kinetics
Family Activity Awareness System

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Interaction & Interface Design
Spring 2007
American Adults
- 64.5% overweight
- 30.5% obese
- 4.7% severely obese

American Children
- 30.3% overweight
- 15.3% obese

Source: American Obesity Association
Physically Active Families

Our goal is to create an intelligent agent for the home that would support families with teens and pre-teens to be physically active together.

Frick Park - Sunny Saturday Afternoon
Physically Active Families

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Children
- Organized physical activities
- Unstructured play time

Parents
- Parents socialize while guarding children in playground area

Frick Park - Sunny Saturday Afternoon
Exploratory Research

- Interviews with 2 families
- Interview with professional health coach
- Magazine Analysis
Family Interviews

Two Moms

Atypical mother with overzealous need for physical fitness

Design Implications

We have to be careful to avoid an obsessive focus on children’s health
## Family Interviews

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<td>Typical mother who wants to be with her children, but does not have enough time</td>
<td>Create a product that creates opportunities for parents to spend time with their children</td>
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Expert Interview

Professional Health Coach

Approaches coaching from all aspects of healthy living

Must have internal motivation, and set goals to become more healthy

Pedometers are a vital tool for providing immediate feedback about activity, and can be used for friendly competition

Implications

We acknowledge this, but we need to keep our focus narrow

Our target audience has preexisting internal motivation; we need to support setting and maintaining goals

Monitoring activity and providing progress statistics needs to be the core of our system
Magazine Analysis

“While Mom’s away, Dad will be feeding us from the four major food groups: Canned, Frozen, Fast, and Junk.”
It is mom’s “job” to keep the family healthy

Poll of readers showed a considerable amount of embarrassment in going to the gym

There is a desire to be healthy by all ages
kinetics
Family Activity Awareness System

- Reminder & Encouragement
- Control
- Family Status
- Privacy
- Rewards
I need to be reminded and encouraged to do physical activities.
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I want to feel like a good parent.
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I need to know about my family member’s activity status.
Reminder & Encouragement

I need to be reminded and encouraged to do physical activities.

I want to feel like a good parent.

Control

I don’t want a thing to dictate my life. I want to set my own goals.

Family Status

I need to know about my family member’s activity status.

Privacy

I am not willing to share the details of my health with others.

Rewards
I need to be reminded and encouraged to do physical activities.

I want to feel like a good parent.

I don’t want a thing to dictate my life. I want to set my own goals.

I need to know about my family member’s activity status.

I am not willing to share the details of my health with others.

I need to be rewarded for my good activity. I need to feel good about it.
Concept Generation

Brainstormed 60+ Concepts

Categories of Needs Addressed
Scenarios for Concept Validation

1. Family Watching TV

2. Bunny & Morning Cartoons

3. Fridge Center

4. Fridge Center & Scheduling

5. Mirror

6. Family Meal

7. Family Activity Selection

8. Goal Setting, Kids

9. Goal Setting, Dad
Concept Validation

1. Family Watching TV

“What kind of parent are you if you don’t know that your child has been watching 4 hours of TV?!”

“If I’m being lazy, I know I’m being lazy.”

6. Family Mural

Mom asks Brandon if he wants to go for a bike ride around the block, and off they go.
Concept Validation

“What kind of parent are you if you don’t know that your child has been watching 4 hours of TV?!”

“If I’m being lazy, I know I’m being lazy.”

Trends of are more informative to parents than current activity status
Concept Validation

3. Fridge Center

"Kids never need to see their health status or their parents."

"Knowing my progress would keep me motivated."

5. Mirror

Dad wakes up and sees a record of his activity and health progress while he is getting dressed.

The house mirror compliments him since he has been keeping up with his activity goals.
Concept Validation

“Kids never need to see their health status or their parents.”

“Knowing my progress would keep me motivated.”

Only parents need to review activity status in private locations such as the bedroom.
Kinetics
Family Activity Awareness System

Concept Validation

4. Fridge Center & Scheduling

“Knowing my kids want to do something in advance would let me plan better.”

“Getting suggestions that my family can enjoy is great!”

7. Family Activity Selection

Family members put ideas for activities into the fitness activity jar.

This week, they chose Brandon’s idea of biking. He got a turn to pick an activity.
Concept Validation

“Knowing my kids want to do something in advance would let me plan better.”

“Getting suggestions that my family can enjoy is great!”

Supporting scheduling and activity suggestion empower the parents
kinetics - Monitoring

Shoe Inserts

These shoe inserts monitor physical activity discretely, and report it back to the kinetics system.

Parent Pedometer Device

The parents carry a pedometer like device that helps record additional health information about adults. The device also acts as a key to access the kinetics application.
kinetics - Goals & Progress

Personal Goals

The kinetics application shows personal progress, with goals and trends. These help parents gauge their own physical health.
kinetics - Private Status

Family Status

Once in the kinetics application, which is only accessible with the parent device, parents can check the status of their other family members.

They also control their privacy settings regarding how much their family members can see about them.
scheduling family life

the kinetics system helps track the family’s activity schedule, providing reminders when appropriate.

activity suggestions

the kinetics application provides activity suggestions based on individual and family preferences, and on local information such as weather and discounts.
kinetics in Action

Time to meet Jessica and Amanda’s family...
Family Activity Awareness

Through our research, ideation, and concept validation, we created kinetics to help parents monitor their own and their family’s activity, and coordinate physical activities.