feel in more control over their experiences/relationships on social media • Enables patient to remove self from toxic environment (e.g., block toxic person)	About half	*"I think blocking's good. I think my patients think it's useful because they're able to kind of be out of sight, out of mind."* *"I have had some situations where a patient has been harassed in a relationship in which they've had to block and cut off a connection with an individual because they were being harassed in various ways and it was having negative consequences."*
	• Generally beneficial (no articulated pathway)	A few	
	• Both harmful and beneficial (no articulated pathway)	Almost none	
	• Increases rumination after being blocked by someone else • Negatively affects patients' sense of self worth (or adds distress) • Interferes with offline social functioning	Almost none	*"Came up because of a particular example with a friend who was it had to do with Facebook and being unfriended by a friend, that kind of thing. And the patient's also trying to decide to cut off certain connections via Facebook. Friending and unfriending and unfriending people and kind of cancelling."*

** Among clinicians who evaluated the product affordance based on clinical experiences; data based on interviews conducted with 51 clinicians in the US/UK/KO/BR in Oct-Nov 2021*

Many clinicians also identified pathways by which social media *in general* plays a role in their patients' mental health, without linking them to specific product affordances

Primary Pathways Associated with General Social Media Use (primary= discussed/evaluated by at least a few clinicians)	**Frequency***
• Detracts from patient's ability to control time spent • Increases isolation and dependence on social media for connection • Facilitates repeated negative social comparison • Negatively affects patients' sense of self worth • Promotes dependence on social media for validation	About half
• Enables patients to connect with community/family • Enables deeper connection rooted in shared experiences	A few

** Data based on interviews conducted with 51 clinicians in the US/UK/KO/BR in Oct-Nov 2021*