



Raising the Responsible Child: Collaborative Work in the Use of Activity Trackers for Children

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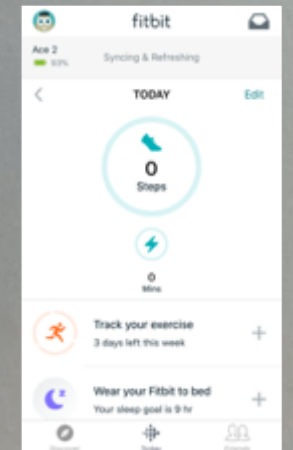
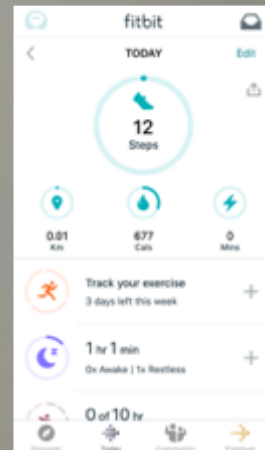
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Research questions

What are parents' and children's expectations from children-oriented activity trackers?

How parents and children naturally use children-oriented activity trackers towards collaborative management of family health?



Method

Data comes from 2,628 user reviews* of:

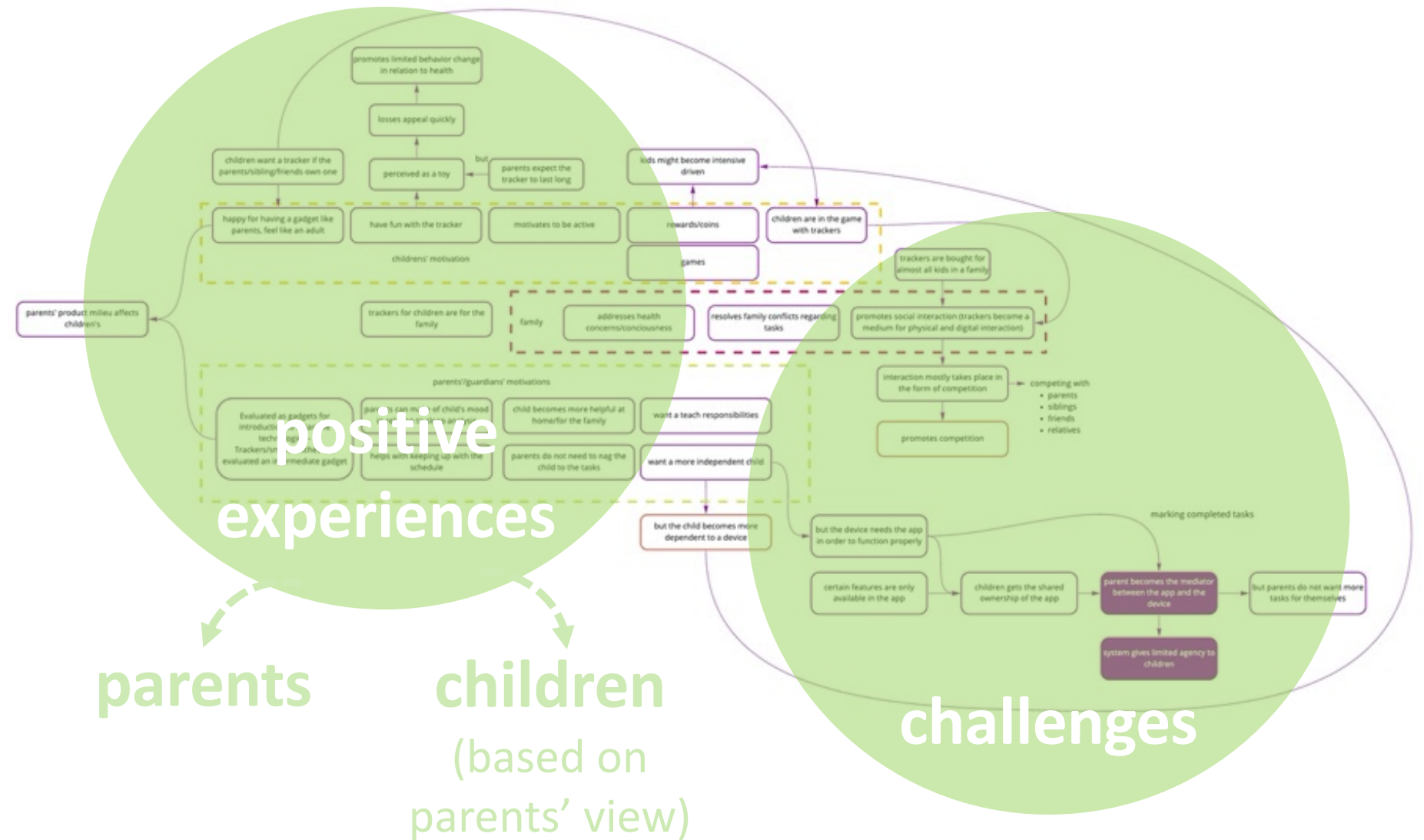
- 9 children-oriented activity trackers

- 1) Advista Sports
- 2) BingoFit Young
- 3) Fitbit Ace
- 4) Fitbit Ace 2
- 5) Garmin Vivofit Jr.
- 6) Garmin Vivofit Jr. 2
- 7) Joy Octopus Watch v2
- 8) LeapFrog LeapBand
- 9) Trendy Pro

