

koko

Making mental health
accessible to everyone.

Disclosures



- Co-founder & CEO | Koko
- Scientific advisor | Homecoming

About Koko

- Koko is a tech -based **nonprofit** created by a team out of Airbnb and MIT.
- We have 7+ years of experience building mental health and safety products for many of the largest Internet platforms in the world.
- We've helped over **2 million people** so far, mostly adolescents.

tumblr.

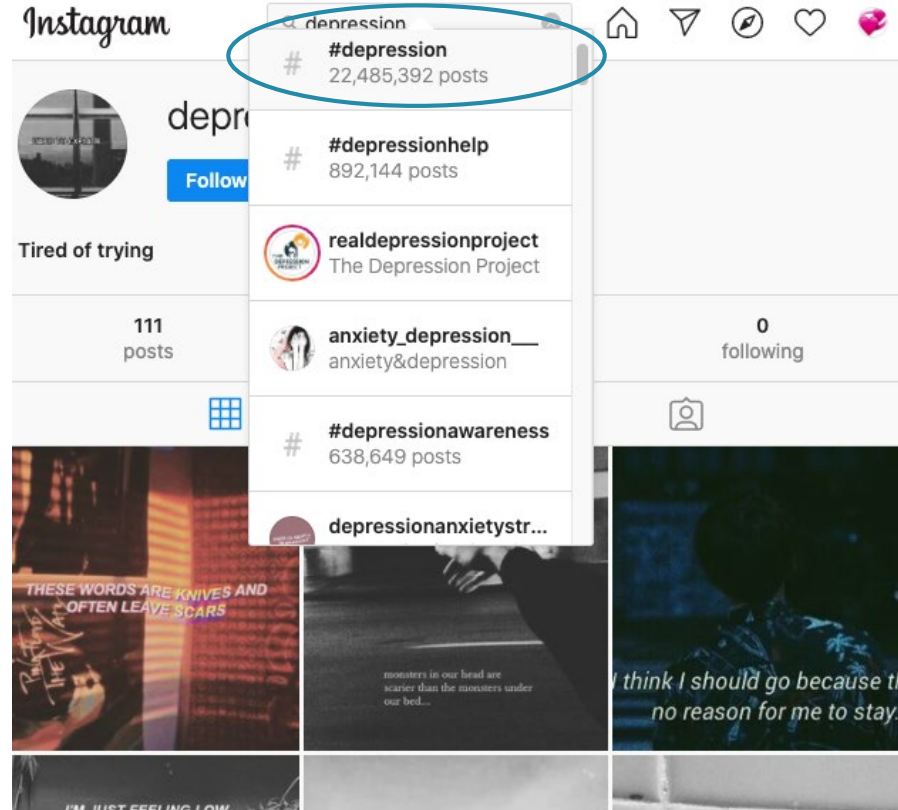


Pinterest



Most individuals with mental illness suffer for
approximately one decade before receiving help...

... and yet, millions are reaching out for help online *right now* — on the platforms they use every day.

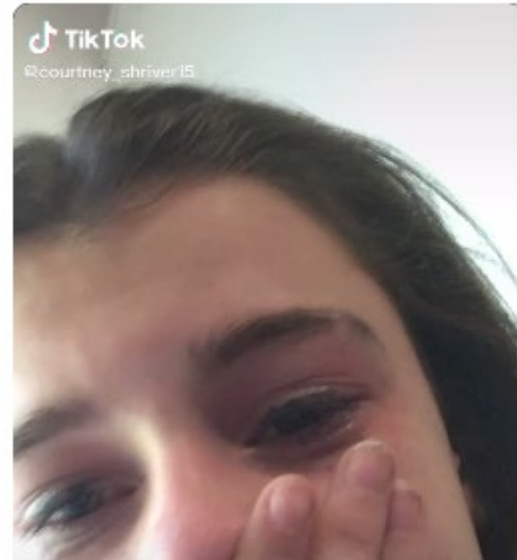


Reaching these individuals is a huge opportunity.

Here is how we do it...

