THE RISE OF DIGITAL COGNITIVE BEHAVIORAL THERAPY

Learning & Empowering

Abstract

Technology has changed pretty much everything around us. Cognitive Behavioral Therapy aka CBT is no exception. What traditionally been a face-to-face discussion with therapist has now become digital to benefit large number of people. The Digital CBT (dCBT) is emerging as a cost-effective solution and being implemented on a web or mobile devices at scale to cater large population.

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Introduction

In today's world, more and more people are struggling with depression, anxiety, addiction and a whole range of similar mental health problems. In most of the cases, people are not even aware of the fact that they are fighting with some kind of mental illness. Managing these problems is not an easy task and ignoring these problems calls for unwanted actions and severe consequences, but fortunately we have Cognitive behavioral therapy (CBT) to help people manage their problems by making simple changes in the way they think and behave.

It is always believed that talking your heart out to someone helps in relieving the pressure that builds inside the human brain. Talking is a very effective therapy at times which can reduce the negative and unwanted or unwishful thoughts from people's mind. Cognitive behavioral therapy is also a talk therapy to reduce or remove the symptoms of mental and physical health disorders. It is used to treat and improve the mental health condition of people.

CBT has been existing for a long time in different shapes and forms. Traditionally it was done by connecting people to therapists or psychotherapists face-to-face multiple times in one to one session or in the group to understand their mental situation and provide treatment accordingly. CBT is a very effective short-term therapy technique that helps people overcome their immediate problems by changing their negative thought patterns. With the improvements in technology and the onset of digital world, the CBT has taken the digital route to provide same therapies in a digital form like applications over web and mobiles.

The Digital Cognitive Behavioral Therapy has seen a sharp rise worldwide after the recent COVID-19 pandemic. As opposed to physical one-to-one meeting, the digital format has many advantages which are behind the rise of DCBT. The accessibility is a key differentiator here and it's more convenient to people compared to traditional face-to-face sessions.

The DCBT has great potential and there are a number of applications/platforms being built to provide these therapy sessions to millions of people. These apps are bringing more technological advanced features to cater the increasing demand of online cognitive behavioral therapies. With the emergence of artificial intelligence and machine learning, the future of DCBT looks even more promising.

Introduction to Cognitive Behavioral Therapy (CBT) and Digital

Many people at some point of time in their life develop negative thoughts in their mind. The feeling of being worthless, fear of failing, feeling of guilt, restlessness, and hopelessness are some of the examples or the signs of the mental illness that leads them to various problems in their lives. People find it hard to deal with the problems of anxiety, depression, addiction and start feeling discouraged and depressed in their life.

Some Facts first
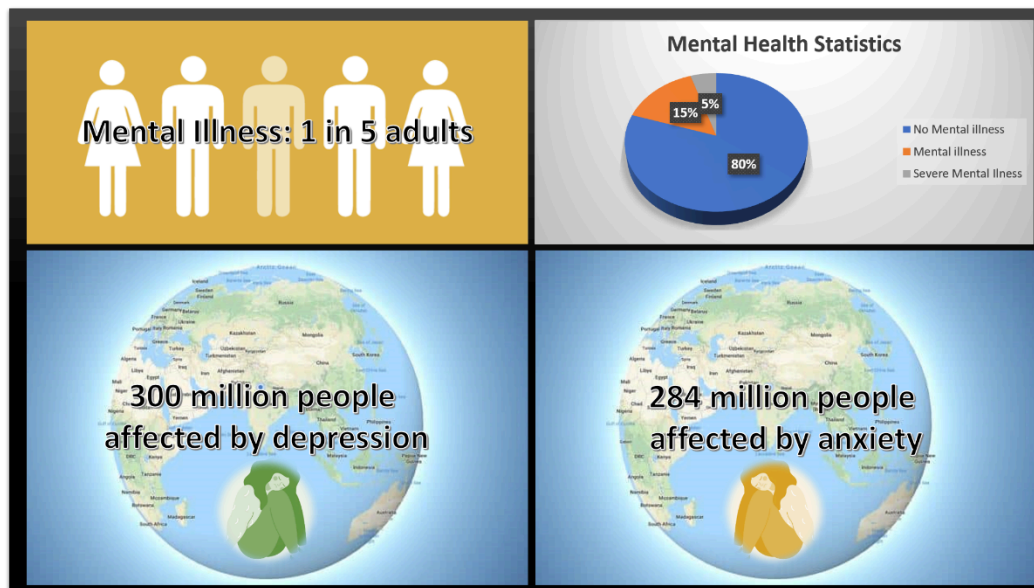
- As per a report, 1 in 5 adults in the U.S. suffer from some kind of mental illness each year.
- Another report mentioned that close to 20% of the adult U.S. population was experiencing mental illness in 2022 alone with close to 5% with severe mental illness.
- More than 300 million people are affected by depression each year worldwide as per a 2017 report by WHO.
- Anxiety affects around 284 million people worldwide. Over 40 million adults in the U.S. alone.
- Another 2020 survey shows some degree of anxiety in 62% of respondents.
- As per a study done in the U.K., depression and anxiety increases premature death by up to 134%.
- The COVID-19 Pandemic has caused a serious spike in common mental illnesses such as Anxiety and Depression.
- As per a latest U.K. report published in 2022, the number of people taking talking therapies for anxiety and depression through the NHS increased by 21.5% from 2020-2021 to 2021-2022.