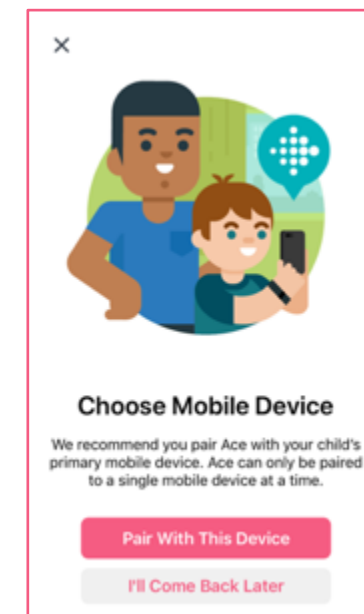
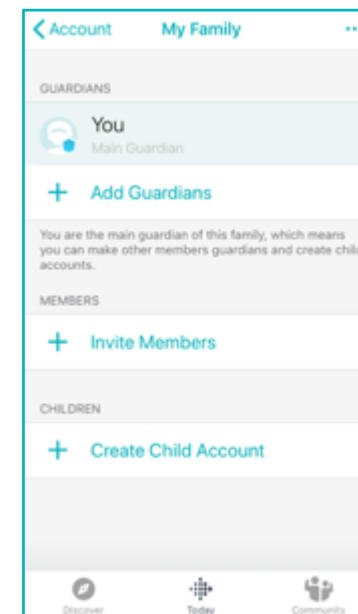
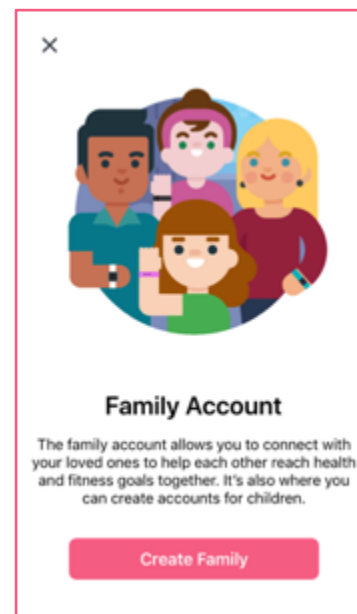
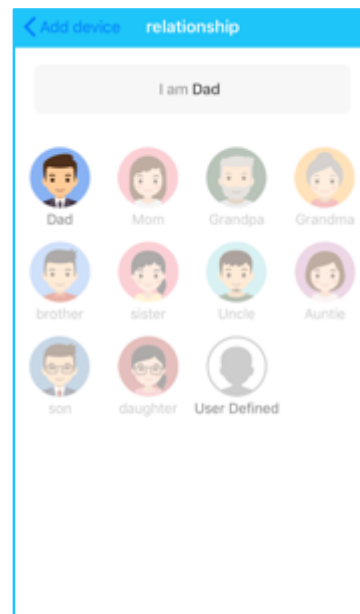
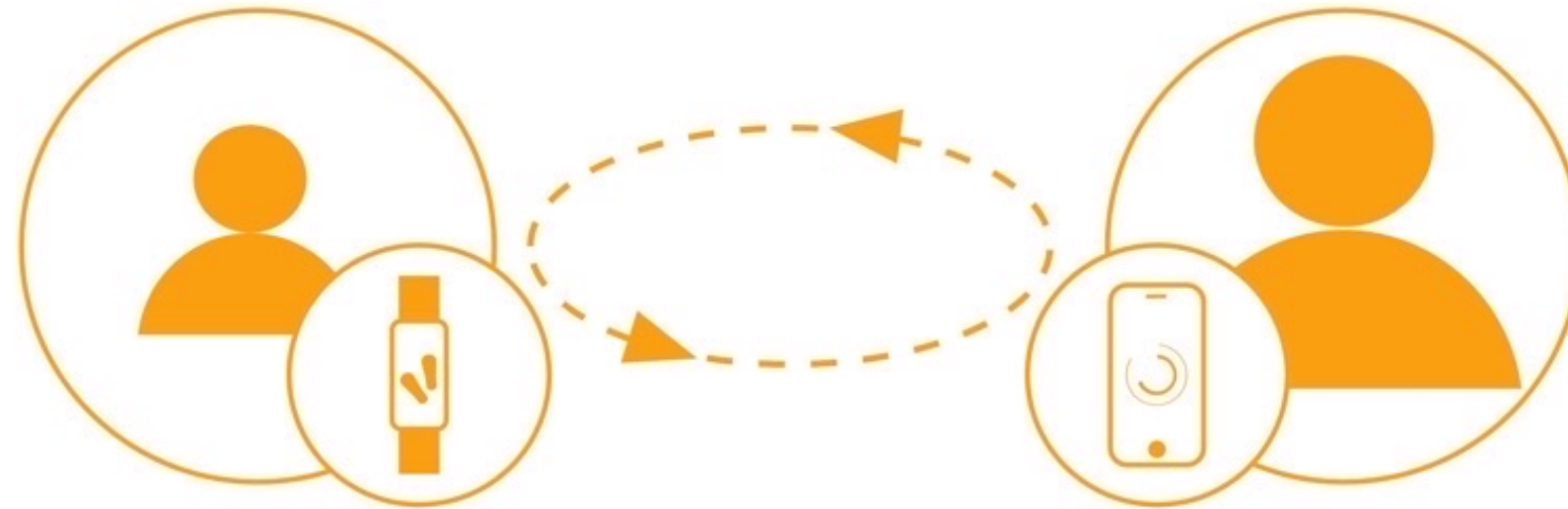
- their associated apps

- 1) Ufit
- 2) CC Band
- 3) Fitbit
- 4) Vivofit Jr
- 5) Octopus Watch by Joy
- 6) VeryFit 2.0

* Product reviews scraped from Amazon, BestBuy, Target, and Walmart; app reviews scraped from Apple App Store and Google Play



Overview of children-oriented activity trackers



Parent's experience

Monitoring child's wellness and behavior

"I ordered this for my son to see how much exercise he is getting during the day" (BFY, Amazon, 2019)

Starting a healthy life journey

"... what matters most is that she's motivated and that's a great start toward a healthy lifestyle later on in life for her" (GVJ, Amazon, 2017)