#greenscreen #idontwanttoliveanymore

🎵 original sound - Numb

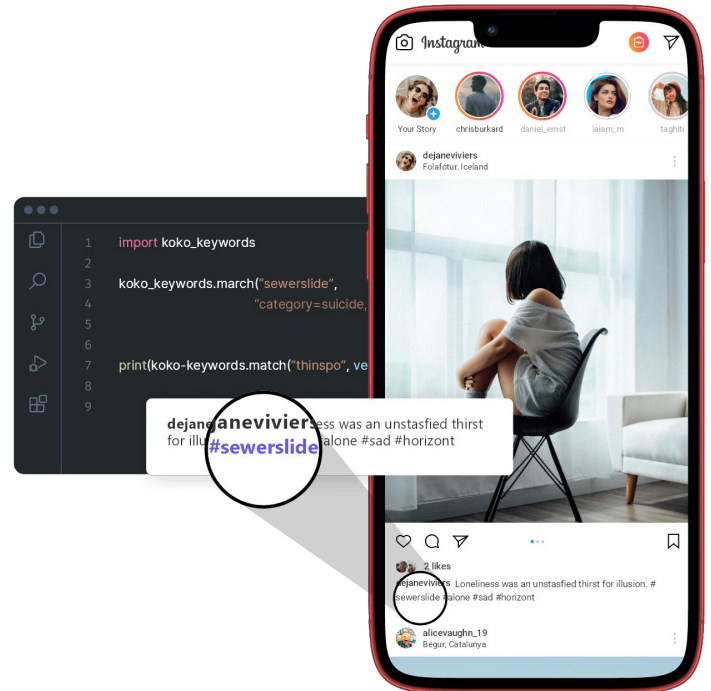


Crisis Toolkit



Our crisis toolkit has two components:

1. **A keyword library** that detects high risk terms and phrases.
2. **Koko resources** and online interventions.



Keyword Models

The Problem

Many online platforms have keywords that detect concerning search terms (e.g., “suicide” or “depression”). But these lists always have huge omissions.

hang myself

Top Accounts Videos

me always hanging out by myself 🥰
2021-7-23
#ColorCustomizer pls guys 🤔
macmillerluv... 111.4K

thanks for the people who told me to hang myself.
2021-2-23
therealfamo... 30.2K

"YOU THOUGHT I WAS GONNA HANG..."
2020-6-13
swaggyasstr... 2048

Everyday essentials from Amazon Brands

\$10 or less




Keep shopping for




LUXSWAY Wireless Pict... BIGLIGHT Wireless Batt...

Prep for Prime Day



Small business sweepstakes Explore more, get \$10

Buy Again



Wet Jet Swiffer WET JET


The Problem

It is hard to to regularly update keywords in response to dangerous new slang terms, evasive language, misspellings.


sewerslidal
✕
🔍

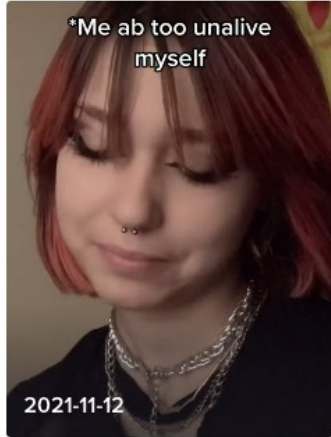
Top
Accounts
Videos

someone who's sewerslidal 🤔..

 appleg1rl ▶ 201.7K


but i always just end up trying it.

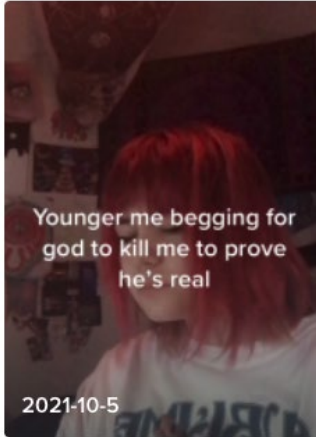
 sloresunited ▶ 2.71



2021-11-12


⚠️ TW: MENTION OF SEWERSLIDE ⚠️//// but like I don...

 ash.ketchvp ▶ 289.4K



2021-10-5

Yeah I still can't break this habit besties #fypp #sewerslidel #tw..

 m0ch1c ▶ 2.11

Keyword Models

Our regular expression library includes tens of thousands of mental health terms and phrases.