Cognitive Behavioral Therapy (CBT)

Let's first try to understand what Cognitive Behavioral Therapy means. Cognitive represents thinking i.e. our thoughts whereas Behavior represents our actions i.e. what we do and Therapy here represents a talking therapy. Cognitive Behavioral Therapy is a very psychological approach focused on changing negative thoughts, beliefs, attitude and behaviors in such a way that it results in positive thinking,

actions, and outcomes. Every person has the ability to control their thoughts, emotions and behaviors but they are not aware of how to do it.

CBT teaches how to have greater control on our thoughts. Since emotions are driven by thoughts and actions are driven by emotions therefore controlling thoughts gives control over our emotions and behaviors. CBT has its tools and techniques using which you can focus on solving your current problems. Unlike other talking therapies where a person's past is explored in order to find the root cause of the issue, the CBT only focuses on the present.
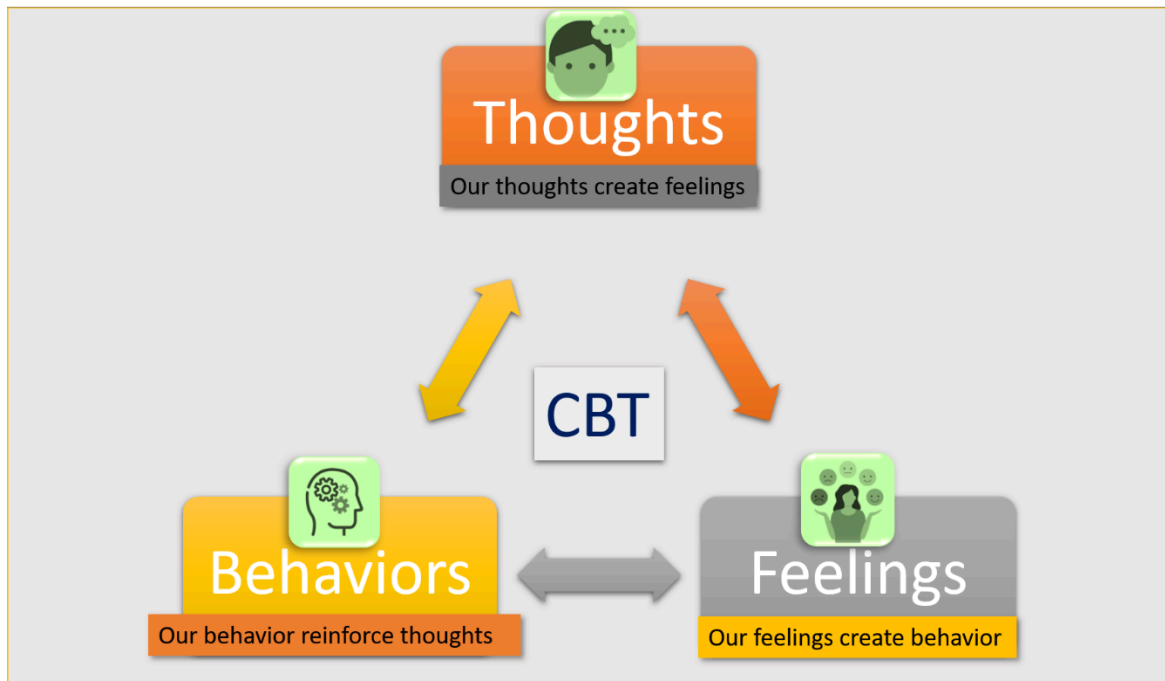
CBT Triangle

