APW 2021
SMART Healthcare Delivery
Teenager Group
Cyberbullying

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02 Cyberbullying: The Stats
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PART 01

A Real Problem.
Amanda Michelle Todd (November 27, 1996 – October 10, 2012)
Have you ever experienced Cyberbullying?
PART 02

Cyberbullying: The Stats

- Cyberbullying Definition
- Statistics: Taiwan, South Korea, The U.S.
- Our Survey Results
2.1 What is Cyberbullying?
2.2 Cyberbullying in Taiwan

11% of victims have suicidal thoughts

47% of teenagers have suffered cyberbullying.

Source: Child Welfare League Foundation, 2020
2.3 Cyberbullying in South Korea

- 54.1% increase in recent years (2016→2018)
- **Cyberbullying** is even more common than physical assault (2019)
- Various types of Cyberbullying:
  - Teka
  - Explosion room
  - Game Shuttle
  - Wifi Shuttle

Source: Ministry of Education, 2019
2.4 Cyberbullying in the US

59% of U.S. teens have personally experienced cyberbullying (2018)
2.5 Real statistics from Alabama A&M

Have you ever witnessed cyberbullying?
126 responses

- Yes: 74.6%
- No: 23%
- Maybe: 2.3%

Do you think cyberbullying is a big problem?
126 responses

- Yes: 82.5%
- No: 9.5%
- Maybe: 2.3%
- I don't know: 5.7%

If yes, did you say anything?
126 responses

- Yes: 50%
- No: 42.1%
- Prefer not to say: 7.9%

Would it help you recognize cyberbullying if there was an app for it?
126 responses

- Yes: 73%
- No: 27%
PART 03

Current Solutions & the Need

- The Big Social Media Brands
- Other Initiatives
- The Need
But I don't want to limit the positive people/comments...

• Option to mute notifications for tweets with particular words, accounts, etc.
• Choose who can respond to your tweets
• Harassers' reach is limited

3.1 The Big Social Media Brands

Instagram
• “Are you sure you want to post this?”
• “Shadow ban”

Facebook
• Scans posts and comments for suicidal language

But I still have to see the mean comments...

Can't we stop it before going that far?
3.2 Other Initiatives

Kindly Beta

ScienceDaily
Your source for the latest research news
3.3 The Need

Combine & Improve
Victim - Bully - Bystander
Incorporable

CyberPeace
Peace Us Back Together

May 5th, 2021
PART 04
The Solution: CyberPeace

- Solution
- Business Model
4.1 First, story time...

Although **Noby** is not good at sports and always gets zeros in exams, he is a happy boy in your class.

But recently, he has suffered a lot. Because **Fat Tiger** enjoys bullying him.

With new technology, **Fat Tiger** not only beat **Noby** in reality but also chose to...

**Noby** finds there is no way to hide...
4.2 It is not only about one side!

Generally, bystanders have 4 choices:
1. Support the victim
2. Support the bully
3. Walk away
4. Say both are guilty

Help the victim and bully by explaining how the bully is acting inappropriately.

May 5th, 2021
4.3 Solution: CyberPeace

For **Victims**
- Set filters and blockers to words, topics, or people
- Provide links to helpful resources, both online and IRL
- Detect victims' mental condition. If suicidal thoughts were detected, give advice or report to parents or teachers if the situation is serious.

For **Bullies**
- "Are you sure you want to post this" notification
- Send educational materials when detecting bullying action.

For **Bystanders**
- Can select the "bullying" you want to fix. A correction will be shown on the sentence. And a notification will be sent to the original author.
- Send educational material to bullies.
- Send encouraging words to victims.
- All this can be done anonymously.

May 5th, 2021
4.4 Solution: encouraging rather than punishing

Sentiment rating system (Percentage + Emoji based)

Fat Tiger

Most frequent sentiment: “Angry”
Frequency of positive language: 25%

Blue Cat

Most frequent sentiment: “Happy”
Frequency of positive language: 75%
4.5 Solution: education matters

Not only for teenagers, but also for teenagers’ teachers and parents.

Educate them about cyberbullying

- Online courses
- Regular online workshops
- A professional involved community psychiatrist/counseling psychologist

Our vision is to decrease cyberbullying around the world!

May 5th, 2021
### 4.6 Business Model

<table>
<thead>
<tr>
<th>Key Partnerships</th>
<th>Key Activities</th>
<th>Value Propositions</th>
<th>Customer Relationships</th>
<th>Customer Segments</th>
<th>Channels</th>
<th>Revenue Streams</th>
</tr>
</thead>
</table>
| Our universities and nearby primary and middle schools | 1. Recruitment  
2. Psychoanalysis & programming!  
3. Promotion | Stop & prevent cyberbullying | 1. User, feedback for upgrade  
2. Promotor  
3. Donator | Target on teenagers (bulliers, victims, or bystanders) and their parents | Stop & prevent cyberbullying | Donation OR sale (Free version vs Premium) |

<table>
<thead>
<tr>
<th>Key Resources</th>
<th>Cost Structure</th>
<th>Key Activities</th>
<th>Challenge: tech performance of the NLP model</th>
<th>Challenge: at start point build the tool without support of the social network companies</th>
</tr>
</thead>
</table>
| Broadcom, National Yang Ming Chiao Tung University | Salary, server renting, promoting fee, ... | 1. Recruitment  
2. Psychoanalysis & programming!  
3. Promotion | |

1. Build the tool and upgrade it within nearby schools
2. Promote it to more teenagers and their parents
5.1 Summary

An NLP embedded tool to prevent and solve cyberbullying

Filter and block

Support

Condemn and help
CyberPeace
Peace Us Back Together
Thank You!