We can detect common terms, (#depression, #suicide) — as well as slang (#sewerslide) and evasive language (#an0rexi), and misspellings (bulimia).

Bindings for Python, PHP, Ruby, etc. Written in Rust, matches in under a microsecond.

```
anabudy
anabudyneded
anabudywanted
anacoach
anaemia
anahelp
anamia
anamat
anamatje
anamia
anamina
ananednomana
anaposts
anapro
anareca
anarecia
anarecic
anarecix
anarecksia
anarecya
anareixa
anareksea
anareksia
anareksic
anareksja
anareksya
anarekxia
anarex
```

How we derive our keywords

Unique datasets

- Keywords from our network of partners , 30k+ labeled crisis posts

Scraping

- We scrape and label thousands of co -listed terms from social platforms

Text Generators

- We use text transformers like GPT -3 to generate new keywords and phrases



Shouldn't we use neural nets?

Not for short text.

Text transformers are prone to bias, data drift, and are hard to fine-tune.

Keywords are transparent and can be evaluated and updated easily.

Integration is on the order of minutes vs months/years.

How was using the client?



Matheus Morett 11:57 AM

very easy

like 10 minutes of coding

We are not trying to predict suicide!

We are simply reaching users who are already crying out for help, publicly, on large Internet platforms.

Our goal is to radically redirect their mental health trajectory, right at the moment they are most willing to seek help.



Privacy is paramount

1

No personally -identifying data is ever passed to Koko

2

Referring to Kokobot is no different than adding a link to a hotline

3

Koko does not collect PII (email, sms, ip, etc)