CBT can help people deal with:

- Negative, self-sabotaging, bad habits and behaviors
- Feeling of stuck in life, inability of taking steps
- Feeling of failures and worthless
- Anxiety, stress, fear and anger
- Emotions, thoughts and reactions

CBT helps people reprogram their mind in such a way that they start taking back the control of their mind and emotions. CBT is so empowering and uplifting that they start making better choices in their lives for a positive and happy life.

DCBT

Digital CBT takes the CBT processes and tools online as opposed to face-to-face delivery in CBT. Digital CBT is proven to be very effective and no less than CBT for some medical conditions, and at the same time brings the advantage of joining the meeting from anywhere in the world over in-person offline meeting. Many people prefer digital CBT over traditional CBT because of mobility and accessibility

challenges. Digital CBT is not only flexible for patients but also for therapists as they can serve the people at a distance.

Digital Cognitive Behavioral Therapy can be either or both:

- Self-guided in which the patient can go through the learning material, exercises, tools, techniques and other digital contents like games, audio, videos, quizzes to deal with his problems.
- In a live session with a therapist where one to one discussion can take place to discuss the health issues and receive advice.

The use of Digital CBT is on the rise because of the comparable results as CBT. The digital delivery of CBT helps in improving outcomes, increasing accessibility, and reducing cost. Since DCBT applications can be accessed any time during the day or night, it becomes a more flexible option for a person compared to CBT. Also, the availability of DCBT applications on Web, tablet and Mobile enables better accessibility.

The human intervention in Digital CBT ensures the effectiveness of treatment by making sure the treatment is working and if not, then identify that quickly. Though Digital CBT has its own drawbacks, but it is very helpful and recommended for the treatment of depression, anxiety and other mood related issues. The apps based on the principles of cognitive behavioral therapy (CBT) saw wide adoption especially during COVID-19 pandemic when mood and anxiety issues were very prevalent.

The Digital CBT apps are widely accepted by both patients as well as therapists across the globe. It provided tools such as daily mood tracker, activities for the day, healthy thinking, emotions management, suggested actions, and general awareness about depression, anxiety and other mood related issues. These tools help people in calming their intense emotions and take actions which are helpful in treating their symptoms and well-being. A person can learn the CBT techniques and can practice on himself as well.

Digital CBT is very helpful to people in different circumstances such as:

- Mobility issue, difficulties in traveling to therapist for face-to-face sessions
- Issue in managing or taking time out for therapy because of work or other constraints.
- Prefer online over face-to-face communication
- Prefer taking self-help route before talking to therapist

Challenges

The statistics suggest that millions of people who suffer from mental health conditions are left without any treatment. In many cases, people are not even aware of the fact that they are experiencing mental illness. There are various barriers which force people not to seek treatment such as privacy concerns, social stigma, accessibility issues, and expensive healthcare. There is a serious and denting impact on an individual suffering from mental illness and not able to get the treatment for the same. It not only affects their day to day life but also impacts others connected or associated with that individual.

Even though some of the mental health issues are treatable at low cost, there are gaps in people looking for treatment and people able to access the treatment. This gap is a big challenge which requires

immediate attention. As per WHO, the common mental health conditions such as depression and anxiety cost USD 1 trillion each year to the global economy.

The subsequent sections will cover the Digital CBT and how it offers benefits such as 24*7 accessibility, cost effectiveness and availability to combat these challenges.

Digital CBT Users

Since Digital CBT is used as an alternative to traditional CBT, the target users are the same which require some kind of assistance in their life to overcome the mental health issues they are currently facing. These users could be people of all ages e.g. a child, teen, adult, and older adults.

