AI-Powered Supports for Neurodivergent Minds

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For the Transformative Technology Solutions Grant

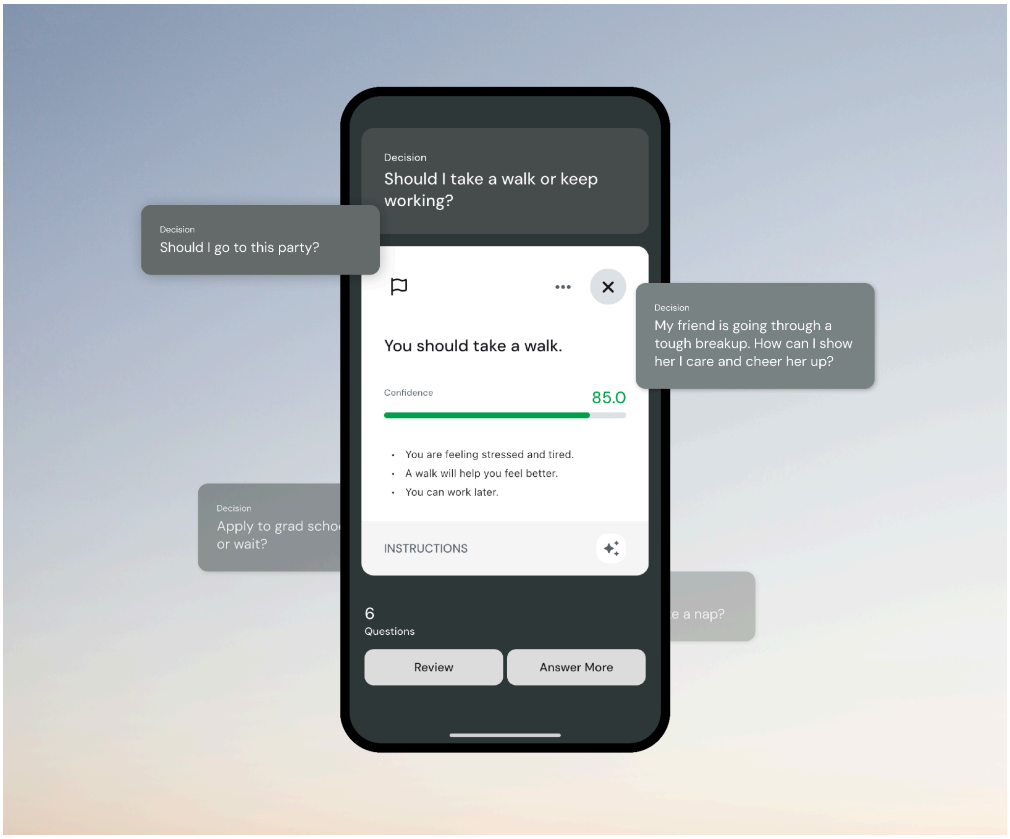

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Table of Contents

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Introduction

SUMMARY: How We Help Neurodivergent People Make Better Decisions

The Big Problem

In 2024, our organization (ITI) answered a call from the Ohio Department of Developmental Disabilities. They wanted technology using AI to help people with intellectual disabilities or other disabilities like autism, ADHD, cerebral palsy, and/or Down syndrome improve their health.

Our focus is on Autistic and ADHD adults. Autistic adults face serious health problems including higher suicide rates and shorter lives. Many autistic people also have ADHD, and both conditions can make life harder. Not much research focuses on helping autistic and ADHD adults live better lives - only about 4.3% of research money goes to studying quality of life for autistic adults.

Why Decision-Making Matters

The average person makes about 33,000 decisions every day. For autistic and ADHD people, this can be overwhelming and lead to burnout.

Autistic burnout happens when autistic people face too much stress without enough support for a long time. It causes extreme tiredness, loss of skills, and sensitivity to sounds, lights, and other sensations. This burnout can last for months and seriously affects health and independent living.

Autistic and ADHD brains work differently when making decisions. While most people's brains filter information quickly and automatically, neurodivergent brains often process everything step-by-step. This means they may have to think about even more decisions than the average person, which can be exhausting.

Our Solution

The research team at Independence Through Interdependence Assistive Technologies Inc. (ITI) includes people who have autism and ADHD themselves. They understand these challenges from personal experience.

The main problems they identified:

1. People with autism and ADHD can get overwhelmed by making too many decisions
2. Their brains process information differently, which can make decisions harder
3. They may have trouble knowing what their bodies need (like when they're hungry or tired)

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4. They can experience "meltdowns" or "shutdowns" when overwhelmed

ITI is creating an app called "Decide" that:

- Breaks down complex decisions into simpler steps
- Helps assess risks
- Shows decisions in a visual way that matches how they think

Our goal was to see if this app could help people feel better, experience less burnout, and make better health decisions.

In 2024, Independence Through Interdependence Assistive Technologies Inc. (ITI) responded to a request for proposals from the Ohio Department of Developmental Disabilities (DODD) for “technology that can leverage Artificial Intelligence (AI) or other machine learning to improve the medical/behavioral health of people with developmental disabilities.”

Autistic and ADHD adults experience **disproportionately high suicide rates** (Bentum et al., 2024; Cassidy et al., 2022; Di Salvo et al., 2024; Furczyk & Thome, 2014; Kirby et al., 2024), **health disparities** (Croen et al., 2015; Gornik & Salgado, 2022), and **increased mortality risk** (Hirvikoski et al., 2016; Huang et al., 2024; O’Nions et al., 2025).

Because of high rates of co-occurrence (Hours et al., 2022; Leitner, 2014; Zablotsky et al., 2020) between the two conditions, including among the ITI research team, we included both autism and ADHD within our study.

The lived experience of ITI’s all-autistic and/or ADHD research team resonates with a characterization of people with autism as having brains “characterized by particularly high levels of synaptic connectivity and responsiveness” (Walker, 2021) in keeping with research exploring autistic people’s atypical sensory sensitivities and challenges with predictive coding (Lawson et al., 2014; Sapey-Triomphe et al., 2019; Sinha et al., 2014; Van de Cruys et al., 2019; Ward, 2019).

Autistic people report experiencing meltdowns (extreme activation of the sympathetic nervous system calling for fight or flight) and shutdowns (extreme activation of the parasympathetic nervous system calling for rest and digest) across the lifespan in response to overwhelming sensory stimuli and/or cognitive overload, among other triggers, that may not register to someone whose brain developed typically (Lewis & Stevens, 2023).

Meltdowns and shutdowns are extreme examples of nervous system dysregulation (NSD), a state of imbalance between the sympathetic and parasympathetic systems in the human body (Alshak & Das, 2024). More typically researched in the context of Adverse Childhood Experiences (ACEs) and

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developmental trauma, persistent low-level NSD interferes with sleep, digestion, comprehension, emotional regulation, social-emotional reciprocity, and working memory and correlates with many co-occurring physical and mental health challenges (Elbers et al., 2017, 2018).

Additionally, many autistic adults struggle with differences in communication and processing speed, making it difficult for them to communicate their thinking to others in real time. For these and other reasons, Autistic/ADHD adults find decision-making difficult. They report the greatest need for help around low- and high-risk decision making,[1] both of which feed into their medical/behavioral health.

Whether NSD and other common characteristics of the lived experience of autism and ADHD are due to developmental trauma or to other neurodivergence is irrelevant to the scope of this study or the intervention we propose. The point is that they are common enough to require support.

