Social comparison: Topics, celebrities, Like counts, selfies

This document from Facebook researchers, posted in January 2021 on an internal company site, discusses survey results and other data about "social comparison" by users of Instagram. In the document, the names of Facebook employees whose names appear in the documents have been redacted, excepting only the most senior. Every named person has been contacted and given an opportunity to comment. Third-party images that aren't directly relevant to the research have been pixelated. And some title pages were modified to remove extraneous material.

Social comparison: Topics, celebrities, Like counts, selfies

Here are results from a 100,000-person social comparison survey in nine countries matched with behavioral data. Controlling for demographics, people feel more negative comparison after greater exposure to fashion posts, high Like counts on others' posts, celebrities' polished content in Feed, and selfies (particularly filtered ones).

They feel better (more inspired) after seeing posts about gratitude, community, vulnerability, and pride. Surprisingly, they also feel inspired by workout posts (rather than negative comparison, as they do for fashion posts). They feel inspired by celebrity content in Stories, which is less polished and doesn't have Like counts. We identify specific celebrities whose followers have higher levels of negative comparison for partnership opportunities.

w/ ▁▁▁▁, ▁▁▁▁, ▁▁▁▁, ▁▁▁▁, ▁▁▁▁▁▁

Social comparison on Instagram

Results from a 100k-person survey + behavioral data

▁▁▁▁▁▁ & ▁▁▁▁▁, Core Data Science
with support from ▁▁▁▁ ▁▁▁▁▁ ▁▁▁▁ and ▁▁▁▁

Social Comparison on IG - CDS analyses
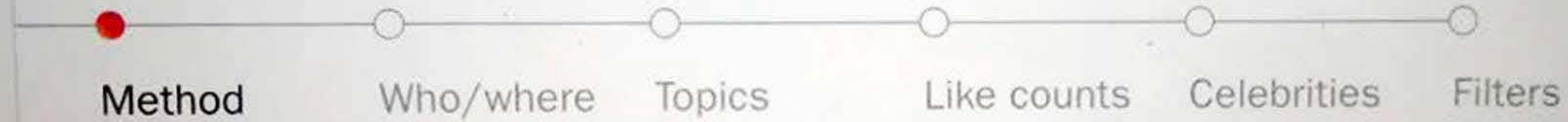Google Drive

Social comparison on Instagram

Results from a 100k-person survey + behavioral data

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with support from ██████████, ████████████, ████████████, and ████████████

Outline

Social comparison research

Method   Who/where   Topics   Like counts   Celebrities   Filters

Survey of 100k people, March & April 2020

Countries: Australia, US, Brazil, Korea, Japan, India, Germany, France, Great Britain
(full survey text)

Joined responses with behavioral data

Time spent by surface, like counts seen, keywords in caption text, celebrities seen, use of filters . . . (code listing all features)

Collected data longitudinally from same people; about 100k took first wave and 15k returned for a second wave. For the most part we'll report cross-sectional results from Wave 1 unless otherwise noted.

This is a method that Justin and I use a lot -- survey a large # of people, and then pull thousands of pieces of data from behavioral logs to understand what kinds of experiences on IG are associated with people's feelings.

We're sharing the results of our social comparison survey today, and we're currently running a survey specifically about body image and appearance-based comparison and working on the same kind of analysis...

Negative social comparison scale (a=0.80)

1. How bad, if at all, do you feel about yourself because of other people's posts on Instagram?

2. How often do you feel discouraged about your own life after seeing others' accomplishments on Instagram?

3. How often do you feel like you are not as successful or attractive as other people you see on Instagram?

Positive social comparison scale (a=0.70)

1. How good, if at all, do you feel about yourself because of other people's posts on Instagram?

2. How often do you feel encouraged about your own life after seeing others' accomplishments on Instagram?

3. How often do you feel inspired or motivated in your life after seeing other people on Instagram?

(full survey text)

