Ubiquitous and Mobile Computing
CS 528: Final Project
“DeStress: A Stress Management Tool”

Nichole Etienne

Computer Science Dept.
Worcester Polytechnic Institute (WPI)
Stress ?!

A Look at the High Cost of Stress

Stress could shrink the brain’s hippocampus by 3%, which can impact memory and learning retention.

Irritability
Fatigue
Motivation

Stress can cause irritability (45%), fatigue (41%), and dwindling motivation and energy levels (38%).

Stress and anxiety directly led to Americans taking off 25 days in 2001; substantially more than the 6 days they took off for nonfatal injury and illness.

51% of American employees say they become less productive when they feel stressed.
52% of American workers say they’ve made a career decision based on stress levels.
In 2005, 33% of Americans said they would check in with the office while they were on vacation.
10% of medical costs go toward prescription drugs for anxiety-related conditions.

Sources: apa.org | cnn.com | guardian.co.uk | stats.org
Stress cost money, time and energy!

- Stress is estimated to cost American companies more than $300 billion a year in health costs [1].
- 50% of Americans are presently more stressed than years before [2].
- 55% of people who work in demanding jobs are stress all the time [3]
- only 35% know how to manage stress.
Can a mobile phone application teach individual how to manage stress?
Related Work (smartphone)

- **Automatic sensing**

- **Monitoring user usage.**

- monitors and promotes
Related Work  (stress reduction)

➢ Relaxation Training

➢ Meditation

➢ Deep Breathing

➢ Yoga

➢ Music
Methodology

Gender
- Male
- Female

Age range
- Below 18
- 18-28
- above 28

Stress can defined as any negative impact brought on the body by particular circumstances.

Do you consider yourself to be an individual that is usually stressed?
- Definitely yes
- Probably yes
- Might or might not
- Probably not
- Definitely not

Do you know how to manage your stress?
- Definitely yes
- Probably yes
- Might or might not
- Probably not
- Definitely not

Would you consider using a mobile application to aid with stress management?
- Definitely yes
- Probably yes
- Might or might not
- Probably not
- Definitely not
Gender?

Age range?

Stressed?

Stressed Management?

Interest in Mobile stress reduction application
DeStress is a stress management tool created for a CS 528 Final Project.

The application combines proven stress reduction techniques such as:

- Breathing
- Music
- Guided relaxation

Tap to Start
Does the DeStress actually help with reduce Stress

4. Has the phone application DeStress helped you reduce your stress overall?

YES!

5. On a scale from 1 to 5 (with 1 being not satisfied at all to 5 being extremely satisfied) How wo...
User Discussions

“Relaxing application “

“.. worked suprisingly well”

“Wish there were longer and shorter meditation sessions”

“ I like blue”
Conclusion and future work

- Yes, a mobile application is able to teach an individual how to manage their stress.
- The next step is to utilize the users saved meditation times to automatically prompt meditations.
- Increase meditation options
- Implement other stress reduction techniques.
References

- UCLA