Frustrating efforts to address these issues, the systems enabling the current status quo have fostered a massive trust gap between autism/ADHD "experts" and those with lived experience over the idea of finding a "cure" for autism, a project which many autistic people are concerned will lead to screening for and eliminating fetuses that show signs of developing autistically (O'Dell, 2024).

The larger context for these problems stems from a critical gap in research and services for Autistic/ADHD adults. Currently only 4,3% of research funding in the United States examines quality of life across the Autistic lifespan (18+), while just 8.4% supports service development (*At-a-Glance IACC 2019-2020 Autism Research Portfolio Analysis Report*, n.d.). As of this writing, the first clinical practice guidelines for treating ADHD in adults in the US is under development but does not yet exist ("Adult ADHD Guidelines Development," n.d.).

The societal conversation around Autistic/ADHD people tends to focus on their cost to society. Estimates regarding the social cost of autism range from $35 billion to $7 trillion (Ganz, 2007; Blaxill et al., 2023). The original article estimating $7 trillion was retracted, but not before being cited almost 1000 times, including in an article that claimed social costs were on track to rise to $15 trillion by 2029 (Cakir et al., 2020).

Adult ADHD is likewise seen as a burden costing $122.8 billion in total societal excess (Schein et al., 2022).

Society has no idea of the opportunity cost of viewing Autistic / ADHD adults as a burden to be tolerated and, if possible, eliminated instead of as valuable talent to be supported to thrive.

About ITI

ITI was founded as part of a systems-change approach to disrupting the existing autism industry while addressing the complex problems facing Autistic/ADHD adults. ITI is the social enterprise counterpart to

[1] See Appendix B for relevant survey instruments

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the Autistic Self-Reliance Support Network (ASR), tasked with developing evidence-based assistive apps for Autistic/ADHD adults.

ASR is an autistic-led 501c3 impact organization. Operating based on the principles of disability justice, ASR's mission is to fill gaps in services and to cultivate positive wellbeing for autistic adults, in collaboration with partners.

ASR is entirely disability-led. Its first priority was to establish a sustainable funding ecosystem that will support autistic adults across the country in living more independent lives and contributing to society to their utmost potential. The goal of this ecosystem is to allow those who are able to earn income to receive valuable support while funding direct services for those who are not able to earn income at this time.

ITI was founded to develop effective, adaptive supports for neurodivergent adults in support of positive wellbeing, to build trust and keep faith with the Autistic community and to support disability-led organizations such as ASR's efforts to provide direct assistance. Its vision is a world in which Autistic adults thrive and contribute their fullest potential to society through interdependence.

Having completed preliminary research with the Autistic/ADHD community and identifying decision fatigue and paralysis as a priority issue, ITI answered DODD's RFP with a request for a pre-service contract to leverage its AI-enabled decision-support tool to research the following question: How can AI-powered tools support making better choices while maintaining users' independence and priorities?

Research context and significance

The average person makes 33,000 decisions a day and over 2000 decisions an hour. Autistic/ADHD people, even those living mainstreamed lives, burn out under this overload.

"Autistic burnout is a syndrome conceptualized as resulting from chronic life stress and a mismatch of expectations and abilities without adequate supports. It is characterized by pervasive, long-term (typically 3+ months) exhaustion, loss of function, and reduced tolerance to stimulus" (Raymaker et al., 2020, p. 140). Preliminary studies suggest Autistic burnout is distinct from chronic depression and occupational burnout.

> *"I would lose executive function and self-care skills. My capacity for sensory and social overload dwindled to near nothing. I avoided speaking and retreated from socializing. I was spent. I couldn't maintain the facade anymore. I had to stop and pay the price" (2020, p. 136).*

> *"The way I define burnout is a regression of skills. For me the really, really scary part of burnout is you don't know whether or not you're gonna get those skills back to the point you had them where you were before [the burnout]" (2020, p. 136).*

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Autistic burnout negatively impacts health, capacity for independent living, and quality of life, and can exacerbate and be exacerbated by a lack of empathy from neurotypical people regarding the reality of the autistic person's suffering and support needs (2020, p. 140).

ADHD burnout is more often conceptualized within the framework of occupational burnout (Oscarsson et al., 2022; Team, 2024; Turjeman-Levi et al., 2024), but shares enough common characteristics with autistic burnout as to call for additional study.

In conceptualizing the "expectations" at the core of neurodivergent burnout, ITI relied on Maslow's hierarchy of needs, a widespread framework for understanding motivations for human behavior. Maslow theorized that humans experience their needs in order of urgency, with existential needs emerging or becoming dominant once more survival-oriented needs are predominantly met. A person who is starving, for example, will likely be more focused on securing food than on ensuring their physical safety or finding love.

Figure 1
Maslow's hierarchy of needs

People are most likely to be satisfied when they are able to meet – at least partially – all their needs, both physical and existential. They are most likely to suffer when they are unable to meet their physiological (air, food, water, shelter, sleep, etc), safety (freedom from illness, abuse or poverty), belonging (friendship, love), or esteem (self-respect, independence, status) needs – with each higher level need emerging and gaining importance once the more vital needs are substantively met. The visual most commonly associated with Maslow's hierarchy is a pyramid.

In the absence of an externally verifiable challenge – be it physical or intellectual disability, illness, addiction, war, natural disaster, or systemic disenfranchisement – adults are expected to experience and be able to meet their needs as they emerge in order of importance.

However, many autistic people experience delayed processing and interoception challenges (difficulty perceiving and accurately interpreting bodily signals such as hunger, thirst, pain, etc.), such that autistic people are often not in tune with their bodies and emotions in real time (Garfinkel et al., 2016; Schauder et al., 2015; Shah et al., 2016; Williams et al., 2023). Partially due to these difficulties, Autistic/ADHD adults are unable to meet their own needs consistently without support. According to correspondence with Dr. Sean M. Inderbitzen, LCSW, author of *Autism in Polyvagal Terms: New Possibilities and Interventions* (2024), their nervous systems are often but not always "locked into a state of threat," as demonstrated by fifteen studies over 5 decades noting elevated heart rate variability among autistic people (2023; personal communication, March 17, 2025).

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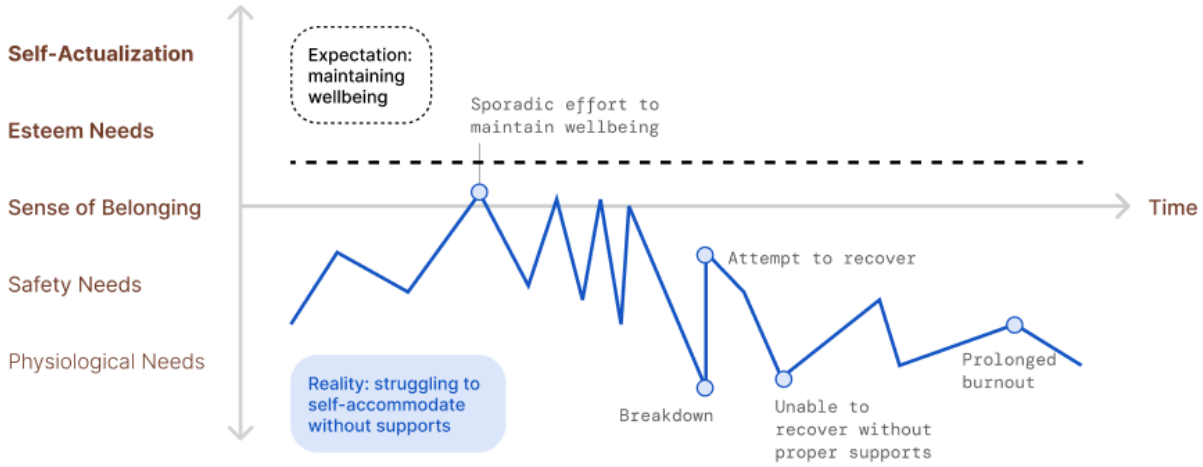
Figure 2

Illustration of autistic burnout cycle in terms of Maslow's hierarchy of needs



Note: In their study of autistic burnout, Raymaker et al. (2020) repeatedly reference autistic people's cumulative load due to a pervasive mismatch between expectations and their abilities. Key phrases describing these expectations include: "demands that are out of sync with our need" (137), "Family, social, vocational, or other mainstream expectations," (139), "'[I] don't have the words to describe to anybody what's going on or to ask for help" (140), and "autistic burnout occurred when the persons felt what they needed to do became more than what was able to do given the combination of their existing resources, the cumulative load they were carrying, and their ability to replenish resources or access support" (140). ITI chose Maslow's hierarchy of needs as a useful framework for concretizing these expectations in relation to wellbeing.