The primary users of Digital CBT can be categorized into two groups:

- People suffering from mental health conditions such as depression and anxiety.
- People who are looking for overall mental well-being which not only includes depression, anxiety but other issues such as mood change, stress, addiction, worry, and emotions.

Since, a large number of populations has access to web and mobile so it makes more sense to deliver the CBT over digital. There are currently hundreds of mobile and web applications developed and accessible to cater to a large number of users worldwide. The Digital CBT users are benefited by instant support, time flexibility, tailored information, interactive interactions, progress tracker and other visual elements offered by the apps.
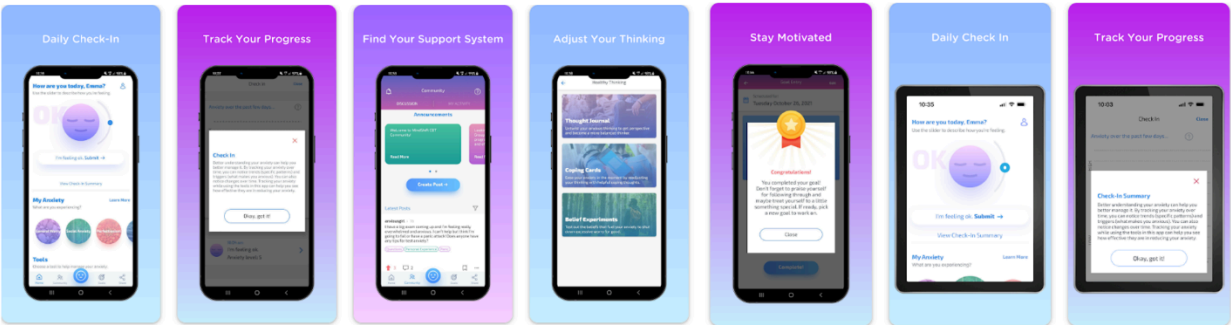
Digital CBT Apps

There are a growing number of CBT apps available in the market currently and more new apps will make their way to market very soon based on the growing number of reported mental illness cases worldwide. These CBT apps not only follow the principles of CBT for common mental illness but also extend the treatment to other areas as well. A good mental illness app can benefit the patients in combating depression, anxiety, stress, sadness and other mood related issues effectively.

These apps are equipped with the right tools and techniques which reduce the dependency to an extent on one to one live session or in-person sessions with therapists. These mental illness apps are available in both free and paid versions for more premium features. The market for these apps is growing fast and with technological advancements in areas like Artificial Intelligence and Machine Learning, these apps will bring more smart features for its users.
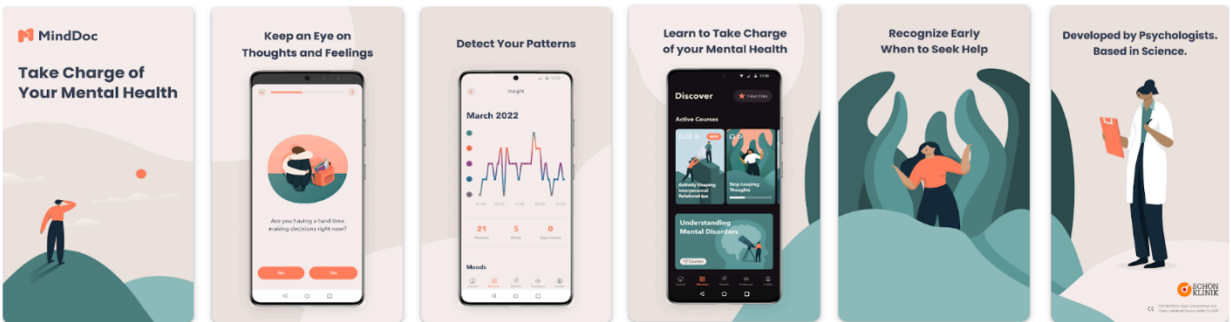
Following are a few screenshots of known CBT apps like Sanvello, MindShift CBT, and MindDoc to get a view of the functionalities offered.
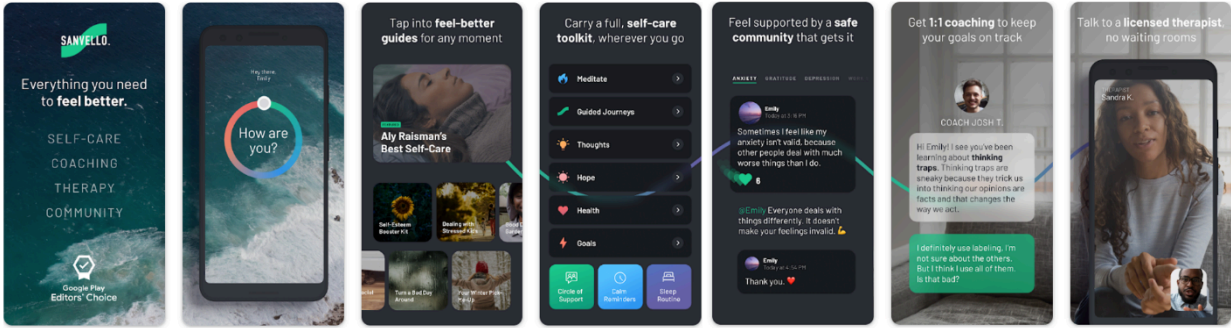
Sanvello App