"he is always trying to compare his steps to mine or his mothers and we have little competitions which is fun for everyone" (GVJ, Amazon, 2017)

Parents' desire for family informatics

Trackers as mediating tools for family life

Facilitating family moments

Getting more help from children

"... yesterday I told them to come help unload all the groceries and I'd give them a [digital] coin. They jumped up excited to help and receive their coin" (GVJ, Amazon, 2017)

Keeping life on track

"I am a working mom. This watch really helps me keep track of my kids' schedules. I like keeping my kids active and mentally stimulated ... Especially on busy days, it's hard to keep track but this watch really helps me ..." (JO2, Amazon, 2019)

Teaching responsibilities to children

"I like this as a gift because it's not a junky toy that ends up on the floor ... It encourages responsibility and self-reliance. No more asking how long until something happens" (GVJ, Amazon, 2019)

Addressing family conflicts

"... really brought a lot of peace and cooperation ... with a little hint from the watch, but that is of course 10 times better than mom nagging" (JO2, Amazon, 2018)

Parent's view on children's experiences

Owning trackers as a family

"... we love the watch and he loves having it - it's a watch AND an activity tracker, so he can be like mom and dad" (TP, Amazon, 2018)

Participating as a family

"They frequently ask us (parents) and each other how many steps, and they glow when they have more steps than us adults" (TP, Amazon, 2018)

Children participating
in family informatics

Trackers motivating children to
collaborate more in daily life

Collaborating in daily life to enjoy rewards

"My kids are obsessed with earning coins. They actually asked if they could do more chores instead of going to bed. They love the loud beeping sound when they get a new coin (sounds are optional) and they are always trying to compete with each other. I had to add a bunch more chores to keep them happy" (GVJ, Amazon, 2016)

Feeling independent with trackers

"The multiple alarms have also helped her to be more responsible and independent by waking up on time for school and setting reminders for herself" (AS, Amazon, 2019)

Potential Challenges

“... even if the child remembers what chores they need to do on their own, the parent still has to go on the app to check them off on the list so the child can get credit for it ... that completely defeats the purpose and makes it annoying for everyone” (GVJ, Amazon, 2017)

You have to be right near the tracker in order to re-sync the tracker to your phone. This means that you cannot view your child’s activity/steps/sleep/etc. unless you are right next to them ... That, in my opinion, is a design flaw with the tracker” (GVJ2, Amazon, 2017)