Why focus on decision-making?

There is growing evidence that Autistic brains struggle with using past information to make accurate predictions (Pellicano & Burr, 2012; Sinha et al., 2014; Wada et al., 2023). This area of study, known as the Bayesian approach to autism, has strong support in *Tojisha-Kenkyu*, a Japanese methodology whereby people with lived experience of a condition reflect on and find commonalities amongst themselves (*A Tojisha-Kenkyu Group for People with Neurodiversity, by People with Neurodiversity Laboratory - Research Center for Advanced Science and Technology (RCAST), Barrier-Free Research Laboratories COPRO*, n.d.; Kumagaya, 2015). Traditional research methods are then applied to investigate the biological and social mechanisms behind those common experiences.

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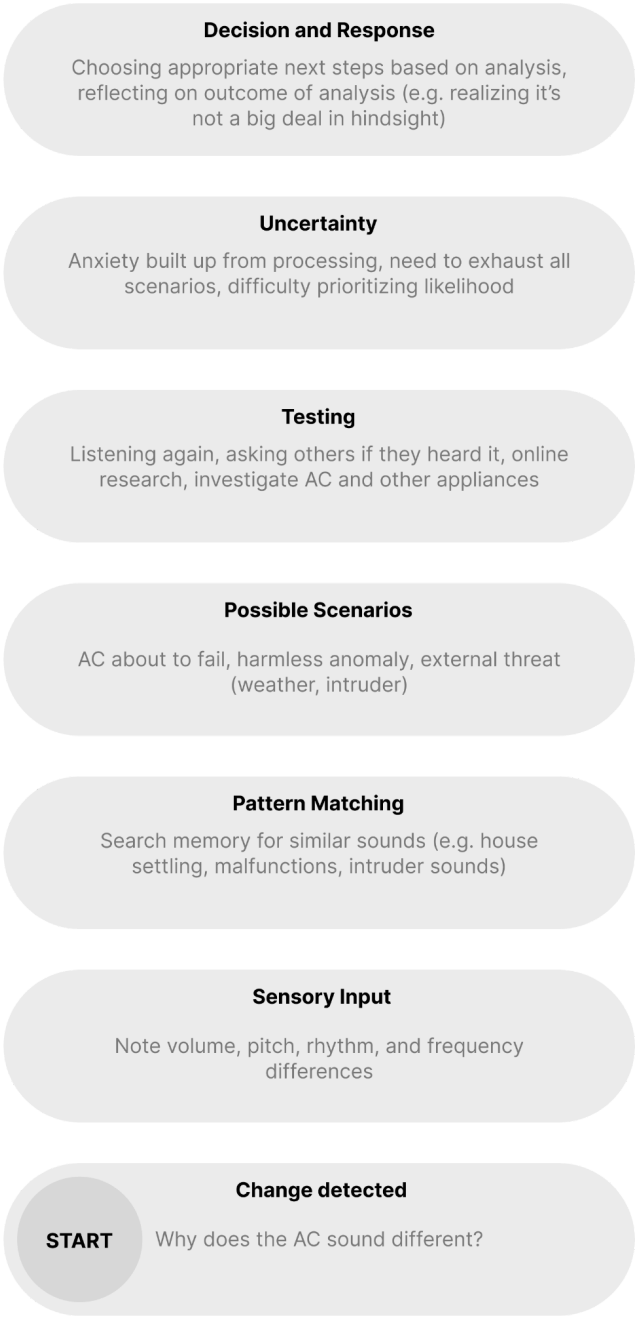
Figure 3

Neurodivergent specific-to-general processing bias when sound of air conditioner changes



Straightforward statistical experiments in a lab have not provided the supporting evidence for the Bayesian approach that researchers initially expected (Retzler et al., 2021). This contradiction may be related to the study design's failure to take into account differences in neural processing observed among Autistic and ADHD adults.

Autistic and ADHD adults frequently exhibit specific-to-general processing biases – prioritizing 1. individual details/sensory inputs until they have gathered enough information to create 2. a big picture that has meaning because it accounts for all the details. The dissonance between the two stages of this process has led to theories that autism is characterized by local processing bias (1) and gestalt learning (2), two seemingly opposite modes of cognition.

People whose brains exhibit specific-to-general processing biases may struggle with prioritizing the importance of a decision before weighing all its factors.

In hindsight, they may realize that a change in the sound of the air conditioner isn't that big a deal, but until and unless they go through their entire evaluative process, they can't be sure.

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As a result, Autistic/ADHD adults may be making even more decisions than the reported 33,000 average, as their brains must manually evaluate all changes in their environment – however routine – rather than relying on the automated evaluation process common to neurotypical brain development.

In terms of ITI's current research, decisions around diet and exercise, while comparatively low-risk in the moment, have a cumulative impact on health.

High-risk decisions – such as whether to quit one's job – must take into account atypical factors such as the impact of the job on one's cognitive load as well as on one's budget.

Identifying leverage points

In October 2023 and again in February 2024, the ITI team conducted quantitative surveys and qualitative interviews with Autistic/ADHD adults, as well as caregivers and support professionals, to identify community support needs.

In the Staying on Task survey, participants were asked about their experiences with trying to complete a workflow. They noted heavy reliance on routines, tools, and emotional cycling. However, most desired a more effective approach. They reported finding:

> *"extremely difficult at times. impossible. like there is a demand and unequivocal expectation to complete something, for which i have no map or instructions in order to begin. like everyone else is swimming in a relatively calm pool, and in order to complete tasks and chores they need to find the corresponding pool toy at the bottom of the pool, which they have a detailed image of in their minds. and for me, it is like i am in an incredibly crowded pool with very little room to swim or even wade normally. i am also looking for the very same pool toy at the bottom of the pool but i only have a very vague description of it's qualities. i end up giving up and getting frustrated before it looks like i have even tried."*

> *"I use strict routines to be able to remember to complete my every day tasks. I have a very strong morning routine that I follow every week day. I also leave a lot of things out on counters so that I see them and remember to complete them. The problem is if my routine is disturbed in any way it's very easy to forget things or mess things up. I also try to automate most things so I have less to remember. For example most of my bills are all on autopay so I don't need to remember to pay them."*

Based on this initial research and mentorship through Give Back Hack Columbus, a social enterprise pre-accelerator, and Rev1 Ventures' Customer Learning Lab, ITI developed the concept of Decide, an app that reduces decision fatigue and paralysis by making simple and complex decision-making clear for neurodivergent minds.