MindShift CBT App

MindDoc App

Digital CBT Apps Features

There are a variety of CBT apps available with different sets of features but they are all based on common CBT principles. Some of the most common features are:

- Self-assessment
- Mood tracker
- Introduction to CBT and its tools and techniques
- Tailored or custom activities for a user
- Information about common health issues such as depression and anxiety
- Relaxation techniques
- Self-learning
- Record and monitor daily activities

- Health goals and its monitoring
- Calming techniques
- Inspirational, uplifting and motivational content
- Mood lifting contents
- Yoga and other meditations
- Exercises
- Tracking users' actions and behaviors
- SOS features
- Telehealth features such as therapist appointment for audio/video consultation
- Results and Progress
- Charts and trends
- Question answers
- Artificial intelligence built-in Chatbot
- Text messaging
- Games, audio, video, quizzes
- Notifications and reminders
- User's privacy

Benefits of Digital CBT

The Digital CBT offers several benefits over traditional CBT but some of the most important ones are:

- **Cost** - For any treatment, cost is a very important factor to consider. Compared to face-to-face therapy sessions, digital delivery is much more affordable.
- **Availability** - The DCBT apps are available at any time without any restrictions due to digital nature.
- **Accessibility -** The DCBT apps are accessible from anywhere on any device like PC, tablet, or mobile, which makes it 24*7 accessible compared to traditional methods.

There are several other reasons why Digital CBT takes an edge over traditional CBT. The Digital CBT apps are extremely easy to use and at the same time as effective as the traditional CBT methods. The digital delivery reduces the travel need thus being more environment friendly. The reach of digital delivery is more compared to face-to-face so a greater number of people can be benefited. The Digital CBT apps are highly engaging and, in many cases, a person prefers these over face-to-face sessions with a therapist. These apps also help empower people to effectively manage their health conditions.

Facts and findings
- Digital CBT is the most cost-effective option for the treatment of insomnia (a sleep disorder normally associated with stress and anxiety), which is a very significant health concern in the U.S. affecting 20-30% of the population.
- As per a study, Digital CBT was found to be more effective in the treatment of depression compared to face-to-face consultation.
- As per another report, Digital CBT is a rapidly growing field and COVID-19 pandemic has fueled the demand further across the world. There is considerable room for digital technologies advancement in this field.

- Another research suggests Digital CBT to play a key role in the healthcare system alongside traditional in-person experience.

Disadvantages of Digital CBT

Though there are proven advantages of using Digital CBT, there are some disadvantages as well. Some of these disadvantages are:

- Digital CBT is dependent on technology and internet so if there is an unavailability of internet or a technical glitch, the digital delivery of CBT would not be possible.
- There might be some privacy concerns about how the person's data is being used.
- Since there is no enforcement in Digital delivery of CBT, there could be an issue of adherence.

