

# NRI:INT Design and Development of a Social Robot to Gather Ecological Momentary Stress Data from Teens



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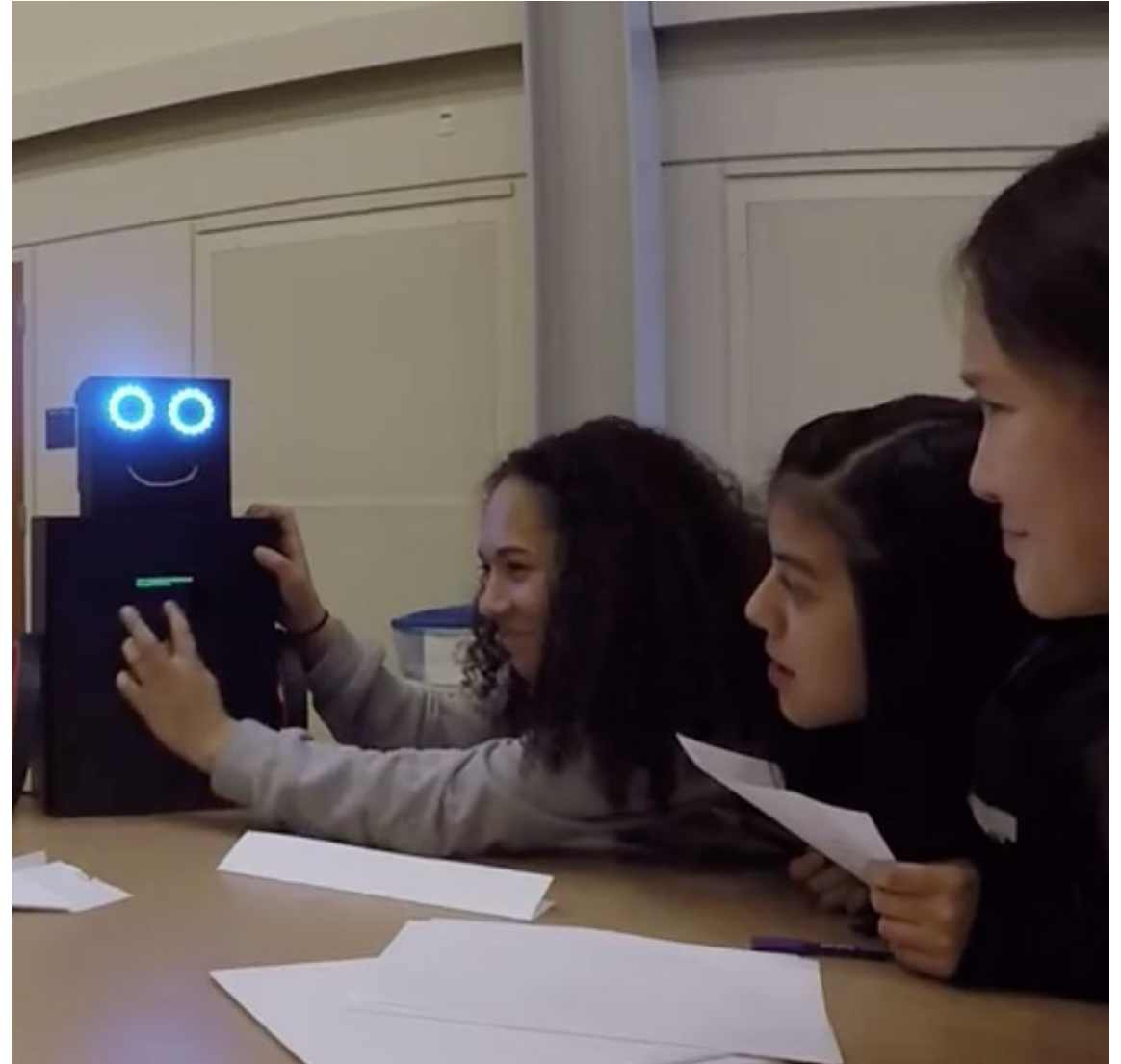
Teen mental health: a **wicked problem** requiring a crosscutting design solution



