



Mental Wellness Technology Landscape

Executive Summary

**The Authoritative Source for Consumer
Technology Market Research**

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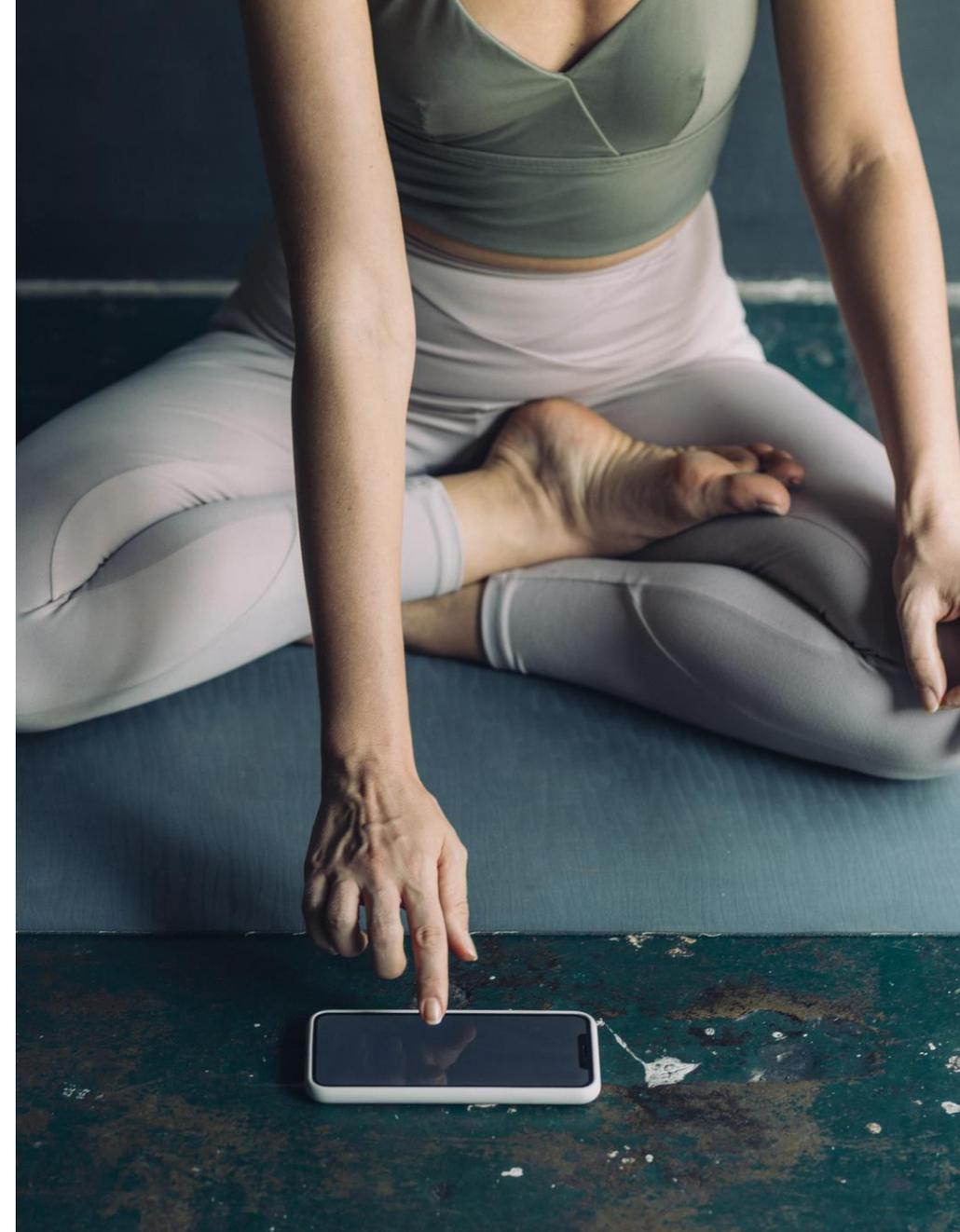
Objectives

Understand landscape of digital therapeutics* and other digital tools targeted toward behavioral and mental health. Determine use cases for mental health technologies, platforms and consumer tech solutions.