CyberPeace
Peace Us Back Together
APPENDIX
Online resources

THE CYBERSMILE FOUNDATION

STOMP Out Bullying
End The Hate... Change The Culture

Childnet International
Teenagers

• Definition
  13-19 years old

• Features
  Still growing
  Big change from childhood to adulthood
  Tech savvy (spending too much time on cell phone)
  Puberty, change, emotions
  Obesity
  Stubborn (less afraid of healthy issues)
  Risky: join more dangerous activities?
  Peer pressure
  “Trendy” is important

• Significance
  Teenagers are the future of the world
1. First stage:
   The most important thing is to build a **useful tool**. Profit making is not priority in this stage.
   Where to start and the form of the tool: **Chrome extension** (for web page based social networks) and **a smartphone app** (for smartphone based social networks)
   Key features: **accuracy, lite, fast, preserving privacy**
   The tool should be free and advertisement free in the first stage.
   We firstly introduce this tool to our universities and nearby middle schools and primary schools to test its performance and update it.
   Conduct surveys throughout the different age groups to better understand what measures need to be taken in order for the app to be more efficient

2. Second stage:
   Consider profit making after the tool works well and a large number of users are accumulated
   The tool is used by C but is sold to B as a service / solution provider.
   Advertisements throughout the app to bring in revenue from outside companies
4.3 Challenges

1. Tech: performance of the NLP based filters and detectors (currently, lots of negative comments on similar tools are about the performance)

2. The first step: build the tool without support of the social network companies

3. Will social media networks integrate tech into their apps?
Cyberbullying may be contributing to the increase in youth suicides

- There has been a troubling rise in teen suicide rates in the past decade. The National Center for Health Statistics (NCHS) found that suicide is the second-leading cause of death among US residents aged 10 to 34.
- Although the NCHS report, which was released in April 2020, does not suggest a reason for the increase in suicides, cyberbullying may indeed be part of the equation. One 2018 study found that young adults under the age of 25 who were victimized by cyberbullying were twice as likely to commit suicide or self-harm in other ways.
- Additionally, research presented at the 2017 Pediatric Academic Societies Meeting revealed the number of children admitted to hospitals for attempted suicide or expressing suicidal thoughts doubled between 2008 and 2015. Much of the rise is linked to an increase in cyberbullying.
- More teen suicides are also now attributed in some way to cyberbullying (1, 2, 3) than ever before. Furthermore, young males are most likely to commit suicide than females, although teen suicides overall were up between 2000 and 2017.
Possible solutions

- **This link** provides great insight into how an AI would be created to detect cyber bullying or harassing activity
- **This link** is another great source.
How Facebook, Instagram, and Twitter are protecting their users?

Facebook/Instagram:
We have a number of tools to help keep young people safe:

- You can opt to ignore all messages from a bully or use our Restrict tool to discreetly protect your account without that person being notified.
- You can moderate comments on your own posts.
- You can modify your settings so that only people you follow can send you a direct message.
- And on Instagram, we send you a notification you’re about to post something that might cross the line, encouraging you to reconsider.

For more tips on how to protect yourself and others from cyberbullying, check out our resources on Facebook or Instagram.

Twitter:
If people on Twitter become annoying or negative, we have tools that can help you, and the following list is linked to instructions on how to set these up.

- **Mute** - removing an account’s Tweets from your timeline without unfollowing or blocking that account
- **Block** - restricting specific accounts from contacting you, seeing your Tweets, and following you
Anyone can become a victim of cyberbullying.

**Facebook/Instagram:**
We know that it can be hard to report someone, but it’s never OK to bully anyone.

Reporting content to Facebook or Instagram can help us better keep you safe on our platforms. Bullying and harassment are highly personal by nature, so in many instances, we need a person to report this behavior to us before we can identify or remove it. Reporting a case of cyberbullying is always anonymous on Instagram and Facebook, and no one will ever know you let us know about this behavior. You can report something you experience yourself, but it’s also just as easy to report for one of your friends using the tools available directly in the app. More information on how to report something is included in Instagram’s Help Center and on Facebook’s Help Center. You could also let your friend know about a tool on Instagram called Restrict, where you can discreetly protect your account without having to block someone -- which can seem harsh for some people.

**Twitter:**
We enabled bystander reporting which means that you can make a report on behalf of another person. This can now be done for reports of private information and impersonation as well.
Help lines around the world

Cybersmile:
https://www.cybersmile.org/advice-help/category/who-to-call

International child helpline:
https://www.childhelplineinternational.org/child-helplines/child-helpline-network/