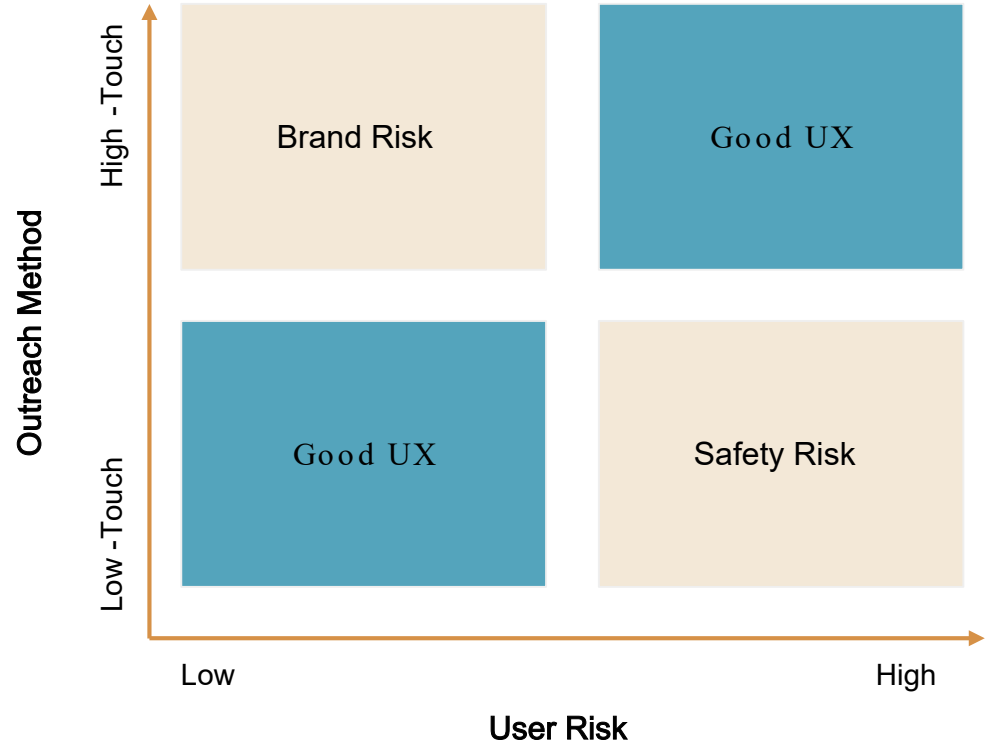
Outreach



UX Trade-offs

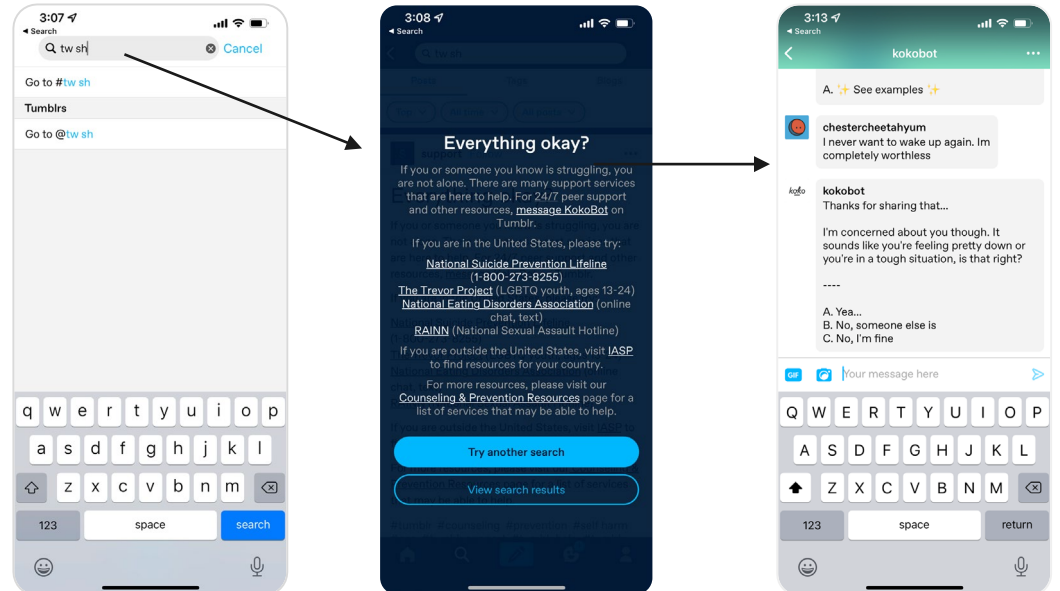
We need high precision models, as well as thoughtful user experiences that fail gracefully in the case of a false positive.

We must carefully manage these trade-offs when collaborating with online platforms and other partners.