Specifically, this research seeks to:

- Define use cases for mental wellness technologies
- Understand how consumers and key opinion leaders (KOLs) are using virtual care solutions for mental wellness
- Identify barriers and opportunities in the mental wellness technology landscape

*Digital therapeutics (DTx) is an evidence-based, standalone or combination software product intended for management, maintenance, prevention or treatment of a disease, disorder or condition acting directly as a medical intervention or guiding the delivery of a medical intervention (Source: ANSI/CTA-2098)



Methodology: Study Populations

The Consumer Technology Association (CTA)[™] designed and formulated this research in partnership with Ipsos MORI. It represents findings from a mixed methodology (qualitative and quantitative) study administered September 2–4, 2021.

Quantitative Consumer Study

The quantitative consumer survey was administered via the internet (September 2–24, 2021) to an online national sample of 1000 U.S. adults living with or having previously lived with one or more of the following mental health disorders:

- ADHD
- Depression
- Bipolar disorder
- Anxiety disorder
- Posttraumatic stress disorder (PTSD)
- Eating disorder

Qualitative Stakeholder Interviews

Sixty-minute in-depth online qualitative stakeholder interviews were held with eight physicians and/or stakeholders across different mental wellness technology companies or areas of expertise.

Methodology: Sample and Data Details

As is common practice in survey research, data was weighted to reflect known demographics of the population under study. In this survey, we applied click-balancing based on U.S. census information using the following variables: gender, age, race, region and household income for the U.S. adult population. As a result, this data can be generalized to the entire online U.S. adult population.

The bases shown on all charts and tables are weighted bases. All percentages in the text, charts and tables included in this report are also based on weighted data. Throughout this report, percentages have been rounded to the nearest whole number. As such, there may be instances where results do not add to 100%.

All sample surveys and polls may be subject to multiple sources of error, including, but not limited to, sampling error, coverage error and measurement error (margin of error = +/- 3% at 95% confidence).

CTA is a member of the Insights Association (IA) and adheres to the research and analysis guidelines set forth in the MRA Code of Marketing Research Standards and CASRO Code of Standards and Ethics.

- **Consumer *awareness* is highest for fitness tracker apps (83%), telemedicine (82%), mindfulness/meditation apps (72%) and food/nutrition apps (67%).**
 - *Awareness* of most apps is through social media advertisements.
 - Over half (52%) of consumers became *aware* of telemedicine/virtual care visits through a recommendation from their healthcare provider (HCP).
 - Women are more likely to be *aware* of mindfulness/meditation apps (75% vs. 68% for men) and telemedicine (84% vs. 77% for men).
- ***Knowledge* of health technology is low, highlighting the need for consumer education.**
 - Men and younger generations are generally more *knowledgeable* of health technologies than women and older generations, but sleep monitoring apps are known better by those age 65+ and telemedicine is known slightly better by those age 35+.

Key Findings (Continued)

- **Top drivers for health technologies overall include simplicity of use, being able to use it at any time and place and easy/quick access.**
 - For telemedicine, top drivers specifically include insurance coverage and offerings from the individual's HCP.
 - Men diagnosed with mental health conditions are more likely to be using health technologies compared to women, except augmented reality platforms, which are used equally.
 - Those age 18-44 are also more likely to be using health technologies compared to those age 45+.
- **Fitness tracker apps and telemedicine/virtual care visits are most likely among all health technologies to be used for one year or more.**
 - Of consumers who discontinued using food/nutrition and fitness tracker apps the top reason was that it was too much work to keep up with (36% and 35, respectively).
 - The top reason for discontinuing mindfulness/meditation apps was that it was too expensive (30%).
 - The top reason for discontinuing telemedicine was that it was missing the human touch (29%).

Awareness & Usage



There is a Broad Range of Mental Wellness Tech Available; the Goal is to Improve Access to the Options Available in the Market

The accelerated digitalization of healthcare and concomitant standardization of software has made mental wellness tech more ubiquitous, alleviating hesitations to adoption.