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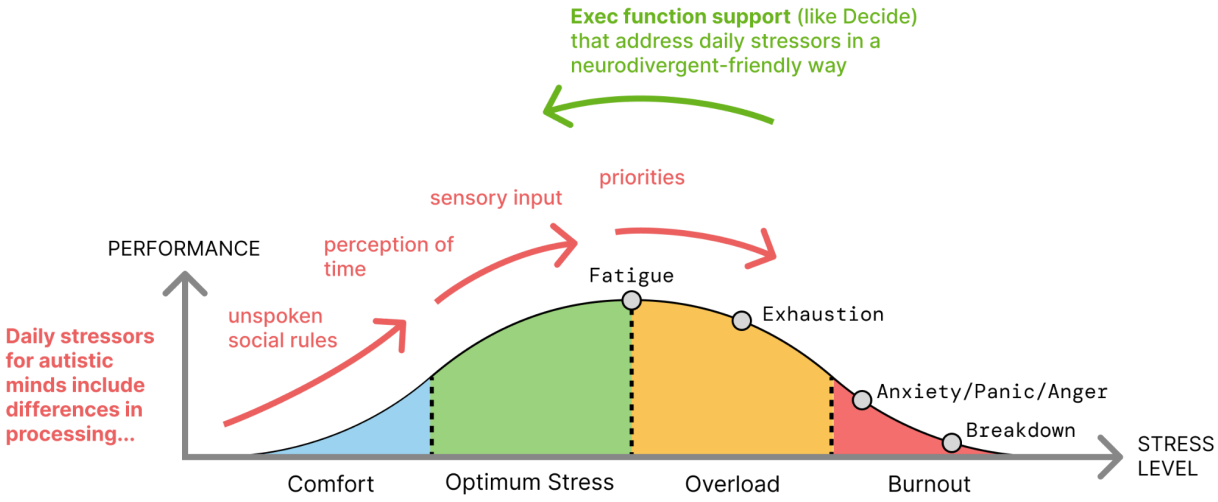
Decide uses AI to break down complex decisions, assess risk levels, weigh users' criteria, and visually present the decisions that best fit their decision-making style.

ITI's objective for the Transformative Technology Solutions Grant was to leverage Decide to identify pain points and successful decision making strategies for improving the medical/behavioral health of Autistic / ADHD adults. Success would be shown through percentage of users reporting increased measures of positive wellbeing, decrease in symptoms of burnout, and increased satisfaction with their decision-making.

Figure 4

Benefits of Executive Function Support



Background and Literature Review

SUMMARY: Research People Did Before Us

What is Wellbeing?

The research team looked at different ways to measure wellbeing (how good someone's life is) for people with autism and ADHD. They found:

- The US mostly looks at money and friendships
- The UK looks at how people think about their life, their sense of purpose, and their daily

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feelings

- For autistic people specifically, wellbeing means having the freedom to do things they value, like:
    - Having basic needs met (food, shelter)
    - Having environments that work with their sensory needs
    - Having meaningful relationships
    - Being able to make their own choices

Decision-Making Challenges

The research found that people with autism and ADHD often struggle with making decisions:

- Autistic people tend to be very logical in decisions, which can be both helpful and challenging
- They may miss social or emotional factors that are important
- They often try to make "perfect" decisions (called "maximizing"), which takes a lot of mental energy
- People with ADHD may find it hard to stay focused long enough to make the best choice

The research team relied on a simple formula from decision-making expert Annie Duke: the quality of your outcomes equals the quality of your decisions plus hidden information plus luck.

Wellbeing

In quantifying wellbeing for Autistic / ADHD adults, ITI looked first at the framing of population-level studies on wellbeing writ large. The US, where ITI is based, defaults to assessing an individual's wellbeing by economic measures and perceptions of access to family or friend support (Bureau, n.d.-b, n.d.-a). While this approach gathers valuable data, we deemed it only indirectly related to the personal executive function support ITI hoped to provide, and thus irrelevant for this study.

The UK government's Office for National Statistics (ONS) takes a multi-dimensional approach. They situate their questions about personal wellbeing in particular within three distinct conceptual frameworks: 1. "a cognitive assessment of how their life is going overall, or on specific aspects of their life;" 2. "people's sense of meaning and purpose in life, connections with family and friends, a sense of control and whether they feel part of something bigger than themselves;" and 3. "people's positive and negative emotional experiences (or affect) over a short timeframe to measure personal well-being on a day-to-day basis" (*Personal Well-Being Frequently Asked Questions - Office for National Statistics*, n.d.; *UK Measures of National Well-Being Dashboard - Office for National Statistics*, n.d.).

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A 2020 review article focusing on the construction of wellbeing among autistic adults in particular found that across 63 articles “authors described their understanding of autistic well-being: (1) well-being as an objective and uncontested object, (2) well-being is personal and can vary in nature, (3) well-being warrants a measure that considers opinions of autistic people, and (4) well-being as very specific to autistic people's subjective perspectives.” (Lam et al., 2021).

The frameworks around personal wellbeing are certainly closer to what we had in mind; however, as we read through studies demonstrating the importance of having a positive sense of one’s Autistic identity (Cooper et al., 2017; Najeeb & Quadt, 2024) and access to autistic-led spaces and social interactions (Milton & Sims, 2016; Watts et al., 2024), we questioned which, if any, existing frameworks for constructing wellbeing held relevance for Autistic/ADHD adults.

Robeyns (2016) examines several philosophies of well-being with this question in mind and lands on the capability approach:

> a general normative framework claiming (among other things) that people's well-being should be conceptualised as a set of functionings that they have reason to value. Functionings are beings and doings, for example, having friends, being knowledgeable, being secure, … Functionings can include negative functionings (whose presence would then indicate ill-being), for example, being stressed, being anxious. Within the capability approach, well-being is distinguished at two different levels: achieved levels of well-being and the freedom one has to achieve well-being. Well-being freedom is given by people's capabilities—their real opportunities to achieve the corresponding functionings.

Robeyns lists Martha Nussbaum’s (2000) ten capabilities “life; bodily health; bodily integrity; being able to use the sense, imagine and think; experiencing emotions; practical reason; affiliation; living with other species and the world of nature; being able to play; and having control over one's environment” and also adds others, including “control over one's time”, “the absence of sensory overload,” the explicit ability to communicate, the capability to be understood, and the capability to be “properly cared for,” which can refer to love as well as caretaking (Robeyns, 2016). As we will explore further in our research findings section, the notion of capacity came up repeatedly throughout our study, suggesting that the capabilities approach holds better than average relevance.

While ITI was conducting our research, another autistic-led research team was conducting interviews with Autistic adults to uncover their perspectives on quality of life, a related concept.

Key findings from their work align with ours, specifically around the satisfaction of needs:

> [Quality of life] is feeling like one’s needs are being met. To some participants, this means having food, water, and shelter. Others mention needs specific to their Autistic identity (an environment that accommodates sensory differences)”, with the caveat that “QoL is more than having basic

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> needs met. It is feeling satisfied or enjoying one's life[;] …feeling mentally and physically healthy[;] …having meaningful relationships with people, animals, and society[; and] …having the freedom to make choices about things a person does, ways a person spends time, and the way a person's identity is expressed (LaPoint et al., 2025).

Decision-making

The framework ITI used for conceptualizing decision quality stems from Annie Duke, distilled into the following equation: outcome quality is equal to decision quality plus hidden information plus luck (Duke, 2019).

The research on neurodivergent decision-making confirmed our anecdotal and survey evidence that neurodivergent adults (specifically Autistic adults) struggle more with decision making than neurotypical people (Luke et al., 2012). Increased rationality around their decision-making process was both a strength and weakness, as Autistic people were less susceptible to making illogical decisions based on how the question was framed but were also less likely to factor socio-emotional nuances into their decisions, leading to social interaction difficulties (Brosnan et al., 2016; Martino et al., 2008). A study directed at distinguishing whether these difficulties were due to co-occurring alexithymia and interoception versus autism suggested that they were related to the autistic condition itself (Shah et al., 2016).