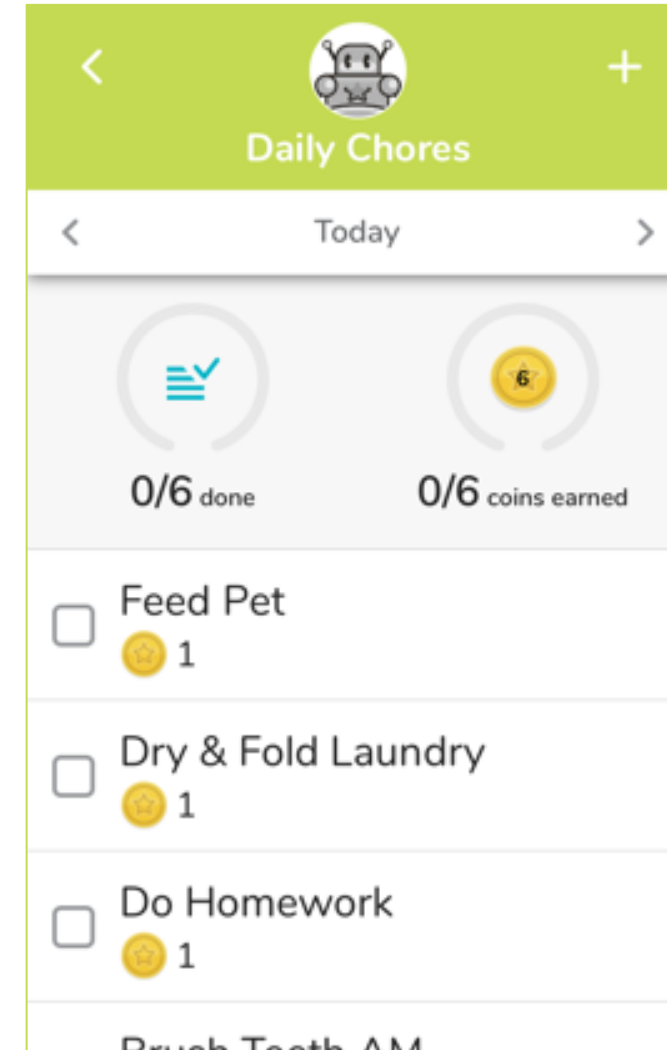
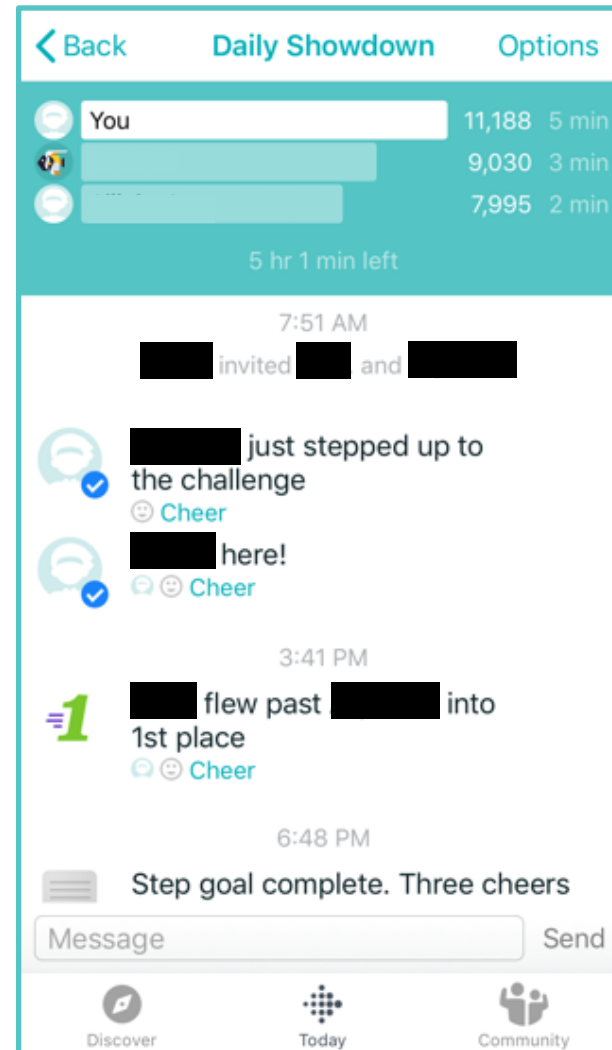
Trackers dependency on the parent