Access to tech, and particularly wellness apps, is rising, with competition increasing the number of available health apps by **25% each year** for the **81% of people** worldwide who have compatible smartphones today.*



With nearly **one in five adults** in the United States living with a mental illness, but only 45% of those receiving treatment, there is a clear gap between needs and offerings.[†]



Source: *Becker et al., Pew Research. †National Institute of Mental Health (NIMH)

Awareness of Mental Wellness Technologies

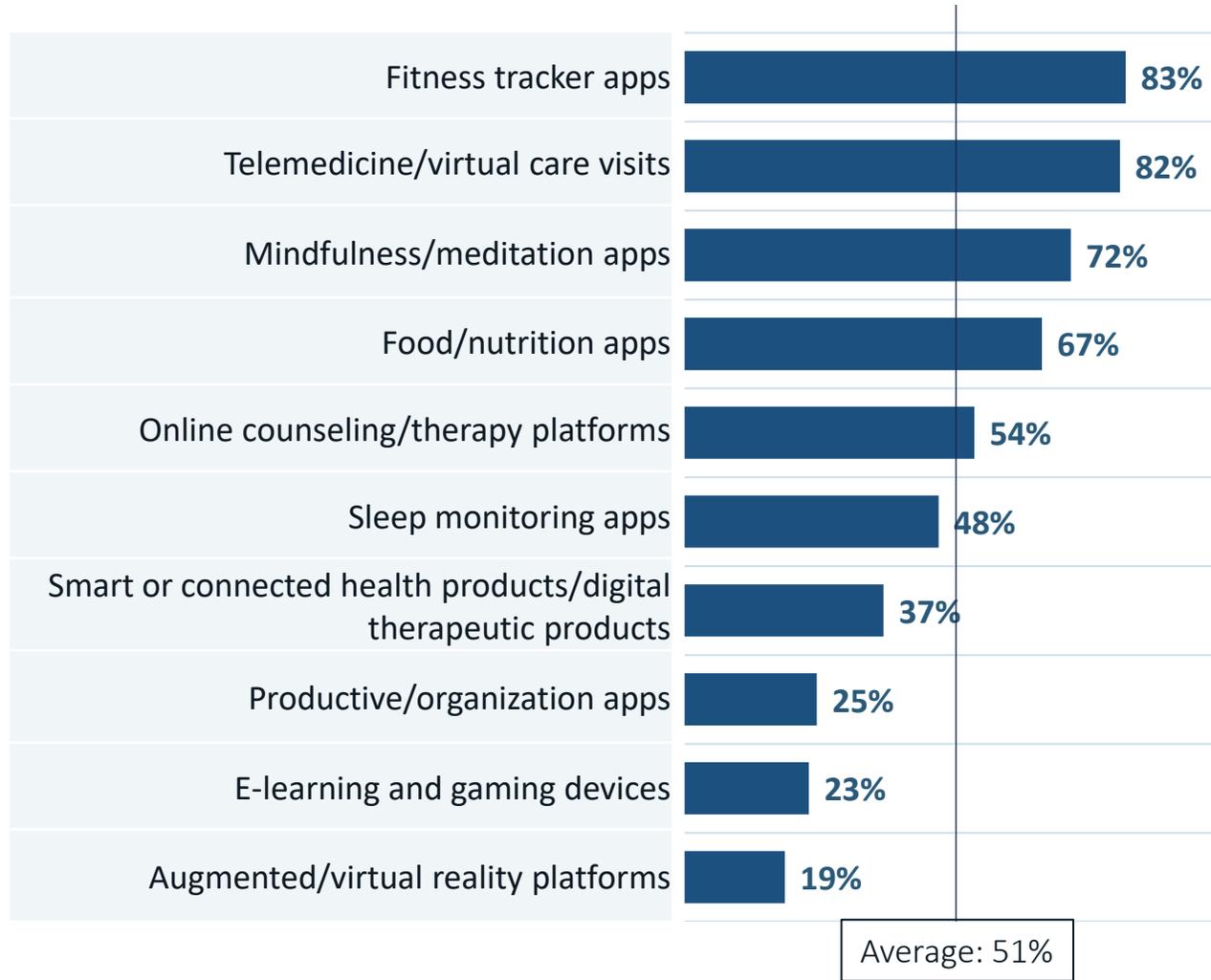
Adults who currently have or have had a mental health disorder are most aware of fitness tracker, mindfulness and food/nutrition apps as well as telemedicine/virtual care visits.



Women are more likely to be aware of mindfulness apps (75% vs. 68%) and telemedicine/virtual care visits (84% vs. 77%), whereas men are more likely to be aware of several apps including sleep monitoring (55% vs. 42%), product/organization (30% vs. 21%), augmented related (25% vs. 14%), smart or connected health (43% vs. 34%) and e-learning/gaming devices (30% vs. 19%).



Younger generations are more likely to be aware of fitness tracker and mindfulness apps whereas those age 55+ are more likely to be aware of telemedicine/virtual care visits.