Autistic individuals also showed marked tendencies towards maximizing their decisions – a more time-consuming and effortful process in which individuals try to get the most value out of each choice (Rogge, 2022). Maximizing is correlated with negative mental health outcomes such as anxiety, suicidal ideation, and depression. Attempts to trace autistic adults' difficulties to either predictive coding deficits or reluctance to draw definitive conclusions due to maximizing tendencies were inconclusive (Mantas et al., 2022).

Dekkers et al distinguished between "risky decision-making, defined as choosing the option with a high variance of potential outcomes, and suboptimal decision-making, defined as choosing the option with the lowest expected value" to evaluate key factors in ADHD decision-making correlated with negative outcomes, and found that difficulty maximizing the expected value of a choice was a core factor (2021). Among the possible explanations for this finding was the suggestion that the sustained mental effort of maximizing was too much for ADHDers, and so they defaulted to less effortful mental frameworks.

For the purposes of this study, we did not consider formal supported decision-making frameworks, though we plan to examine them in depth as we develop user interfaces for Decide that are better suited for those with apraxia.

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Methodology

SUMMARY: How We Studied Decision-Making for Neurodivergent People

What We Did

We studied how autistic people and people with ADHD make decisions. We wanted to understand what makes decisions hard for them and what helps. We used surveys, interviews, and group discussions to learn about this.

Our Research Steps

First, we asked people about common problems. Then we sent out two surveys and talked more with some people who answered them. This helped us focus on decision fatigue - when making choices becomes too tiring.

Next, we read what experts have written about this topic. We did another survey and more interviews to learn how neurodivergent people currently handle decisions. We also had group discussions to understand what "wellbeing" means for neurodivergent people.

We wanted to be respectful of people's time, so we offered to pay qualified people who filled out surveys 4 and 5 and completed a focus group interview. This backfired, and many unqualified people tried to join the study to get paid. We worked hard to make sure we got feedback from five qualified participants.

Finally, we tested our solution - an app called "Decide." We watched people use it at five public events and fixed problems before releasing it to more users.

Who Helped Us

We had 1197 points of contact with people between August 2023 and January 2025. After we took out the data we weren't sure was qualified, we had 930 points that we could include in our study, including more than 734 touchpoints with neurodivergent adults.

We found participants through Ohio agencies, support groups, mailing lists, and public events.

The Decide app was released to the public in February 2025.

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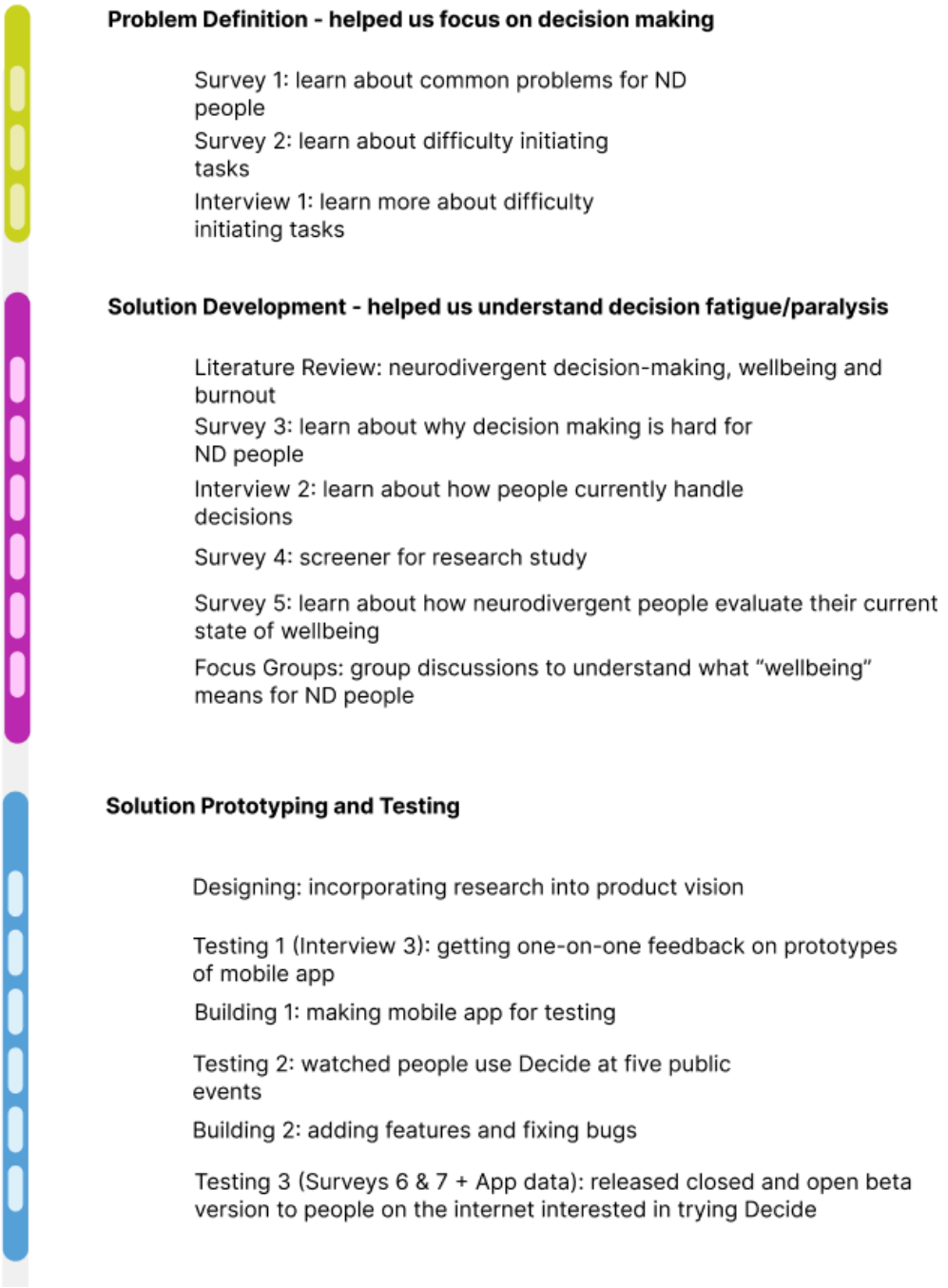
ITI conducted mixed methods research on neurodivergent decision-making pain points and strategies in multiple cycles of quantitative surveys and qualitative interviews along with focus groups to define the problem we were trying to solve. Each cycle had a primarily exploratory sequential design.

Figure 5

Research Design



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In cycle one, qualitative data from informal canvassing about common autistic / ADHD pain points was substantiated via quantitative data from two distinct surveys with embedded follow-up interviews digging deeper into survey findings. This cycle led to our focus on decision fatigue and paralysis.

Cycle two expanded to include convergent parallel research tracks. Following a review of the literature regarding neurodivergent decision-making, wellbeing, and burnout, ITI conducted a third quantitative survey alongside structured qualitative user interviews to identify existing neurodivergent decision-making processes and supports and test our preliminary ideas about how to improve upon them. We also held focus groups to refine our definition of neurodivergent wellbeing in anticipation of measuring our solution's impact on same.

Before we could know if Decide had a measurable positive impact on Autistic / ADHD adults' medical and behavioral health, we needed to define the terms for our population. Based on our literature review, we came up with preliminary definitions and developed a protocol for seeking feedback (see appendix B).