Most of what we'll share today is based on these two sets of questions. There were other questions that I'll share briefly when I go over initial survey results.
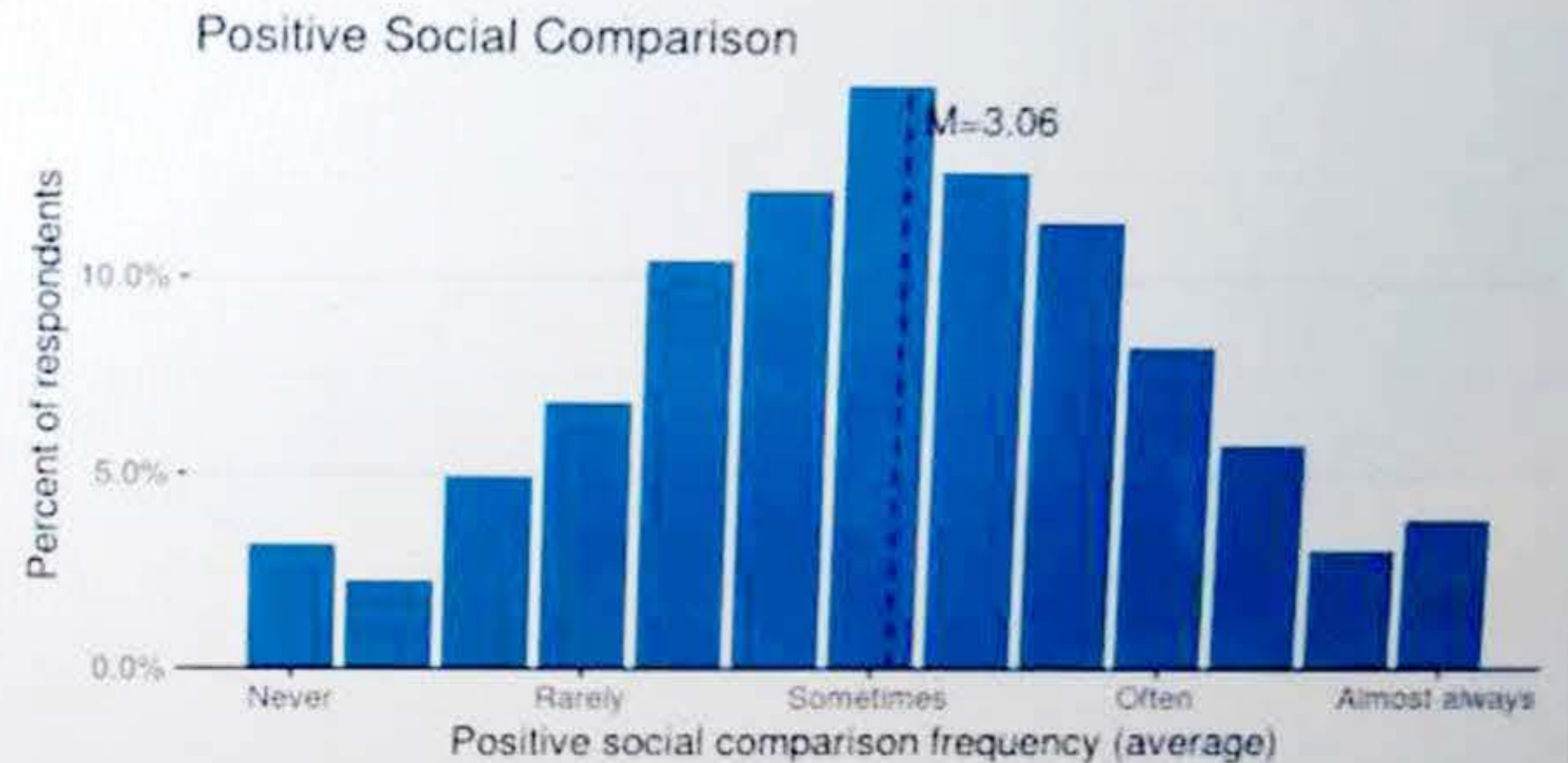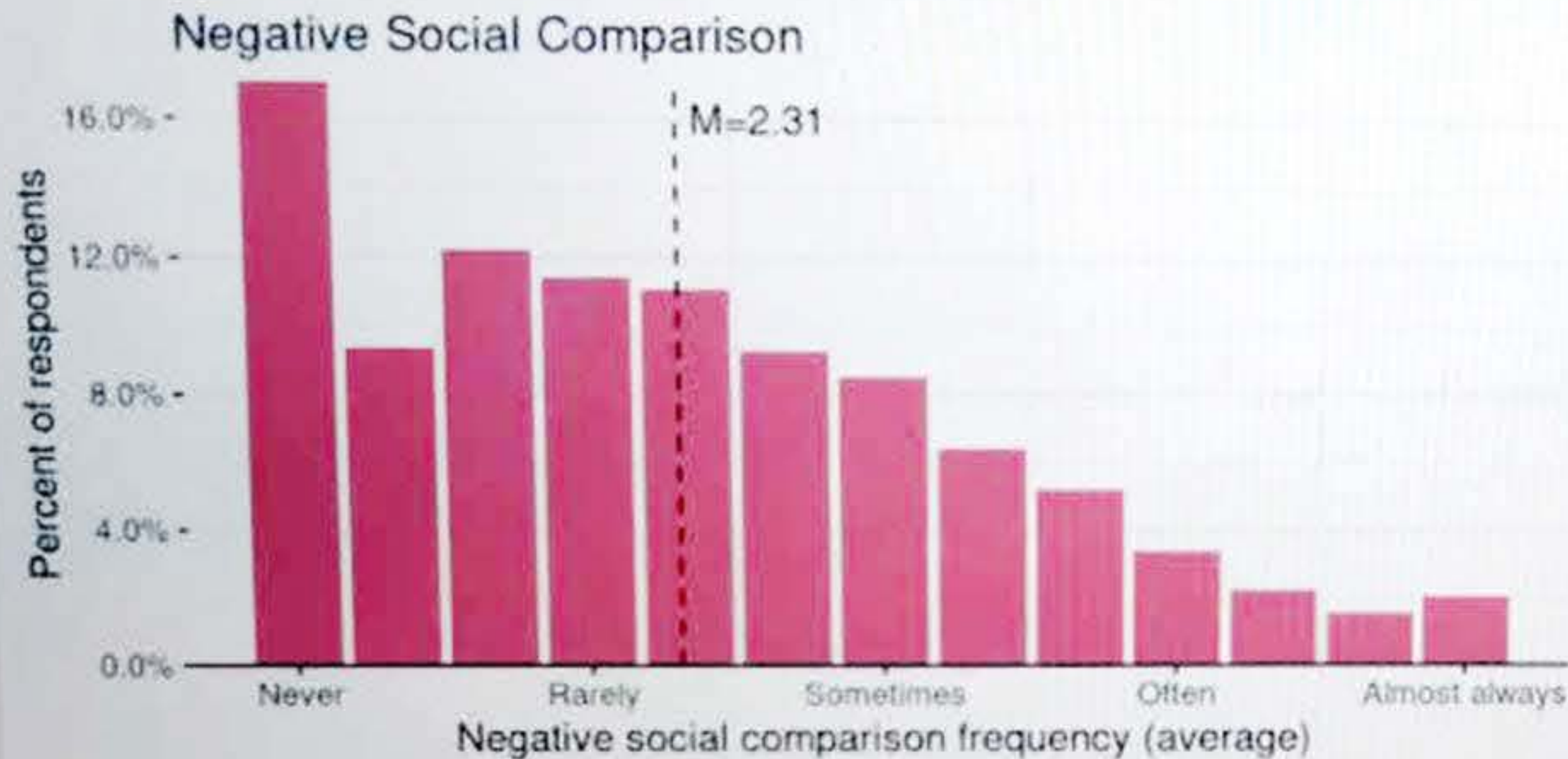