Base: U.S. adults living with or having lived with a mental health disorder (n=1000)
Q105. Which of the following health technologies are you aware of? *Multiple selections allowed.*

Level of Knowledge About Mental Wellness Technologies

Knowledge of health technologies is low, although highest for telemedicine/virtual care visits. Generally, men and younger generations feel significantly more knowledgeable of health technologies compared to their counterparts. Telemedicine/virtual care visits and smart health products are the only exception where knowledge is similar.

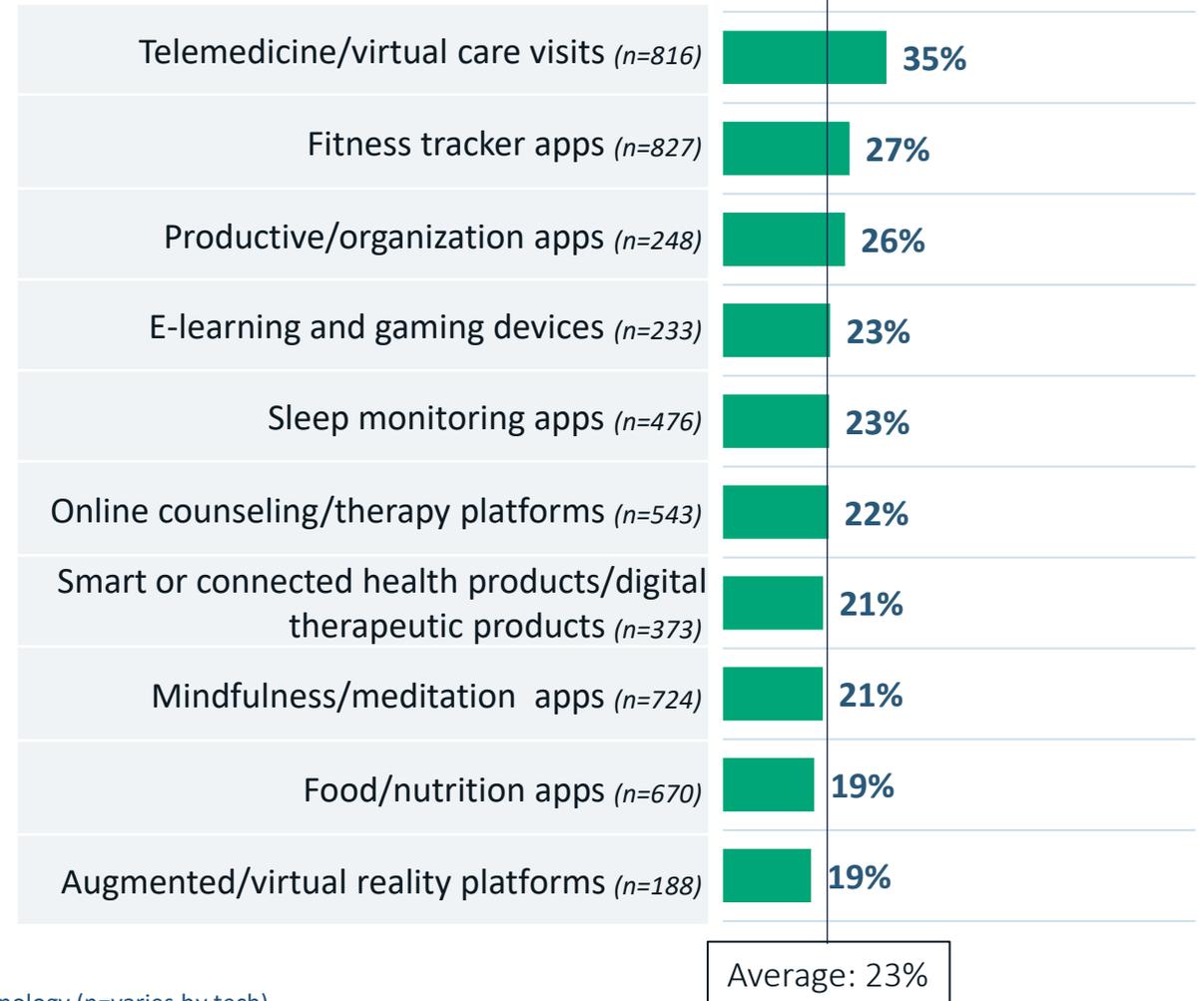


Men are significantly more knowledgeable than women about all surveyed technologies, except for telemedicine and smart or connected health products/digital therapeutic products for which knowledge is only slightly higher among men.