ITI announced paid focus group opportunities for Autistic / ADHD adults in the United States to give feedback on these definitions. We ran into a persistent problem, however, with hundreds of international spammers filling out the screener surveys and even showing up in person to the virtual focus groups in an attempt to earn the associated honorarium. Despite filtering screener responses based on participants' IP addresses twice and closing sign-ups and reopening them a month later with additional safeguards, we encountered the same problems. In the end, we omitted data from surveys 4 and 5 from the study and narrowed verifiable qualified focus group participants to five individuals over four different sessions.

The third cycle tested our proposed solution with convergent parallel research tracks, using user testing and feedback sessions along with app data to test the efficacy of Decide and make incremental improvements to user experience. During this period, we held live user feedback sessions at five public events[2] before launching the app with a closed beta group, identifying and fixing bugs, and launching it with an open beta group.

Decide was publicly released in February 2025.

Between August 2023 and January 2025, ITI recorded 1197 research touchpoints, 930 of which were included in the study after data cleaning, including more than 734 touchpoints with neurodivergent adults. We collected partial demographic data on 833 of the included touchpoints and comprehensive demographic data on 214. Demographic goals were created in the latter half of the research period based on the characteristics of Medicaid recipients in Ohio (Rosebrook et al., 2019). To those, we added

[2] SEAChange Showcase 2024, Stanford Neurodiversity Summit 2024, GiveBackHack Columbus 2024, College Autism Network National Conference 2024, and Columbus Code and Coffee

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measures of neurodivergent identity and relationships to neurodivergence to parse out the different ways in which neurodivergent people support and serve each other.

See Appendix A for a comparison of our incomplete demographic data to Ohio Medicaid demographics. Future research will clarify the demographic goals at the beginning of the study to ensure better alignment.

ITI shared word of the study through our mailing list, social media, the Ohio Department of Developmental Disabilities, the Technology First Community of Practice, the Southern Great Lakes Neurodiversity at Work group, the Autism and Suicide Prevention Working Group, ND Connect, ASDirect, private outreach, and sponsorship of and tabling at public events.

Research Findings

SUMMARY: What We Learned About Neurodivergent Health and Decision-Making

Understanding Health for Neurodivergent People

In our research, we found that neurodivergent people described health differently than most medical experts do.

For autistic and ADHD adults, their biggest health challenge is their changing ability to use what they know. Some days they can easily do things, while other days the same tasks feel impossible.

Physical health problems were often hard to diagnose because their symptoms didn't follow typical patterns. Many participants found that seeing multiple doctors was exhausting and frustrating. They struggled to find doctors who understood how autism and ADHD affect physical health.

What Feeling Good Means to Them

Participants described feeling well as having a "regulated nervous system" - a calm feeling throughout their body. One person explained: "I can have a thought and complete it."

Another said wellness is "a mixture of both physical - like how my body literally feels - and how my brain and emotions feel." They mentioned the importance of nature, moving their body, and having time without pressure.

Based on our research, we defined health for autistic/ADHD adults as: "A state of being in which one has the capacity to be present and react in their life in keeping with knowledge of how their

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actions and behaviors affect their inner balance and their relationships."

Decision-Making Challenges

Most participants (74.5%) said they wanted an app to help them make decisions. They struggled most with:

1. Small, everyday decisions (like what to eat) that happen under time pressure
2. Big, life-changing decisions (like changing jobs) that require deep self-reflection

For small decisions, many used routines to conserve energy. But when routines were disrupted, their ability to make good choices decreased throughout the day. This affected their health over time.

For big decisions, they often had trouble trusting their own judgment over others' advice. Many stayed in difficult situations or made sudden changes based on anxiety rather than careful thinking.

Concerns About AI Help

While participants wanted decision-making support, they were cautious about AI. They worried about:

- Privacy of their personal data
- Impact on their mental health
- Being told what to do
- Having to answer too many questions to get help

They wanted flexible support that wouldn't take over their decisions or make them feel overwhelmed.

Defining Medical and Behavioral Health

Despite a small sample size, we found actionable patterns in focus group feedback. All vetted participants emphasized that their fluctuating **capacity to act on their knowledge** was the core issue impacting their medical and behavioral health.

Participants found that their physical symptoms were often difficult to trace to discrete somatic causes. Often, physical symptoms correlated with nervous system dysregulation in unpredictable ways, making Autistic & ADHD adults difficult to diagnose. Interventions that solely targeted physical health were ineffective. They reported frequently seeking care through one specialist only to be told to start over

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again with another, which posed a massive executive function challenge as well as a logistical one. Finding a doctor with the right combination of expertise to recognize the co-occurrence of multiple disabilities was another difficulty. Lack of capacity to navigate the complex, siloed US healthcare system leads to worsening health outcomes.

Wellbeing correlated with nervous system regulation, a full-body calm tied to heart rate, not just an emotional state. “I can have a thought and complete it,” said one participant.

> *“Wellness is a mixture of both physical - like how my body literally feels – and how my brain and emotions feel. When it’s not working right, it just starts this negative feedback loop. … It’s always connected to outside. It’s being in nature, moving my body…. It’s being alone and allowing my thoughts to do whatever they’re doing. … not be constrained by time and responsibilities… just be there.”*

Wellbeing thus requires equilibrium between an Autistic / ADHD adult’s abilities and the levels of interaction and productivity they are expected to meet.

Conversely, burnout correlated with sustained nervous system dysregulation, characterized by pain, fight or flight, and an inability to talk oneself down.

All participants noted decision fatigue and paralysis as a sign of and contributor to depleted capacity.

For the purposes of this study, ITI settled on the following definition of medical and behavioral health for Autistic / ADHD adults:

> A state of being in which one has the capacity to be present and react in their life in keeping with knowledge of how their actions and behaviors affect their inner balance and their relationships with others and the world around them.

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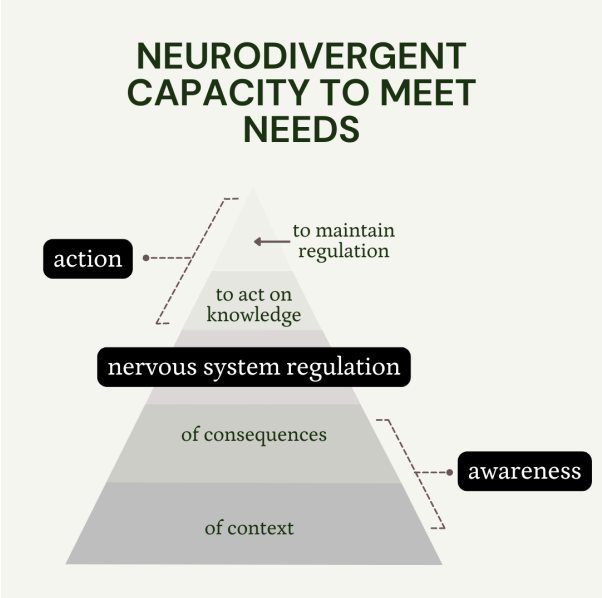
Figure 6

Neurodivergent Capacity to Meet Needs



Area for future research

Maslow's hierarchy of needs was valuable for our purposes in concretizing the "expectations" that are so often detrimental to Autistic / ADHD adults' wellbeing in large part because of its dissonance with our population's needs. We found it most useful for conceptualizing how Autistic / ADHD adults' experience their disability - with fluctuating capacity in any area destabilizing capacity in every other.