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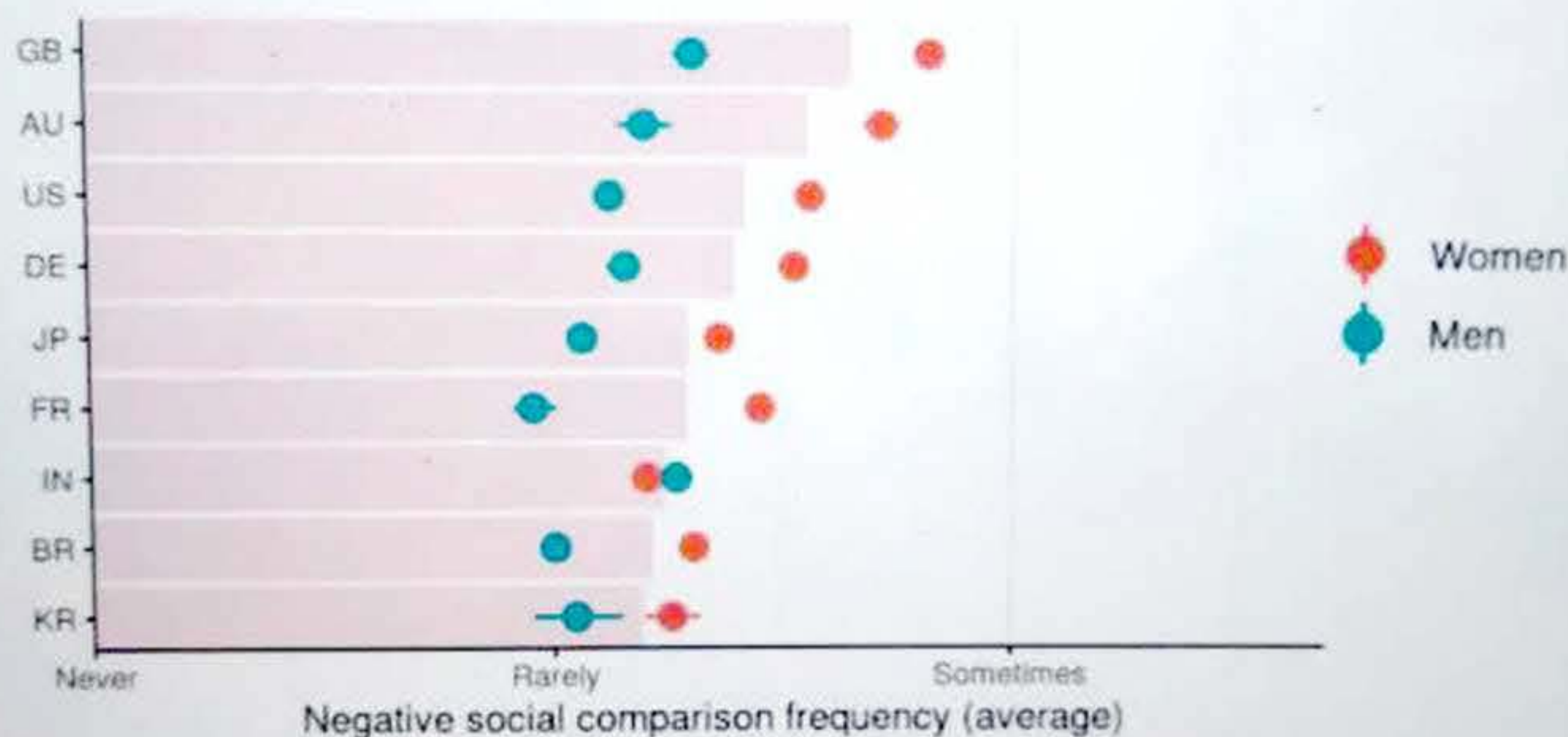
Click to add speaker notes