Overall, 18-44-year-old consumers are much more knowledgeable of health technologies than those age 45-65+. This is true for all applications, except sleep monitoring apps, which are known better by those age 65+ (followed by 18-44-year-olds), and telemedicine apps, which are known very slightly better by 35-65+-year-olds.

("Extremely knowledgeable" + "Somewhat knowledgeable")



Base: U.S. adults living with or having lived with a mental health disorder who are aware of the technology (n=varies by tech) Q106. For each of the health technologies you mentioned you were aware of, how knowledgeable would you say you are?

Use Drivers



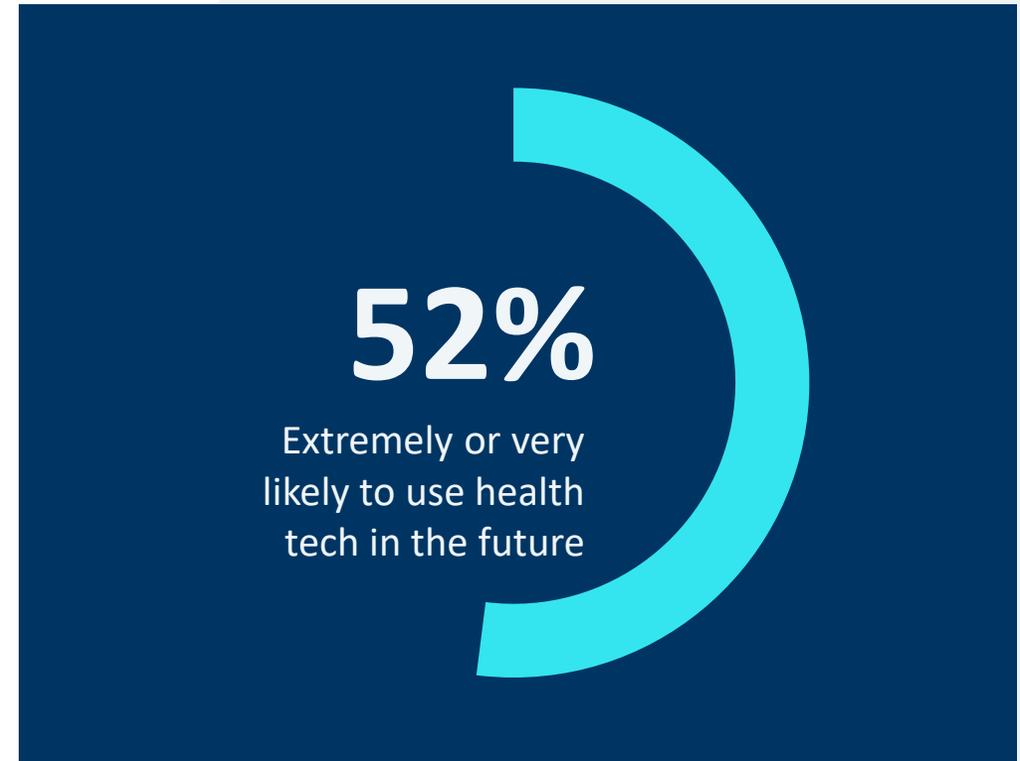
The Future is Bright With Half of Consumers Willing to Use Health Technologies to Improve Their Wellbeing

Likely to Use Health Technologies in the Future

Half of consumers are extremely or very likely to use health technologies in the future. Tech users (i.e., those who currently use at least one of the mental wellness technologies surveyed), men and those age 18 and 44 are significantly more likely to use health technologies than those in other demographics.

But why is that?

We hypothesize that men feel more comfortable using technology to aid mental health, as it's a method that offers anonymity, and therefore reduces the stigma they may feel.



Base: U.S. adults living with or having lived with a mental health disorder who are aware of the technology (n=1000)

Q325. How likely are you to use health technologies in the future to improve your overall wellbeing?

Mindfulness, Sleep Monitoring, VR and Therapy Platforms Gain the Most Interest Among Consumers

Slightly more than two-thirds of consumers who have never used a mental wellness technology before are interested in using one in the future.



Women who never used health technologies would be the most interested in using them in the future.

Women non-users show a much higher interest in using mindfulness apps in the future.