Figure 7

The Jenga Tower of ND Needs

Additional work is required to create a framework for visualizing neurodivergent needs and wellbeing that accounts for the breadth of variation in experience on the autism spectrum, frequent co-occurring conditions such as apraxia, and fundamental experiential differences and

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fluctuating capacity specific to autistic and adhd adults.

Fluctuating capacity due to fundamental differences in neural processing might explain why both polyvagal theory and the Bayesian hypothesis have so much consistency with neurodivergent lived experience without consistent experimental evidence linking the presentation to the theorized biological origin (Retzler et al., 2021; Barbier et al., 2022). A more holistic approach would also be consistent with the presentation of Autism / ADHD as dynamic disabilities characterized by fluctuating capacity.

The Evolutionary Stress Framework conceptualized by Autistic thought leader Lori Hogenkamp based on the work of researchers such as Santamaría-García et. al. (Santamaría-García et al., 2025) on the interaction of allostatic interoception and predictive coding offers a promising starting point for further research.

Survey results suggest the importance of continuing to workshop and refine our definition with Autistic / ADHD adults. One of the key findings from Survey 2 (Appendix A) was that Autistic adults had notably different priorities than families and caregivers. Families and caregivers were more focused on the external presentation of nervous system dysregulation, while Autistic / ADHD adults prioritized the internal stressors preceding and contributing to that dysregulation (see figure 8 for data representing both groups combined). At the top of the latter's list was decision facilitation, especially around finance.

Defining the problem: decision fatigue and paralysis

Focus group participants identified two systemic levers supporting their medical and behavioral health. The first was access to preventative care that was routine, structured, and predictable. The second was the need for a coordinated holistic care model staffed by those knowledgeable in the correlations between neurodivergence and common co-occurring conditions such as connective tissue disorders.

We will return to these opportunities when discussing future directions for research. However, for this study, ITI's focus was on how AI-powered applications might provide real time support at the individual level.

In Survey 2, 74.5% of respondents said an app that helps you make decisions instantly would be valuable to them.

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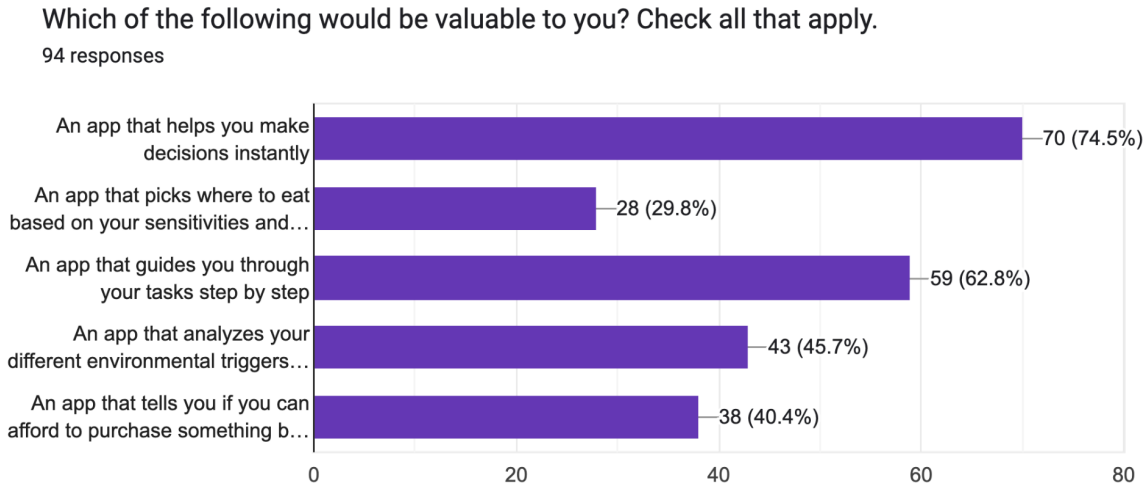
Figure 8

Responses to survey question evaluating proposed executive function supports



Subsequent surveys and one-on-one interviews revealed that Autistic/ADHD adults felt the most need for support around low and high impact decisions. Medium-impact decisions, such as determining which TV to buy, were adequately supported by tools such as asking around and gathering online product reviews. In addition, they usually offered more time to explore different options.

Low impact decisions in which Autistic/ADHD adults have to choose between multiple options with no clear differentiator under time pressure caused a disproportionately high amount of stress and depleted energy. Common strategies for minimizing this energy cost include always choosing the same option or reviewing options in advance and making a choice ahead of time.

These decisions had two disproportionate effects on Autistic/ADHD adults' capacity to be present and react in their life in keeping with their knowledge: 1. Most daily activities require repeated low-impact decisions – e.g. what to eat for breakfast, whether to exercise, whether to wash the dishes, whether to shower, etc. For participants who used routines or planning ahead to minimize cognitive load, any disruption to the routine or plan caused increased NSD, depleting their capacity for purposeful action as the day progressed. 2. As capacity went down, the quality of Autistic/ADHD adults' decisions decreased as well. The negative health impact of this diminished capacity is best illustrated over time. For example, Figure 10 shows the compound health effects of moderation versus no moderation over six meals: the difference in health points (8) is greater than the actual number of meals (6).

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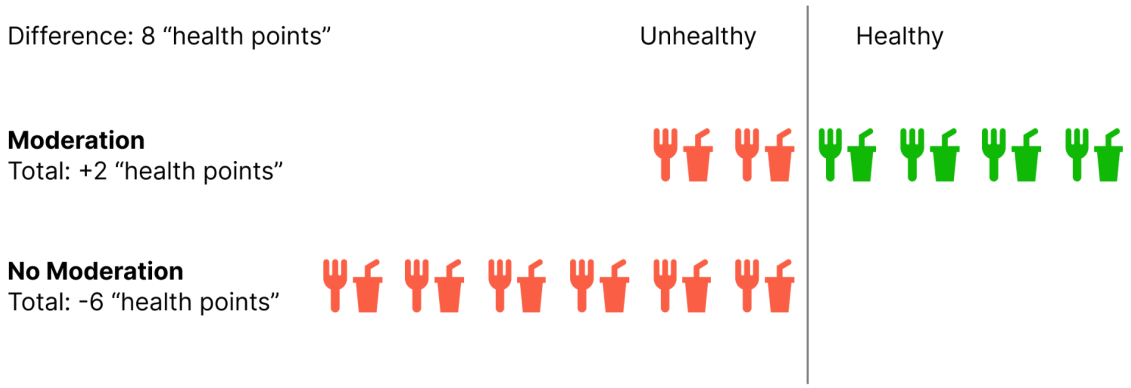
Figure 9

Comparing compound health effects over 6 meals



For seemingly simple situations in which one might solve the problem by picking from a premade list, existing randomization tools did not take into account Autistic/ADHD adults’ fluctuating capacity levels, rendering them only intermittently useful.

High impact decisions, such as whether to break up with one’s partner, proved difficult because they are deeply personal. There is no one right answer. These questions require self-reflection focused on one’s own needs and priorities. Many Autistic/ADHD adults reported difficulty prioritizing their own reflections over friends’ and family’s advice, leading to disabling self-doubt. These decisions often defaulted to continuing the status quo or made impulsive changes based on emotional cycling – using anxiety and panic as motivators – rather than considered thought.

Again, many Autistic/ADHD adults had strategies for working with this challenge, but they were dissatisfied with the amount of time and effort these strategies took.

Considerations for AI-powered supports

Though unanimously interested in the prospect of support for decision fatigue and paralysis, the Autistic/ADHD adults we interviewed did not fully trust AI. They raised concerns about data privacy and mental health. In addition, their decision-making styles varied greatly. They wanted flexible real-time support, but did not want to offload their decision-making to tech.