Social comparison is common and people's experiences vary widely.

- About **1 out of 10 people** experience negative social comparison on Instagram *often or always*
- About **1 in 4 people** think that Instagram makes social comparison worse (source: Hard Life Moments survey)
- Positive comparison (inspiration) is more common than negative comparison (consistent with ███ and ███ findings)
- Social comparison didn't change during early COVID (note)

Negative Social Comparison

M=2.31

Percent of respondents — Negative social comparison frequency (average)
(x-axis: Never, Rarely, Sometimes, Often, Almost always)

Positive Social Comparison

M=3.06

Percent of respondents — Positive social comparison frequency (average)
(x-axis: Never, Rarely, Sometimes, Often, Almost always)

Source: Positive and negative social comparison on Instagram (May 2020)

Social comparison varies by country and is often worse for women.

- Negative social comparison on Instagram is more common in globally western countries (GB, AU, US)
- Negative comparison is more common for women in many parts of the world, but more common for men in India (and other countries). We shouldn't focus exclusively on women in the west.
- It's more common among teens than non-teens (not shown), especially teen girls.
- Inspiration (positive comparison) is more common in India and Brazil (not shown).

Negative social comparison frequency (average)

Source: Positive and negative social comparison on Instagram (May 2020)

These bars are the 9 countries where we surveyed people. Focusing just on negative comparison: You can see that on average, it's higher in Great Britain, Australia, US, and lower in Korea, Brazil, and India, though these gross averages don't vary that much by country.

What's more interesting are the gender dynamics: The orange dots are women and the green dots are men, and you can see that the line of orange dots is almost always farther to the right — women it experience it more than men in most of the countries we surveyed. However, if you look at India, you see the dots switch places. In India, men experience social comparison more than women. ▓▓▓▓ and I traveled to India in 2019 along with ▓▓▓▓▓▓▓▓ to interview people and better understand social comparison there. Because women are a smaller prop of the workforce, they have fewer dimensions to compare themselves to others — social circles rather than ALSO financial and professional. (On average, individuals vary a lot.)

Social comparison varies by country and is often worse for women.

Negative social comparison by country, gender, and teen/non-teen

Countries (left to right): GB, AU, US, DE, FR, JP, IN, BR, KR

Y-axis: % who experienced negative comparison often/always (5% to 30%)

X-axis: M / F for each country

Group:
- Women
- Teen Girls
- Men
- Teen Boys

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Outline

Social comparison research

Method ⸺ Who/where ⸺ Topics ⸺ Like counts · Celebrities ⸺ Filters

Giving, community, and vulnerability were linked to feeling better.

We may want to promote or encourage these topics (e.g., in Explore).

People felt better (more inspired/positive comparison and less negative comparison) when they saw more posts about:

- Giving (*thank, give, credit, need, support*)
- Positive emotion and friends (*love, happy, friend*)
- Pride and achievement (*proud, success, challenge*)
- Humor (*laugh, humor, hilarious*)
- Community (*community, local, club, neighborhood*)
- Strength (*hard, might, tough, strong, power*)
- Workout (*practice, play, workout, fitness*)*
- Grieving (*bad, feeling, pain, hurt, death, loss, cry*)*
- Vulnerability (*soft, hurt, loss, fear, struggle*)*

Unlike fashion posts, workout and strength posts were more inspiring. Can we do a deep dive to understand how these differ from fashion?

* These topics were stronger on women than men.

Outline

Social comparison research

Method —— Who/where —— Topics —— **Like counts** · Celebrities —— Filters

Like counts

- People receive about **5% as many Likes** on their own posts as those they see on IG

- Seeing **high Like counts** is associated with feeling worse (more negative, less positive comparison)

- The **threshold is different for friends** (10 Likes) vs. celebrities (10,000 Likes)

- Likes have a bigger impact than comments on negative social comparison.

- Daisy (hiding Like counts) reduced the negative impact of seeing posts with many Likes. "Pure" Daisy was stronger than "Popular" Daisy. Daisy also reduced negative social comparison overall <u>by about 2%</u>.

Sources: <u>Likes and social comparison on Instagram</u> (Oct 2020). <u>Social comparison, like counts and Project Daisy</u> (June 2020)

Comments (right sidebar):

▪ ████ 1:17 AM Feb 4 ✓
any hypotheses about the likes vs comments association w sc?

▪ ████ 12:36 PM Feb 4
My guess is that like counts are just so much higher than comment counts since they take less effort for viewers. It
Show more

▪ ████ 12:44 PM Feb 4 ✓
Might be helpful to remind the group whether the 2021 Daisy Controls project aligns more with "Pure" Daisy or "Popular" Daisy.

cc @████

▪ ████ 2:56 PM Feb 4
Added info/link to the speaker notes: Daisy with Controls uses the 'Pure Daisy' version — hiding all like counts.