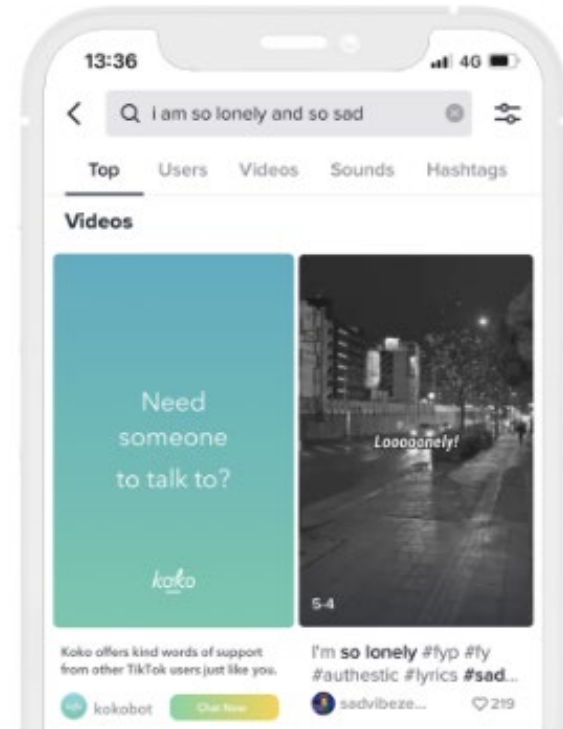
High Touch Example

Search is suppressed, a PSA is displayed, the user is sent a DM



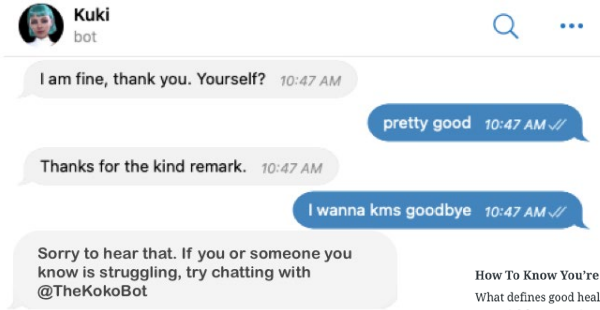
Low Touch

No PSAs. Koko is just pinned in the search results.



Other touchpoints

- User flags
- Article disclaimers
- Comments
- Facebook Groups
- Discord Communities
- Other bots



How To Know You're In Good Health
What defines good health? Good health is essential for managing stress and leading a longer, more active life. In this article, we

8 Suicide Prevention Methods That You Can Easily Apply.
Definition of suicide Suicide is the act of intentionally causing one's death. Mental

NO COMMENTS - add the first!

[Follow conversation](#)

MORE ON WORDPRESS.COM

 [Mberepeteron](#)
Mark Beré Peterson:

[Follow](#)

[International Crisis Resources](#)



Treatment Resistant Depression

If you've been treated for depression but your symptoms haven't improved, you may have treatment-resistant depression. Taking

Help is available

If you or someone you know is struggling, contact the National Suicide Prevention Lifeline at 1-800-253-8255 (TALK)

[Click here](#) free peer support and other resources.

Interventions

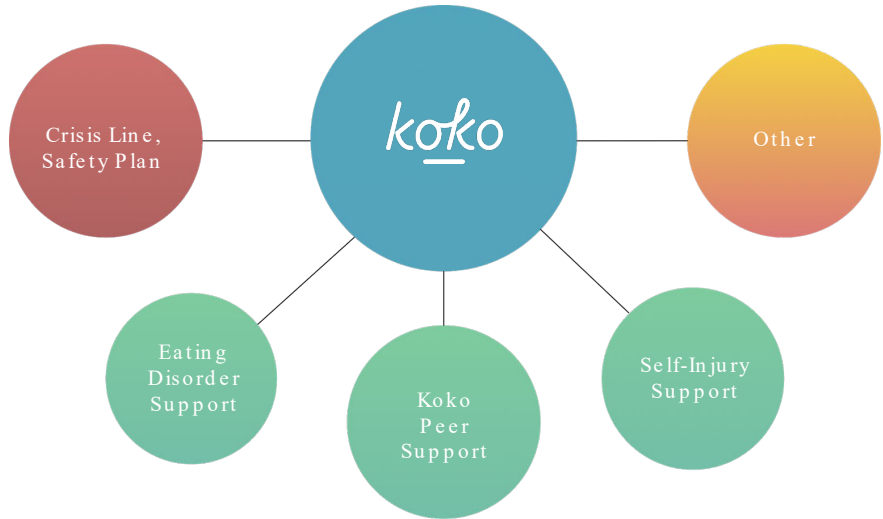


Something for everyone

Our interventions can be accessed online, for free, without having to download an app.

We provide online peers support, single-session interventions, crisis triage, etc.

We maintain updated links to hundreds of crisis lines around the world.



Single-Session Interventions

Along with researchers at Stanford, Dartmouth, and Stony Brook, Koko has developed short (8m in) single-session interventions that can be integrated into any online platform .

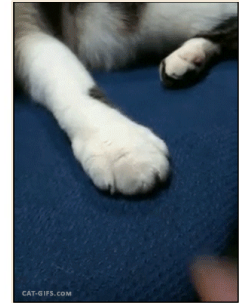
Our courses cover topics like eating disorders, anxiety, and self harm .



“ This course is for all gender identities and body types. All are welcome, and all can benefit.