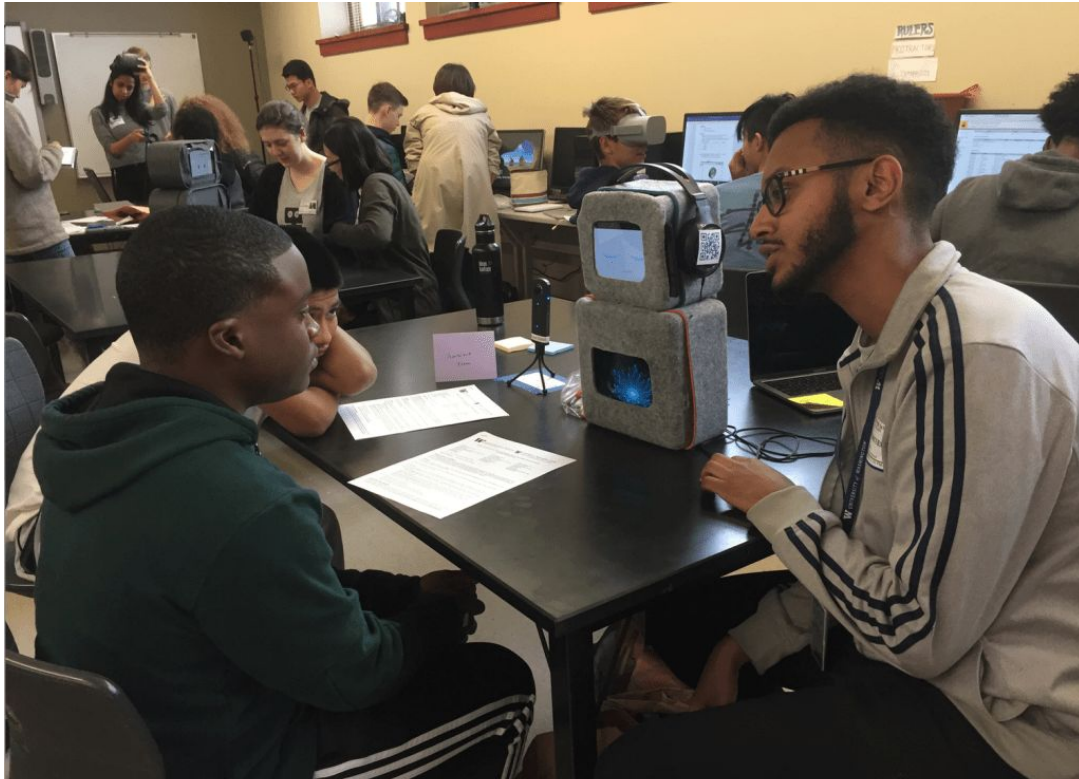
## A social robot can:

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- **Engage** teens to provide data
- Invite **social** conversations about stress
- Be an **innovative** idea to solve wicked problem



# Participatory Interaction Studies in the Wild



## Collaborating with teens as:

- Co-Designers
- Co-Researchers
- Robot Operators



## Our research

- 15 studies so far!
- 11 Seattle Area High Schools
- 400+ teens and counting, now from all over the country

# How do teens *envision* a social robot designed to help with stress?



[Boom Boom]



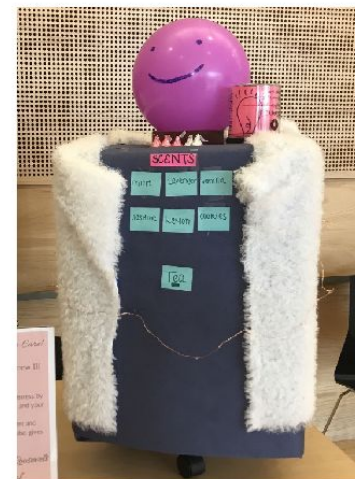
[Lucy]



[Petunia]



[CARLBot]