Speaker notes (bottom):

How much more effective was Pure Daisy than Popular Daisy? It's complicated. See: ████ But on average, Pure Daisy is more helpful than Popular Daisy. (I did some ad-hoc calculations indicating that Pure Daisy reduces negative comparison by about ~2% for an 'average' person. And the point estimate for Popular Daisy would be about one-tenth that. But the error bars are pretty large.)

Daisy with controls: The current plan for Daisy with Controls uses "Pure Daisy" (hiding all like counts, via a new opt-in control). <u>IG Leads Review Deck Oct 2020</u>

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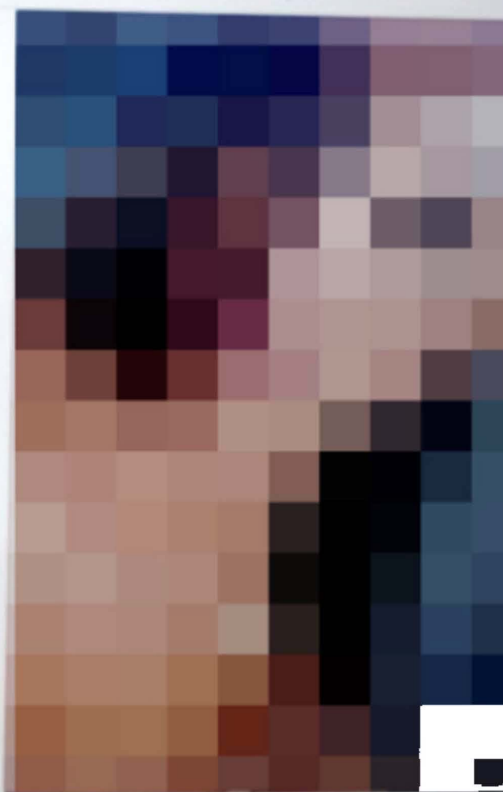
People feel worse when they see more celebrities in Feed

- **Almost half** of the content people see on IG comes from celebrities (top accounts, those with top 0.1% followers globally or by country)

- After controlling for demographics, **seeing more celebrity content in Feed** was associated with more negative comparison and less positive comparison.

Method: We measured how social comparison differed based on amount of exposure to top accounts (celebrities) in a regression controlling for the viewer's gender, teen/non-teen, follower count, following count, whether account is private, and country.

Source: How does seeing content from celebrities on Instagram affect social comparison? (Aug 2020)

May want to offer people the option to hide celebrities temporarily.

People feel worse when they see more celebrities in Feed, *but better in Stories*

- **Seeing more celebrity content in Stories** was associated with more positive comparison (inspiration) and less negative comparison. This was the opposite effect of Feed.

- This may be due to the "unpolished" nature of Stories, showing celebrities in a more relatable way.

- Or it could be because Stories don't have Like counts.

Method: We measured how social comparison differed based on amount of exposure to top accounts (celebrities) in a regression controlling for the viewer's gender, teen/non-teen, follower count, following count, whether account is private, and country.

Source: How does seeing content from celebrities on Instagram affect social comparison? (Aug 2020)

Celebrities whose followers feel more negative comparison:

We may want to partner with them on campaigns to reduce negative social comparison.

- Ariana Grande
- Kylie Jenner
- Kendall Jenner
- Addison Rae
- Hailey Bieber
- Billie Eilish
- Katy Perry
- Charli D'Amelio
- Justin Bieber
- Kim Kardashian
- Jennifer Aniston
- Selena Gomez
- Kourtney Kardashian

Top accounts whose followers feel less negative comparison:

- The Ellen Show
- Will Smith
- Neymar
- World Star
- Sports Center
- The Rock
- Cristiano
- The Shade Room
- Bleacher Report

Analysis reduces selection effects by controlling for viewer's gender, teen/non-teen, follower count, following count, whether account is private, and country.
Source: How does seeing content from celebrities on Instagram affect social comparison? (Aug 2020)

Outline

Social comparison research

Method — Who/where — Topics — Like counts · Celebrities — **Filters**

Sharing or viewing filtered selfies in Stories made people feel worse

- In Stories, **sharing or viewing more filtered selfies** (i.e., that had a color filter or a camera AR effect) was associated with increased negative comparison. The effects of filters are weaker for Feed, likely because Feed camera filters are less selfie-centric.