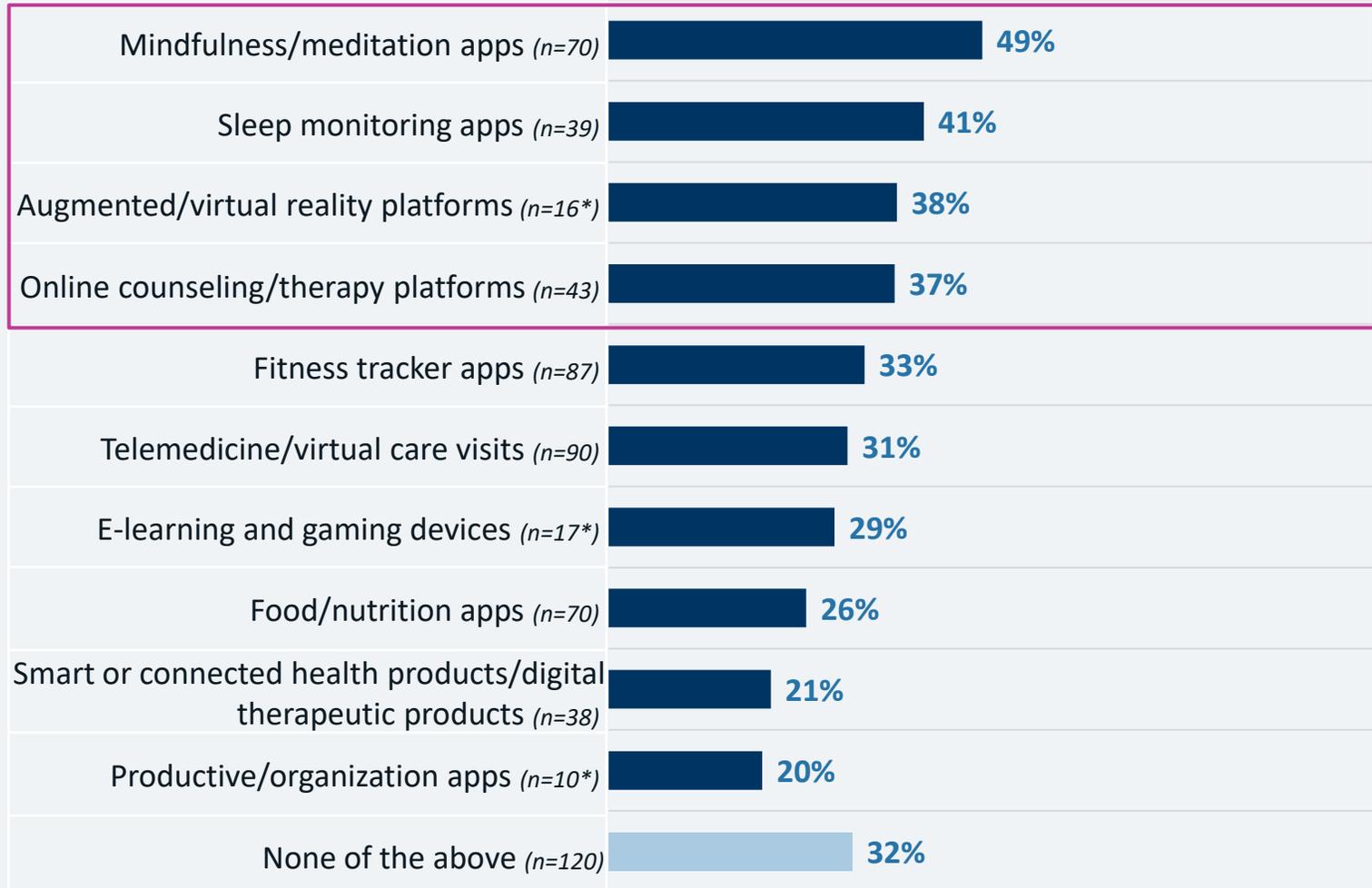


Those age 18-24 and 65+ who never used health technologies would be the most interested in using them in the future.

Non-users in the 18-24 age group show a much higher interest than older non-users in using nutrition apps in the future.

Interested in Using in the Future

("Extremely" + "Very likely")



Base: Base: U.S. adults living with or having lived with a mental health disorder who are aware of the technology but have never used technology (n=varies by tech)

Q116. Which of the below health technologies that you are aware of would you be interested in using in the future?