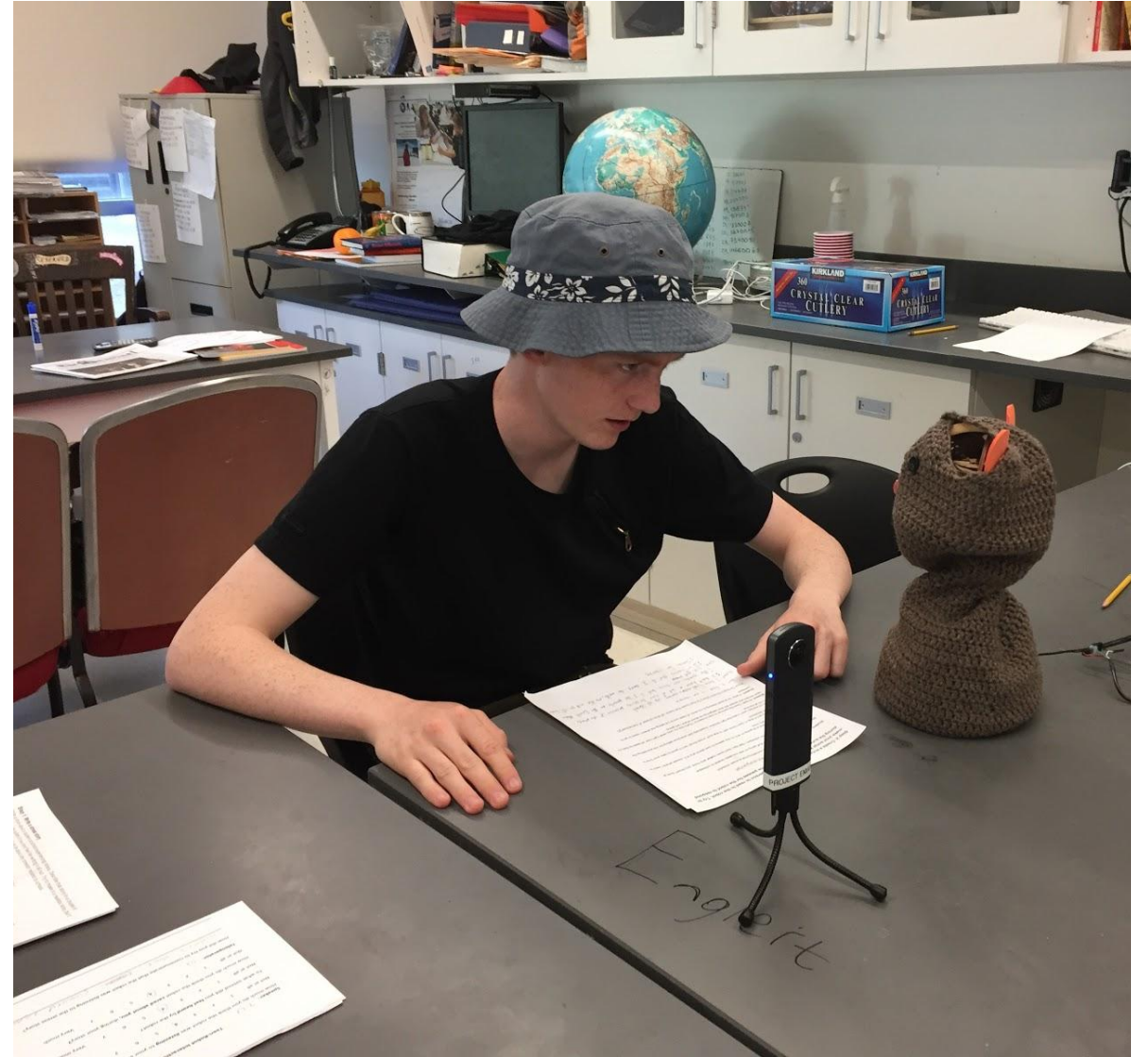
[Joaquin Bartholomew III]



[Comfort Zone]

# How do teens experience sharing stressors with a robot?

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## Study findings

- Sharing stress with a robot is therapeutic
- Teens will engage with robots remotely
- Customization and transparency are key in a robot
- Empathetic interactions



# Robot EMAR specifications

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- **Customizable robot** - ability for teens to change robot facial expressions, sounds, etc
- **End-user programming robot** - Be able to create a robot that fits their needs and preferences