- More generally, **sharing selfies** (both filtered or not; and to Feed or Stories) is also associated with increased negative comparison, but this effect is weaker.

Method: We measured how social comparison differed based on proportion of either viewed or shared photos that were taken using the front-facing camera and/or had a filter applied in a regression controlling for gender, teen/non-teen, follower count, following count, whether account is private, and country.

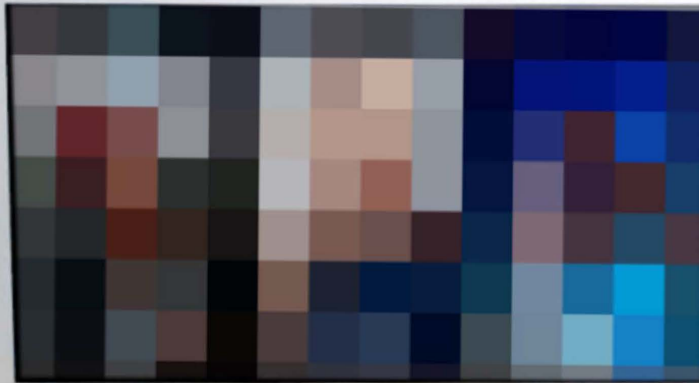Source: Selfies, filters, and social comparison on Instagram (Aug 2020)
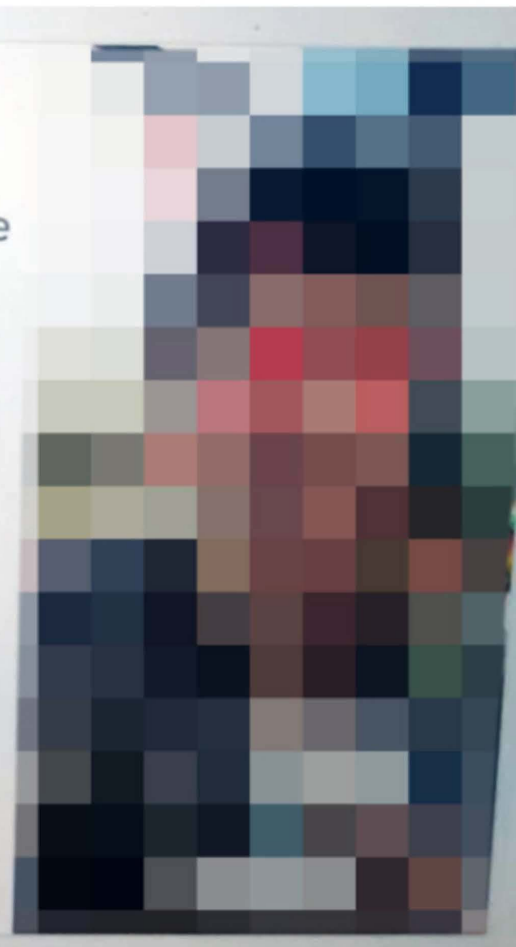
Method: We measured how social comparison differed based on proportion of either viewed or shared photos that were taken using the front-facing camera and/or had a filter applied in a regression controlling for gender, teen/non-teen, follower count, following count, whether account is private, and country.

Source: Selfies, filters, and social comparison on Instagram (Aug 2020)

Seeing these camera effects can lead to more negative comparison:

Why? These may focus on beautification; heart eyes may be interpreted as showing off a relationship.

Seeing these camera effects can lead to more positive comparison:

Why? These tend to be more "fun", focusing on additional objects or taking part in a challenge.