## Digital CBT Market share and size

- As per Grand view research report, the global mental health apps market in 2022 was USD 5.2 billion and is expected to grow at 15.9% CAGR from 2023 to 2030.
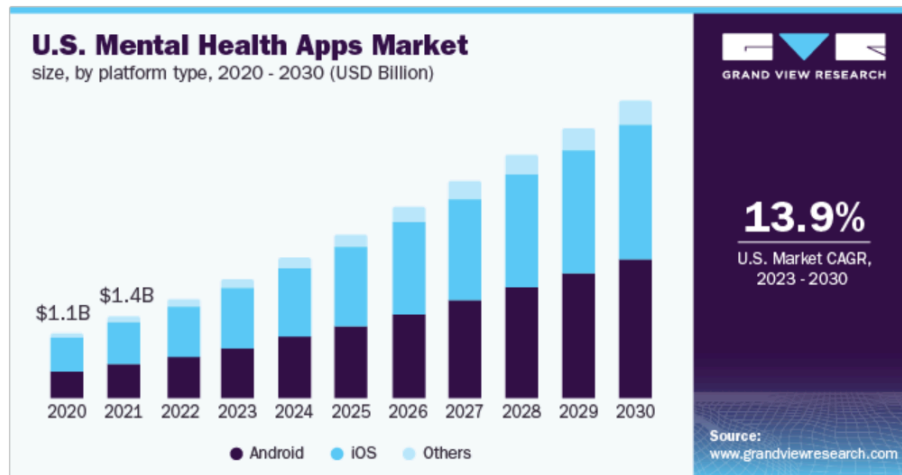
- The Precedence Research report expects mental health apps market size to be USD 19.6 billion by year 2030 from USD 4.4 billion in 2021 with a CAGR of 18.06% from 2022 to 2030.

MENTAL HEALTH APPS MARKET SIZE, 2021 TO 2030 (USD BILLION)
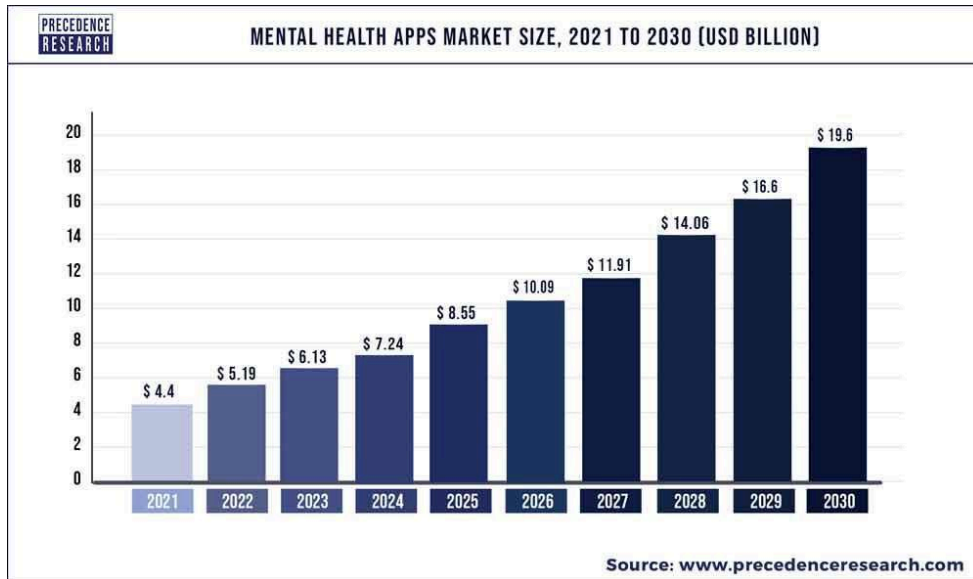
- As per a Deloitte report, the global spending on mental health and well-being apps will see strong growth.
- As per a report from Research and Markets, the global mental health apps market will touch USD 17.5 billion by year 2030 from current USD 5.2 billion in 2022.