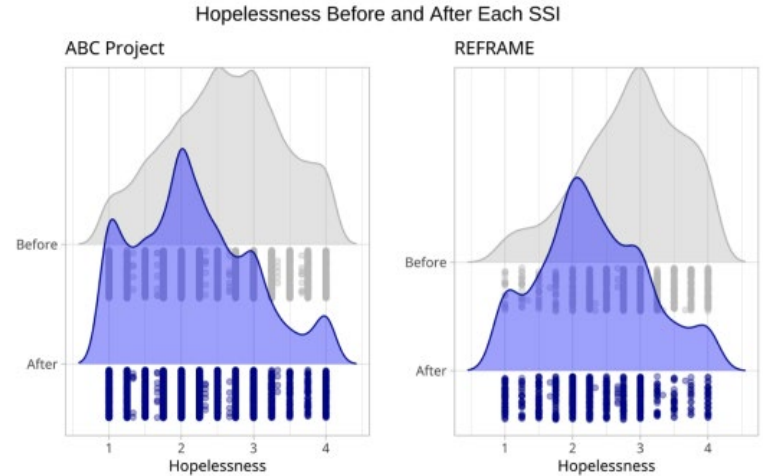
“ Your brain is always forming **new links** between emotions, thoughts and actions.

We can use this to our advantage...



Single-Session Interventions

- High completion rates (~25 - 57%) relative to real-world completion rates among other digital self-help interventions.
- Significant improvements in:
 - Hopelessness
 - Self-hatred
 - Motivation to stop self-harming
 - Body image



Dobias, M.L., Schleider, J.L., Morris, R.R. (in press). Single-session interventions embedded within Tumblr: A test of acceptability and utility. *Journal of Medical Internet Research - Formative*.

↻ icaruscomedown



icaruscomedown

hey [@kokobot](#) thanks for making me feel like I deserve to eat :)

34 notes



Precision Peer Support

Our AI -powered **peer support** platform is the tender beating heart of our service. Koko users are not only learning to help themselves, they are also learning to help others.



Kokobot Admin APP 2:08 PM

Thankyou Review: Thankyou Created
[moderation_review_sample_rate=0.05]

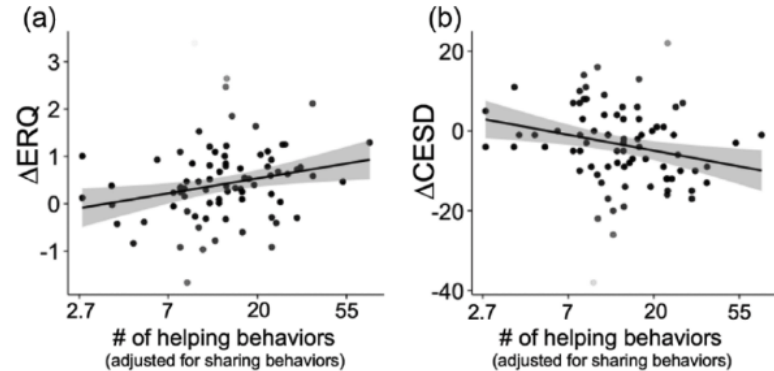
I cannot thank you enough for your response, you have shown me more kindness and compassion as a stranger on the internet than most have in my real life.

Precision Peer Support

Individuals who help others the most show the most pronounced reductions in depression symptoms.

Exchanges are short and circumscribed and every interaction is moderated by a human-in-the-loop AI system.

Response times are very low (< 5m on avg). Over **100 million messages** have been exchanged on our peer network.



Doré, B. P., Morris, R. R., Burr, D. A., Picard, R. W., & Ochsner, K. N. (2017). Helping others regulate emotion predicts increased regulation of one's own emotions and decreased symptoms of depression. *Personality and Social Psychology Bulletin*, 43(5), 729-739.