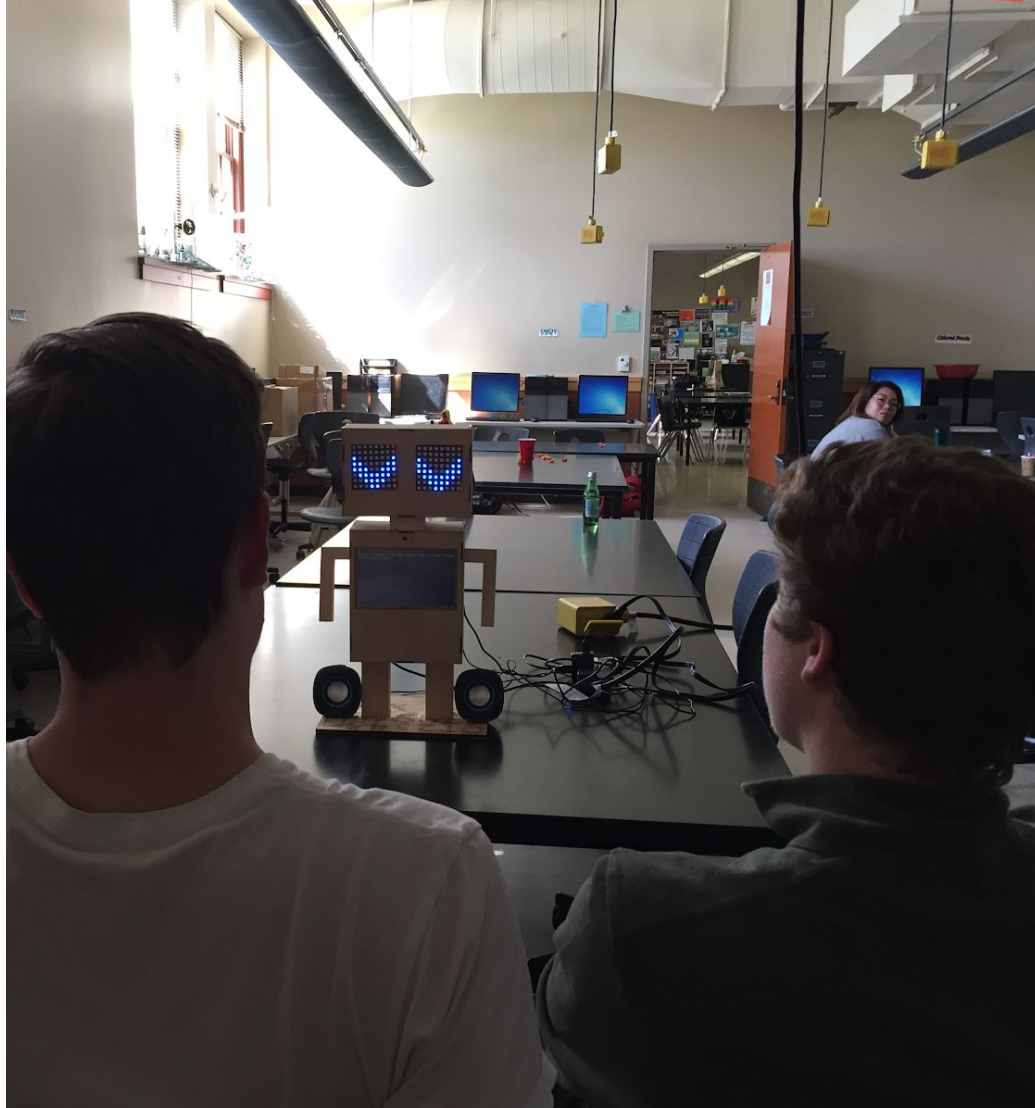


## Project EMAR: Broader impacts & next steps

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- Teens are the *future roboticists*, designers, and engineers.
- Novel, creative and scalable *solutions to support their mental* health are essential to the success of our future.

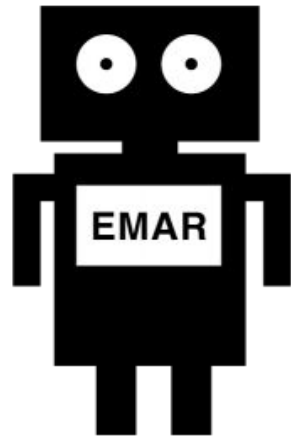




## Project EMAR: Next steps

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- Currently we are conducting ***remote teen-robot*** interaction studies including EMAR and other robots.
- Fall, 2021 we will ***deploy an autonomous EMAR*** into a public high school to explore usability, adoption, disruption, and impact.



# Thanks!

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<http://sites.uw.edu/emar>

**W**

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