*Caution, low base

Reasons for Using Mental Wellness Tech Recommended by an HCP

Consumers report using health technologies recommended by their HCP to help with their mental health/fitness and to keep track of their daily habits (e.g., medication, weight loss, healthy eating).

Fitness Tracker Apps (n=54)

Mental Health/Fitness	57%
Helpful/Useful	11%
Ease/Convenience	6%

“How it would help me with my exercise routine and was great for helping you reach your health goals”

“track my miles to reach my goals”

“necessary for long term weight loss”

Mindfulness/Meditation Apps (n=57)

Mental Health/Fitness	61%
Helpful/Useful	12%
Virtual Platform	4%

“To help with sleep anxiety”

“They suggested it to help build a mindfulness habit instead of going on social media”

“We discussed the importance of practicing mindfulness with recovering from PTSD and managing anxiety. She suggested a few free apps that she knew of.”

Food/Nutrition Apps (n=41)

Mental Health/Fitness	46%
Helpful/Useful	15%
Medical Parameters	10%

“It will help me to eat healthy and hence prevent some of the diseases and ensure that I stay healthy”

“Easier to track, less planning use suggestions”

“That it would help me better manage my diabetes.”

Sleep Monitoring Apps (n=39)

Mental Health/Fitness	49%
Virtual Platform	13%
Helpful/Useful	8%

“Reviews were more positive than negative.”

“It's a good tool to measure your sleep and sleep patterns.”

“Sleep care Dr. said it would be beneficial to me”

Base: U.S. adults living with or having lived with a mental health disorder who use the technology and it was recommended by their HCP (n=varies)

Q120. You previously mentioned that you learned about the following health technology from an HCP and you are currently using it. What, if anything, did the HCP say that helped convince you to use it?

Reasons for Using Mental Wellness Tech Recommended by an HCP (Continued)

Telemedicine/Virtual Care Visits (n=268)

Ease/Convenience	37%
Virtual Platform	15%
Helpful/Useful	6%

"Just that it's more convenient for them sometimes"

"Telemedicine is safer than in person visits right now"

"They said it would decrease my wait time as opposed to physical appointments"

Online Counseling/Therapy Platforms (n=43)

Ease/Convenience	30%
Mental Health/Fitness	19%
Helpful/Useful	12%

"more comfortable to talk in your own home environment"

"he said it would help me not keep all my emotions bottled up"

"I was told that this is just as effective as in person visits."

Smart or Connected Health Products/Digital Therapeutic Products (n=35)

Mental Health / Fitness	31%
Medical Parameters	17%
Ease / Convenience	11%

"a good way to monitor health conditions"

"these products are very effective in tracking your health when you are busy"

"Smart blood pressure and pulse oximeter monitors connected to my cell make logging a breeze and help detect irregularities"

Base: U.S. adults living with or having lived with a mental health disorder who use the technology and it was recommended by their HCP (n=varies)

Q120. You previously mentioned that you learned about the following health technology from an HCP, and you are currently using it. What, if anything, did the HCP say that helped convince you to use it?

Use Barriers



Regulators Play a Key Role in Shaping the Future Landscape — in Both Approving Solutions and Influencing Public Perceptions

For many stakeholders, regulator approval is a sure-fire way for a technology to get the approval and acceptance from HCPs. This creates a few barriers:

- Need for randomized clinical trials and a wealth of specific measurable data points vs. control arm
- Time-consuming, slow and expensive bureaucratic processes
- Strict protocols on who can prescribe or recommend these treatments, limiting the role of psychologists (and over-burdening medical HCPs)

This in turn exacerbates the idea that only treatments that have been approved by the FDA are effective, which creates further barriers and issues:

- Increasing consumer doubts in the efficacy of non-FDA approved treatments
- Potentially exaggerating the efficacy of some FDA-approved treatments



Regulators



Additional CTA Resources

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- CTA Research provides a valuable benefit to the technology industry by researching and reporting on **consumer behavior and technology purchasing trends**, which are available to member companies for free.
- CTA Research also releases comprehensive **forecast reports** that discuss the health and growth of specific technology product categories.
- Forecasts and reports are available at [CTA.tech/research](https://cta.tech/research).



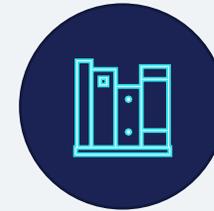
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