Source: Selfies, filters, and social comparison on Instagram (Aug 2020)

Some possible reasons:
- More negative;
    - Heart eyes may indicate being in love, and we know from qual research that seeing others in relationships makes people envious
    - The other two also seem to be more of the skin-smoothing/beautifying-type
- More positive:
    - These filters are more "fun" - adding a halo, sunglasses, or doing a challenge

How might we:

- Reduce exposure to the kinds of fashion posts that trigger negative comparison?
- Refocus people away from negative comparison topics toward inspirational ones?
- Encourage creation of and increase exposure to content that causes people to think about community, friendship, giving, and pride?
- Encourage creators, especially top accounts to share more vulnerable content?
- Encourage adoption of Daisy controls
- Find positive ways to engage with accounts and creators of popular filters whose followers have high negative comparison?
- Rethink how our editing tools can refocus attention away from the body?

We've identified attributes correlated with more negative comparison (high like counts, fashion, specific celebrities, filtered selfies, specific filters, etc). Considering product & policy constraints and what's going on across the company, which of these areas seem more tractable / where should we focus our efforts? Are there some that we should avoid?

Where should we dig deeper?

What other teams should we sync with?

Social comparison research reports

Internal notes / research

- Positive and negative social comparison on Instagram (May 2020)
- Which topics are associated with changes in social comparison on Instagram? (July 2020)
- How does seeing content from celebrities on Instagram affect social comparison? (Aug 2020)
- Likes and social comparison on Instagram (Oct 2020)
- Social comparison, like counts and Project Daisy (June 2020)
- Teen Girls Body Image and Social Comparison (March 2020)
- Selfies, filters, and social comparison on Instagram (Aug 2020)
- Has social comparison decreased because of COVID-19? (May 2020)
- Social comparison on Instagram (qual, survey in US/UK, Oct 2020)
- Hard life moments survey: COVID edition (May 2020)
- Country differences in social comparison (FB) (June 2019)
- Social comparison on Facebook, on Instagram, and in everyday life (cross-platform comparisons) (April 2019)
- Social comparison on Facebook (content-level survey/interviews) (Feb 2016)

Academic papers from FB

- Social comparison and Facebook: Feedback, positivity, and opportunities for comparison (CHI 2020)
- Country differences in social comparison on social media (CSCW 2020)

In-progress (Feb 2021): Appearance comparison/body image survey + behavioral data

Project summary, First note w/ demographic stats

A similar study to the one in this deck, but with survey questions focusing specifically on (1) general body image, and (2) IG's impact on body image and appearance comparison.

Survey questions:

General body image

- How satisfied are you with your appearance?
- How satisfied are you with your weight?
- How important is it to you that you always look good physically?
- How often do you feel good about your body?

IG-specific body image/appearance comparison

- How often do you compare your appearance to the appearance of people on Instagram?
- How much pressure do you feel to look perfect on Instagram?
- How often do you see content on Instagram that makes you feel better about your body or appearance?

IG-specific instance

- Have you ever felt worse about your body or appearance as a result of using Instagram? (Yes, during the last 7 days ...)
- Who caused you to feel this way?
- Where did it happen?
- What about it made you feel worse about your body or appearance?

Social comparison product implications

- Find ways to reduce exposure to heavily polished fashion posts.
    a.   Offer content controls so people can hide these posts (either permanently or when they're feeling vulnerable) without having to unfollow / miss out on other posts by these creators.
    b.   Offer nudges when people are spiraling / searching for / consuming this content excessively.
    c.   Downrank fashion posts on Explore
    d.   Consider replacing fashion posts with workout/exercise content (though this recommendation needs more research to understand specific details that are helpful and harmful)

- Instead, promote and encourage topics that cause people to think about others, rather than themselves and their bodies
    a.   Uprank posts about community, friendship, giving, and pride in Explore
    b.   Create a safe space for people to share low-lights and vulnerable moments (to benefit both the poster and the viewers)

- Promote and encourage less-polished, more vulnerable content
    a.   While polished content in Feed from celebrities triggers negative social comparison, authentic and vulnerable content can be inspiring. Explore ways to encourage celebrities and influencers to share more authentic, unpolished content.

- Hide like counts on others' posts
    a.   Posts from friends with >10 Likes and from celebrities with > 10,000 Likes were linked to more negative comparison

- Partner with celebrities whose followers experience the highest levels of social comparison (e.g., Ariana Grande) on "realness" campaigns.