Child having access to parent’s smartphone

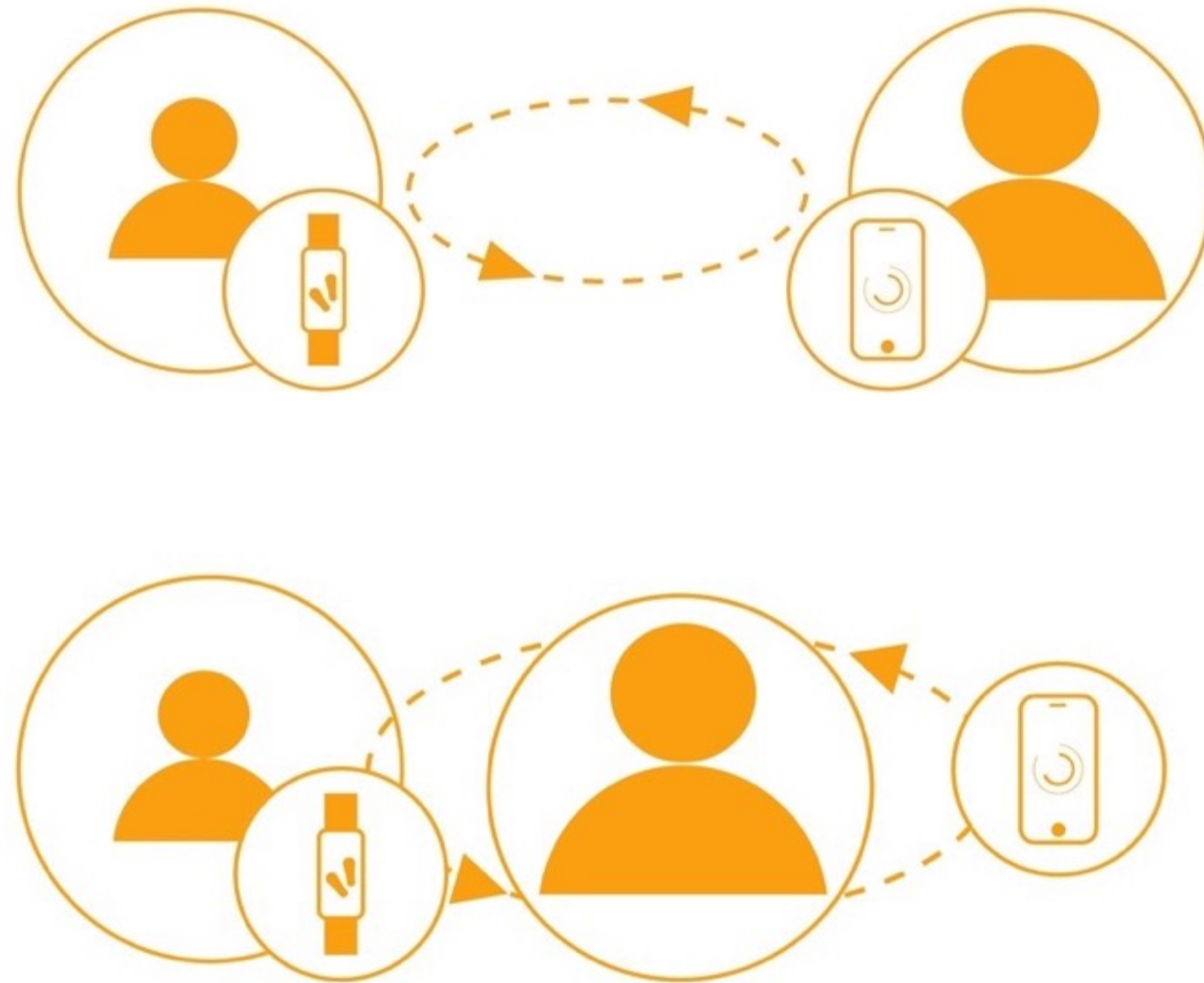
“Would love if my kids could use the family tablet to manage their steps and activity without cluttering up my phone! This is so irritating” (VF, App Store, 2017)

“... they would have to use MY PHONE to check their stuff off, and while they are in MY PHONE with full parental access to the app, who knows what they will mess with” (GVJ, Amazon, 2017)

Family tracking practices for and beyond health and wellness



New invisible work for parents



Tracker-mediated family life



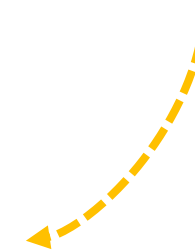
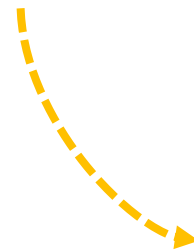
Conclusion



positively impact family life
with increased interaction and
communication



negatively affect children and parents
with their interdependency to each
other during the use of the technology



children-oriented trackers can better address
family needs and individual expectations with the
redesign of individual use and collaborative use
practices of this technology

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Thank you...

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