

WearDuke: Promoting Wellness Through Mobile Health Technology in a College Student Population

Christine Wang¹, Lauren Willis², Lakshya Bakshi^{1,3}, Sarah Bond^{4,5}, Emma Herold^{2,6}, Shrey Majmudar⁴, Nathan Parikh^{1,7}, Jack Wang²

¹Duke Dept of Computer Science, ²Duke Dept of Biology, ³Duke Dept of ECE, ⁴Duke Dept of Public Policy, ⁵Duke Dept of Global Health, ⁶Duke Dept of Psychology, ⁷Duke Dept of BME.



Overview of Initiative

What is WearDuke?

An initiative designed to promote healthy living through student engagement with wearables & novel learning opportunities

How does it work?

- *Participants are given wearables (Apple Watch or Fitbit) to measure their rest and activity
- *Participants will also answer weekly survey questions (on topics such as sleep, general health, mental health, caffeine intake, and academics)

Pilot 1 (2019-2020)

- *All residents of Gilbert-Addoms invited to participate
- *Assess feasibility and acceptance of using a wearable with a companion app to record sleep habits

What are the future plans for WearDuke?

Pilot 2 (2020-2021)

- *Two freshman residence halls will be invited to participate
- *Students who already have an Apple Watch or a Fitbit may participate
- *We will evaluate a range of interventions to improve healthy habits

Full Scale (2021-2022)

- *All incoming freshmen will be invited to participate
- *Our goal is to promote healthy living by engaging students with wearables and intervening to improve health habits

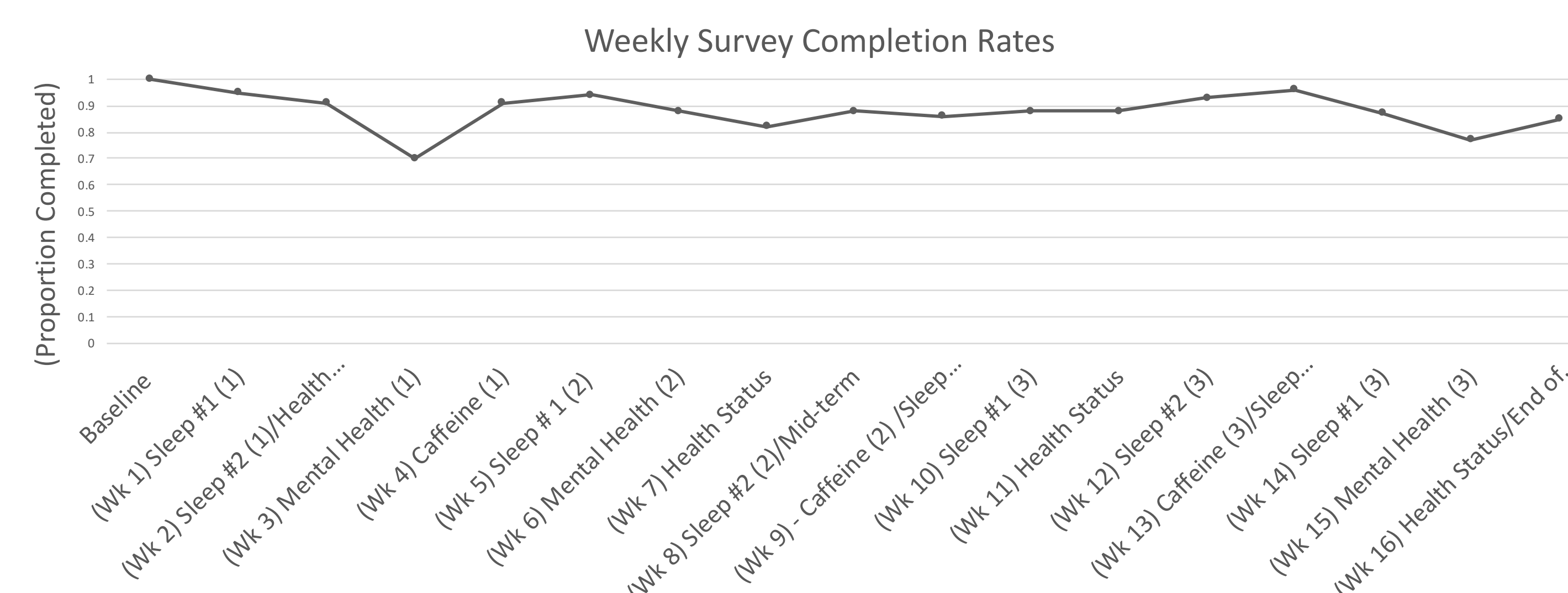
App Development

*The Bass team identified new features to add for the expanded pilot study. Among these new features are gamification, the dashboard, and the events directory (featured here from left to right).
*To implement these new features, the team developed the design and the app will be completed by Duke OIT.



