

PhD Student Mental Health Analysis Project

Ely Lin



Problem Overview

“I truly believe that a PhD degree can kill you”



Nadia A 'Funny, kind PhD student killed herself dent took his After R own life after 'not being posh enough'

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The 'tal

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'frighter

[India](#)

t' as he was

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4 suicides in 7 months at IISc Bengaluru during Covid put spotlight on mental health issues

Students accuse IISc of paying little heed to mental health amid the Covid pandemic, while authorities say they have been looking at ways to address the issue.

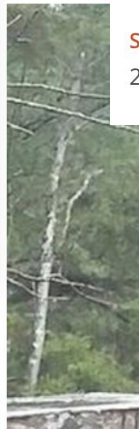
 March 22, 2021

 [Charlotte](#)

> [See n](#)

[SONIYA AGRAWAL](#)

21 September, 2021 11:11 am IST



9+

Problem Overview

- “Publish or perish” culture
- Power imbalance
- Uncertain prospect



**No
systematic
change!**



Data Understanding

- 2019 Survey
- 5 languages
- 6000+ current students
- 56 questions

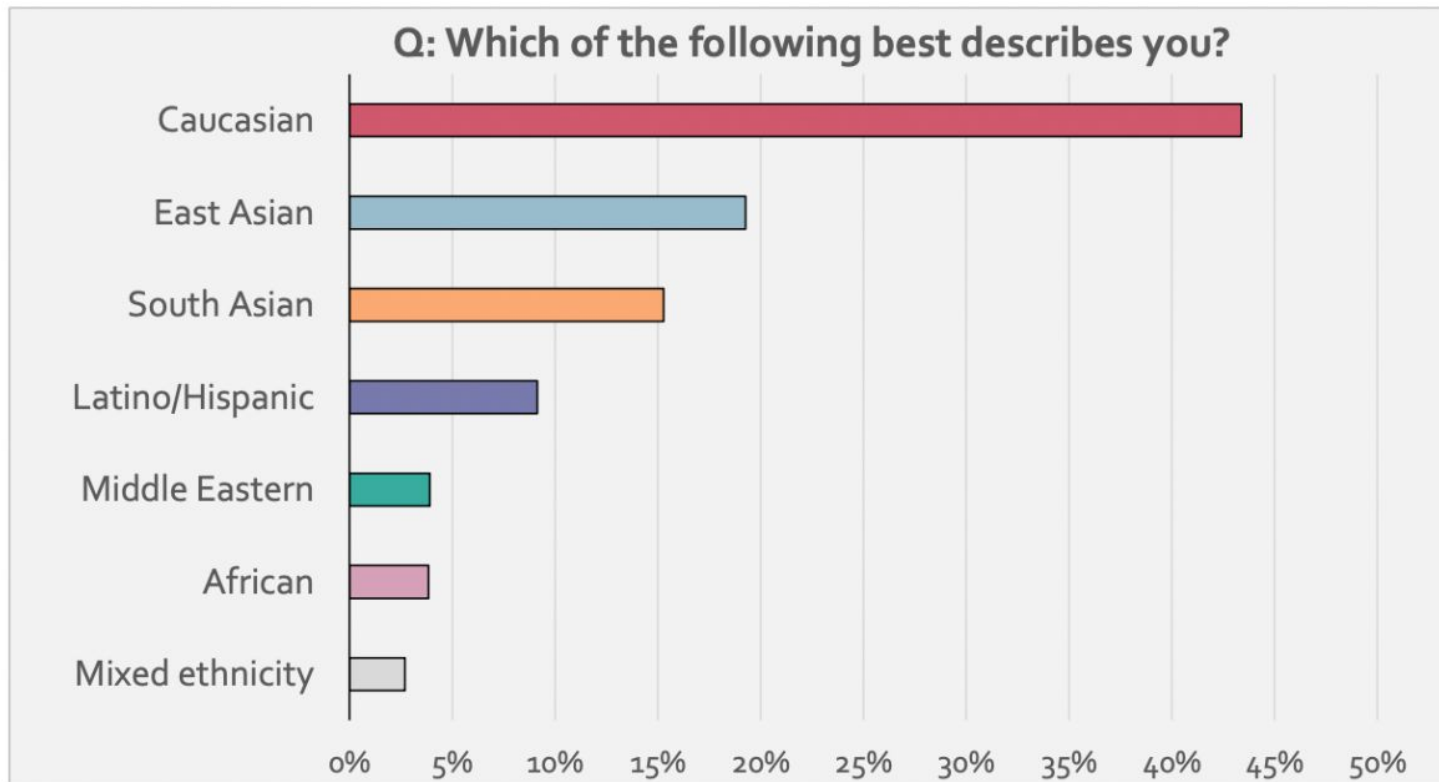


Survey Questions

- Decision rationale
- Satisfaction
- Environment
- Career plans and support
- Reflection

**Not
mental
health
specific!**

Data Bias



Source: Shift Learning UK NATURE PhD Survey 2019

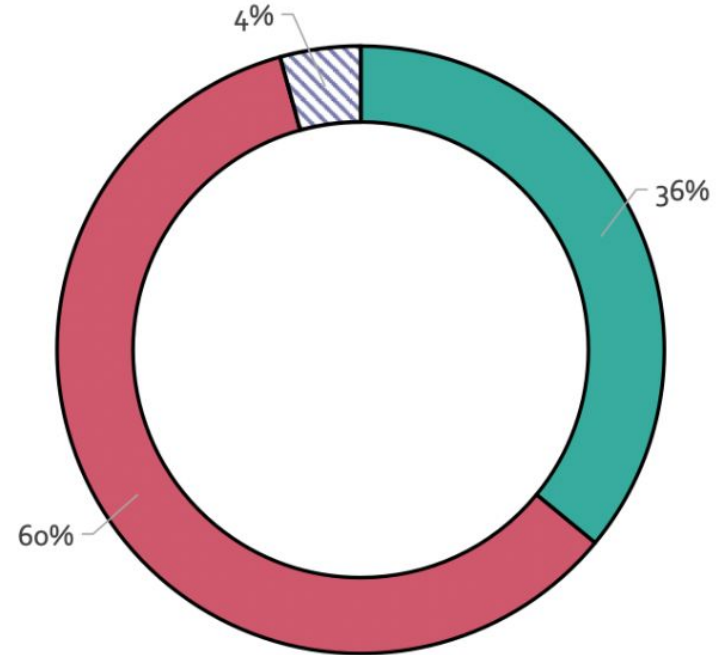


Target:

Assumption:

Need = Action

Q: Have you ever sought help for anxiety or depression caused by PhD study?

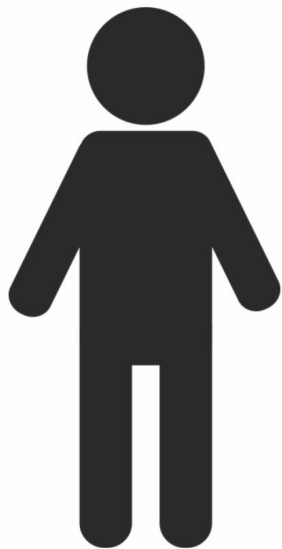


■ Yes ■ No ■ Prefer not to say



Inferential Model Discovery:

Bullying is key



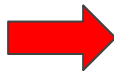
Not Bullied

10%

20%

40%

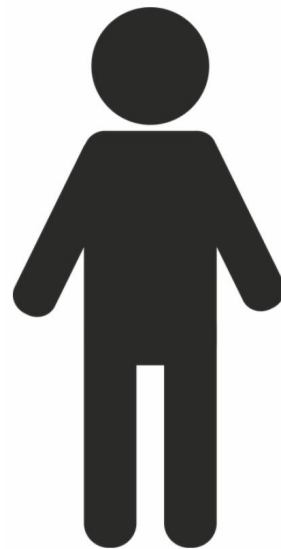
2X



20%

40%

80%

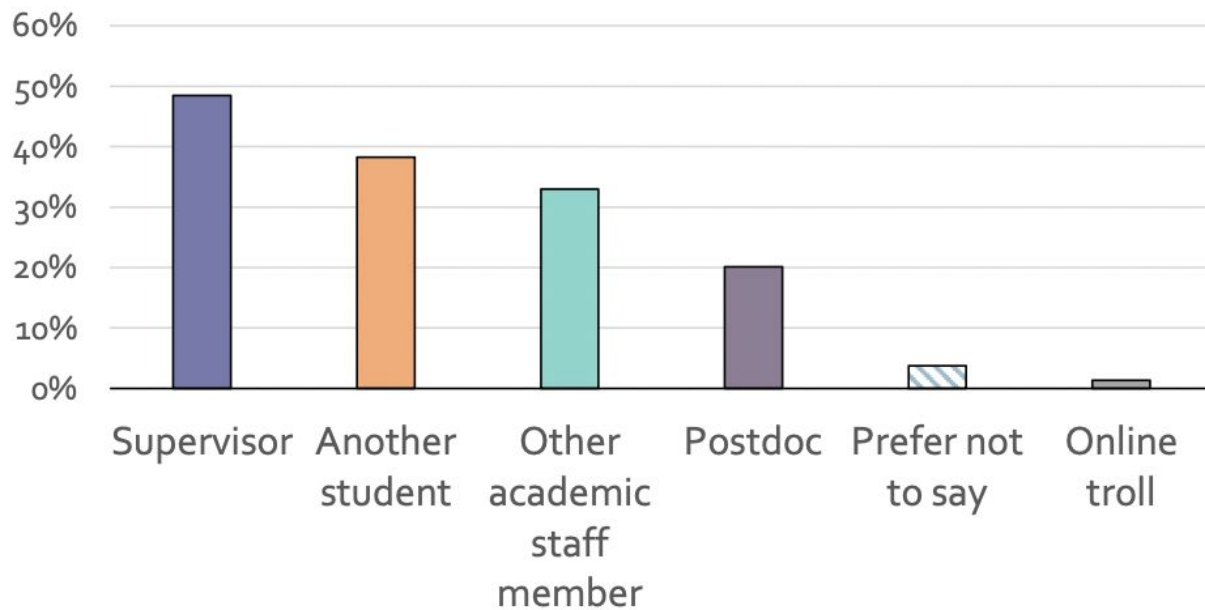


Bullied



Bullying

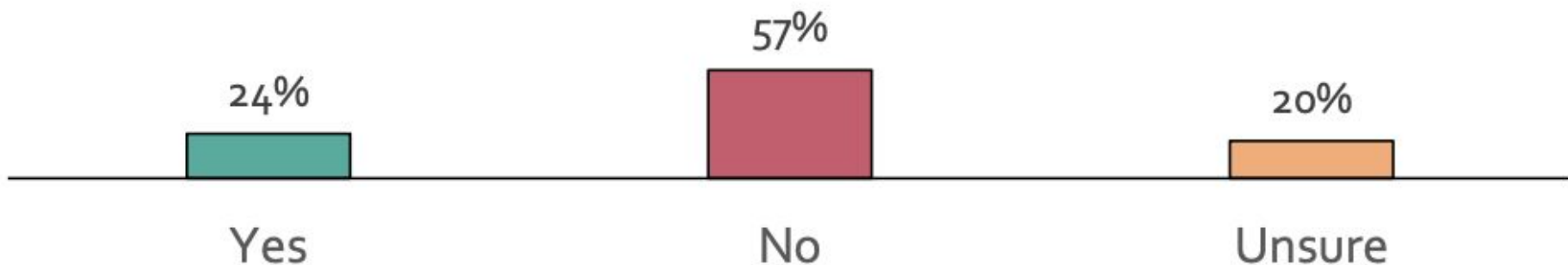
Q: Who was the perpetrator(s)?





Bullying

Q: Do you feel able to speak out about your experiences of bullying without personal repercussions?





Predictive Model Deployment

- Regularly
- Anonymously

Catch 43% sufferers
EARLY

True Label	Fine	Need help
	Predicted Label	Predicted Label
Fine	86% correctly predicted as fine	14% students who are fine wrongly flagged
Need help	57% sufferers slip through	43% sufferers caught by model



Recommendation

- Retrain/discipline faculty
- Monitor students
- Better questions



Thank you!

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Github: github.com/ElyLin

Medium: medium.com/@ely-lin