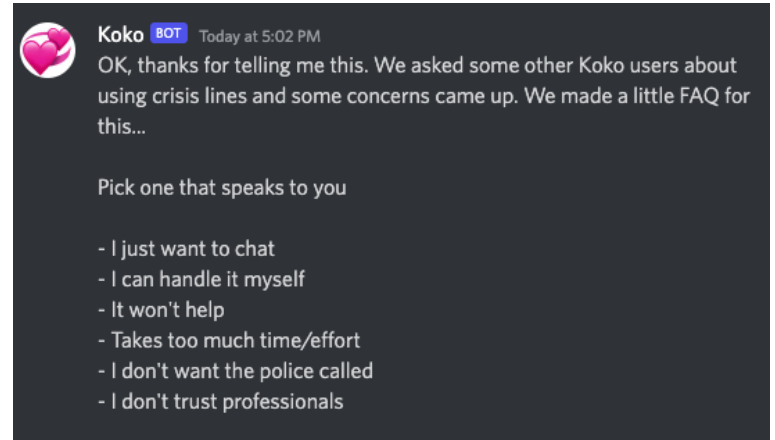
Crisis Triage

Showing a 1-800 number is not enough!

Conversion rates to crisis lines are extremely low.

In an RCT with Harvard, we demonstrated ways to increase conversion rates to lifelines amongst high risk individuals.

Users who go through Koko's crisis flow are 23% more likely to contact a hotline.

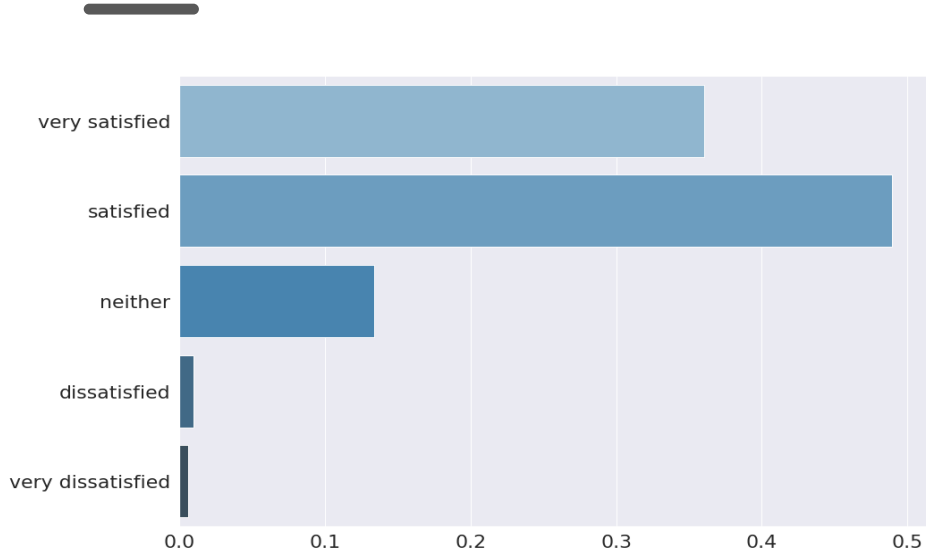


Jaroszewski, A. C., Morris, R. R., & Nock, M. K. (2019). Randomized controlled trial of an online machine learning-driven risk assessment and intervention platform for increasing the use of crisis services. *Journal of consulting and clinical psychology*, 87(4), 370.

“Yesterday, I **was feeling very suicidal** . I had no idea this service existed, but I’m very thankful it popped up on my screen because it sort of **saved me** .”

Anonymous Koko user

User Satisfaction



the-essentials [Follow](#)



I'm literally in love with kokobot
♥♥♥♥♥♥♥♥♥♥ thank you to everyone
who gave me hope and kind
messages!

#kokobot #self love #mental health



KokoBot Fan Art

themultiversetheory-x



themultiversetheory-x

Look man I have met many bots in my lifetime, mostly the meme kind. [@kokobot](#) ? *chefs kiss* best bot, love you babe!

15 notes



Research

Koko started as a clinical trial at MIT.

We have since published seven peer-reviewed papers on our interventions, including two randomized controlled trials. We partner with leading institutions like Harvard, Stanford, Dartmouth, and Stony Brook.

See: kokocares.org/research



Thank You

kokocares.org | rob@kokocares.org