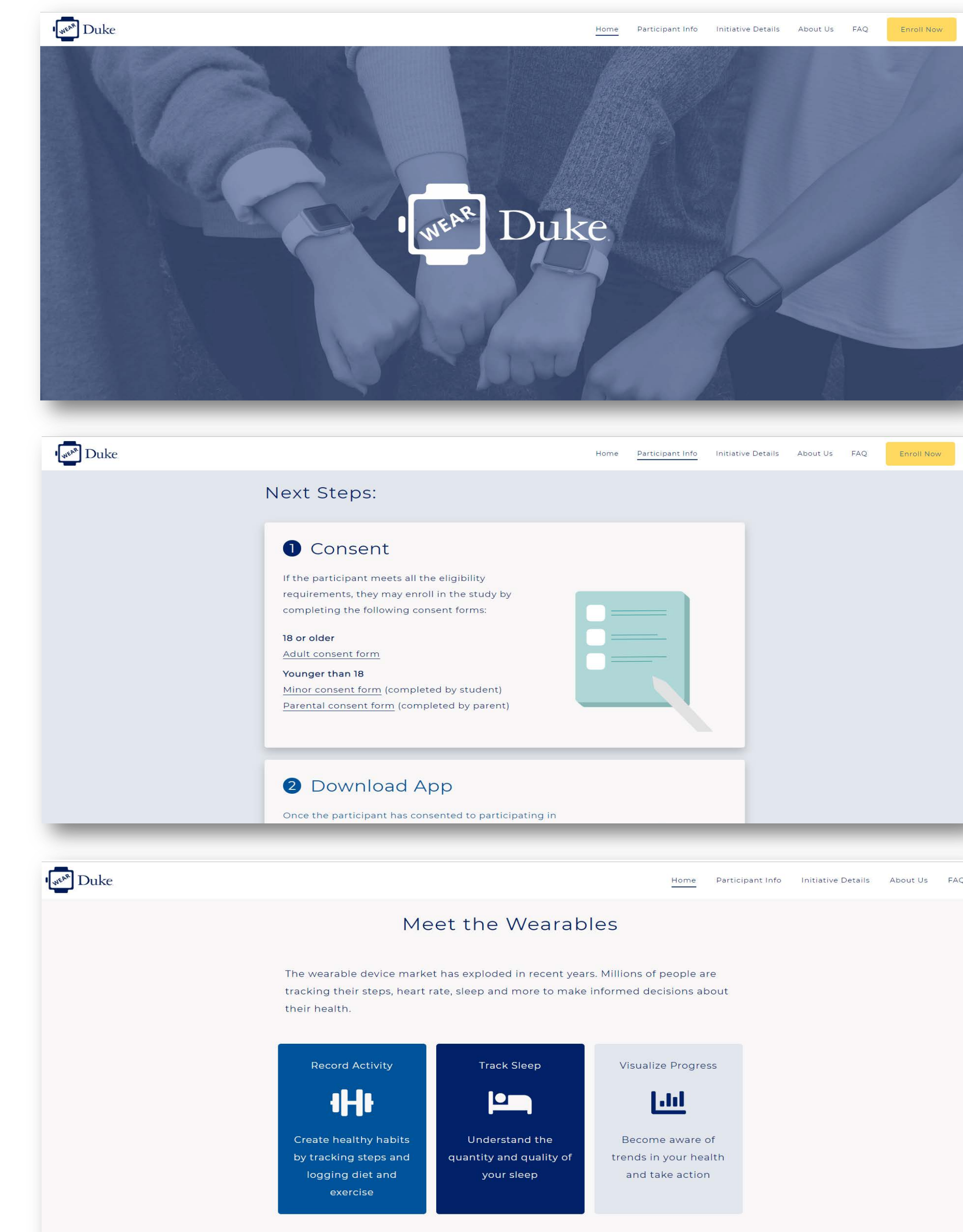
User Experience

*The Bass team developed an IRB-approved protocol to conduct a series of focus groups to gather user experience to inform development of next year's expanded study. Due to low participation, the team converted the discussion questions into an online survey, for which data is currently being collected.
*Participants' weekly survey completion rates have been close to 100% (as indicated by the chart below), showing the incentive system created by the Bass team was effective and progression to Pilot II is feasible.



Website

*The Bass team created a website to provide more information: <https://wearduke.duke.edu/>.



Social Media

*The Bass team has created various social media accounts to maintain student interest and awareness of WearDuke.
*Follow us on [Instagram](#): @wear_duke
*Like us on [Facebook](#): WearDuke
*Check out the WearDuke [YouTube](#) channel!