Global Mental Health Apps Market

Market forecast to grow at a CAGR of 16.4%
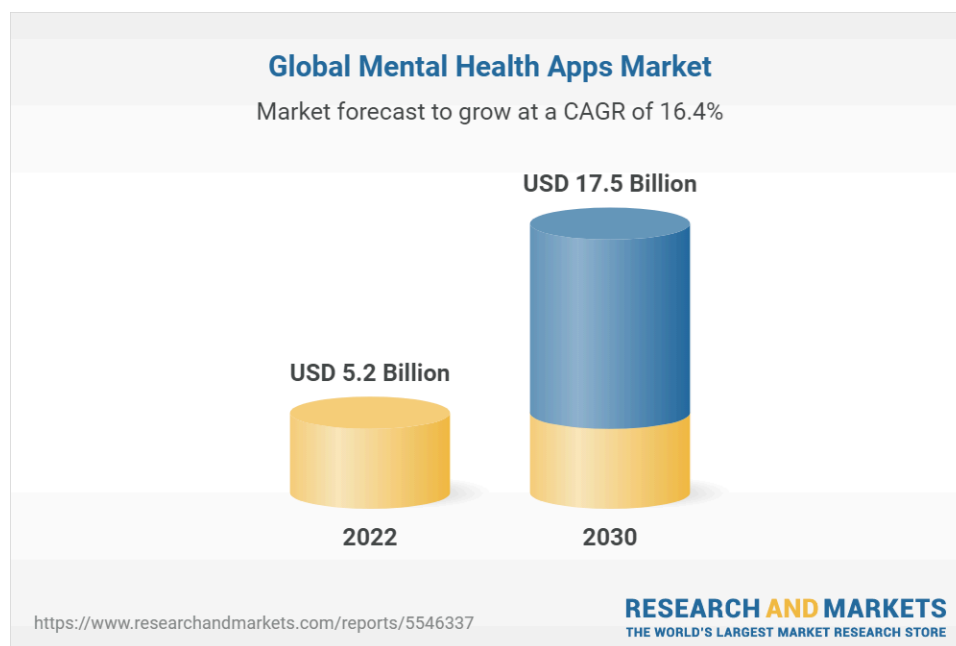
- Another report projects the Cognitive Behavioral Therapy market to grow to USD 295.14 billion by 2030 with a CAGR of 8.5%.

All these data points suggest that Digital CBT and the complete ecosystem is on a strong growth path and will attract more industry attention than ever.

Conclusion

A world where mental health illness is increasing every year and more and more people are struggling to live a normal life and, in some cases, leading to suicidal deaths, a proper mental healthcare becomes extremely important. People across all age groups are victims of mental health conditions and the recent COVID-19 pandemic has pushed more people into such health conditions. These mental health conditions, if not treated, can cause serious social issues. Quality and effective mental health care is the need of the hour.

The states across the world should increase the spending on these health conditions and with the help of technological advancement, should provide more affordable and quality healthcare to large populations. Cognitive Behavioral Therapy has a very important role to play for the effective treatment for a range of mental health problems. Whether it's a traditional face-to-face delivery of therapy sessions or over digital format, the objective of right treatment to all should be fulfilled at any cost. CBT and Digital CBT both are evolving and working hand in hand to address mental health issues in millions of people worldwide.

There is a big room for advancement in Digital CBT apps as a large population has access to the internet, PC, tablet and mobile devices. There are people around the world who prefer digital therapy sessions to avoid travel, high cost, stigma etc. The Digital CBT is very appealing to many people because of its accessibility, availability, confidentiality, anonymity, flexibility, and security. The need for Digital CBT apps will continue growing and with more feedback from people, the quality of treatment will also improve.

POV Summary

- The Digital CBT delivery is proven effective and here to stay alongside traditional CBT.

- More CBT apps will emerge to cater to the growing need for mental health conditions.

- Artificial intelligence and Machine learning will have a key role to play in CBT tools and techniques delivered in digital format.

- Further research and evidence-based learning would be required to further assess the effectiveness of CBT apps for a range of other mental illnesses.

- Because of the huge gap between the number of therapists and people suffering from mental illness, it is challenging to find trained therapists. More technological advancement in digital delivery of CBT will reduce dependency on human therapists to an extent.

- Growing Digital CBT apps market share and size is a great opportunity for the health providers.