Additional insights arose in the third research cycle as users tested Decide’s efficacy as a solution to their decision-making challenges. Many Autistic/ADHD adults have a deep resistance to perceived demands. If they thought the app was telling them what to do, they would almost certainly do the opposite. Many were also concerned about the usefulness of the app if it asked them to answer several questions in a row. Doing so would likely trigger the same cognitive overload they were trying to avoid.

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Decide: Your Personal Decision Assistant

SUMMARY: Our Solution: Decide - Your Personal Decision Assistant

How We Built It

We created an app called "Decide" based on what we learned from our research. The app respects privacy - users own their data and can choose to share it for research if they want. All the user information in this paper comes from people who tested early versions of the app and gave us permission to share their feedback.

What the App Does

Decide has two main features to help with different kinds of decisions:

Random Feature

This feature lets you:

- Make custom lists like "Safe foods" or "Exercise options"
- Mark how much energy each option takes
- Tell the app your current energy level (low, medium, or high)
- Get a random suggestion that matches your energy level

You can even ask the app to help you create your list. For example, you could type "quiet and cheap places to eat" and get suggestions.

Guided Feature

This feature helps with bigger questions like:

- "Should I take a nap?"
- "Should I go to this party?"
- "Should I text this person back?"

When you ask a question, the app shows you statements to think about. You can agree, disagree, or say "I'm not sure." The number of statements depends on how important your decision is. After you answer, the app gives you a recommendation with a confidence percentage and explains why it suggested that choice.

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If you feel the app missed something important, you can give feedback or answer more questions. You can also ask for step-by-step instructions on how to follow through with the recommendation.

Does It Really Help?

Our early results say yes. We surveyed 44 neurodivergent people after they used the app for two weeks:

- 77.3% said the app helped them think about how their choices affect their wellbeing
- 55% felt calm while using the app (only 7% felt anxious)
- 77.3% thought the app's suggestions were good
- 63.6% found the app very or extremely useful

Some users wanted a way to add more personal context to their decisions, which we're adding in the next version of the app.

ITI incorporated our research findings into development of our app, Decide: Your Personal Decision Assistant. Users own their data and may opt in to research projects that align with their needs and values. User data cited in this paper was obtained from closed and open beta users and is used with their consent.

We incorporated previous researchers' suggested strategies for easing decision-making burden (Luke et al., 2012; Mantas et al., 2022; Rogge, 2022) into the user experience design of Decide in the following ways:

- **Provide additional time:** mobile app is used at user's own pace, and is designed for quick interventions when speed is important
- **Minimize irrelevant information:** present each step simply, sequentially, and without unnecessary information to avoid overwhelm
- **Present closed questions:** not only do we use closed questions (simple answers Agree/Disagree with option to say I'm not sure), we learned through user testing that affirmative statements with agree/disagree answers were better than yes/no or true/false in helping the user answer quickly, accurately, and be able to reflect on their inner state.
- **Address general issues around anxiety:**
    - Leverage AI to get people get out of maximizing, especially fearful maximizing
    - Implement self-paced support to help with the tendency to postpone/avoid/defer
- **Simple, structured process:** help with being "increasingly overwhelmed by a feeling of losing grip on the decision-making process as the number of options increases"

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- **Increase decision confidence:**
    - Explain why user's reflections lead to the app's recommendations
    - Rate each decision with AI-generated percent confidence to account for hidden information and luck
- **Support additional info seeking**:
    - Incorporate Answer More button to allow additional info seeking
    - Longterm: incorporate an additional context input to allow users to better shape their decisions

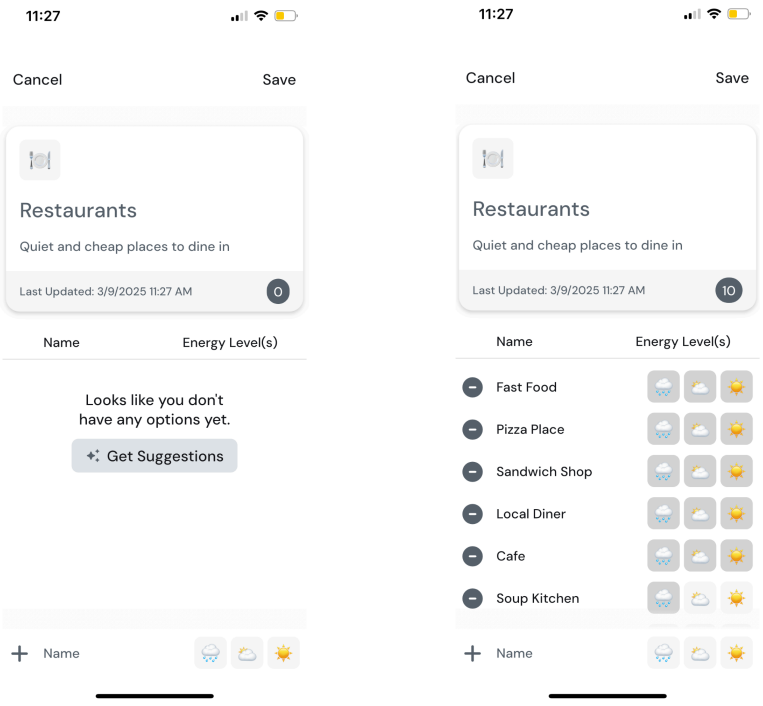
Decide has two core features: Random and Guided.

Random

The Random feature allows users to create a custom list, such as "Safe foods" or "Exercise options" and mark each entry on that list with the amount of energy that option takes. When they need to pick from the list, they select the amount of energy they currently have to low, medium, or high. The app chooses at random only from options that meet the user's current energy level.

Users may use AI to generate a list if they aren't sure of their initial options – for example, a user might say "quiet and cheap places to dine in."

Screenshots of the UX for Decide's Random Feature



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Guided

The Guided feature allows users to enter their question in an open-ended text box. Sample prompts provided to the user focus on "should" questions: "Should I take a nap?" "Should I go to this party? "Should I text this person back?" "Should I take a nap?" The feature takes users through a series of affirmative statements reflecting on the question they asked and asking them to agree, disagree, or select "I'm not sure." The number of statements changes depending on the LLM's assessment of the question's potential impact. Once the user has responded to all the prompts, the app returns a recommendation backed by a percent confidence and an explanation of how the user's responses support that recommendation.

Users may choose to give feedback or answer more if they feel the initial set of statements did not address a key concern. They may also use AI to generate instructions for how to go about the recommended course of action.

Does Decide improve the medical and behavioral health of Autistic/ADHD adults?

Preliminary data indicates it does.

Forty-four neurodivergent beta users completed a 9-question survey two weeks into using Decide. Questions covered ease of decision-making, emotional state while making decisions, speed of making minor decisions, quality of recommendations, depth of consideration and sense of organization in decision-making process, impact on wellbeing, impact on relationships and ease of use.

77.3% of respondents agreed or strongly agreed with the statement: "The app helps me think through how my actions affect my wellbeing." The remaining 22.7% were neutral.

Only 7% of respondents reported feeling somewhat anxious during the process of using the app. 55% reported feeling somewhat or very calm and the remaining 29.5% noted a neutral emotional state.

Most respondents ranked the quality of the app's recommendations as somewhat good (59.1%) or very good (18.2%) and only 7% ranked quality somewhat (5%) or very bad (2%). The negative rankings are likely related to feedback from some users that the app did not ask them to reflect on key areas of personal importance. These users requested an additional input area to provide additional context for their decision as needed, a feature that will be released in the next iteration of Decide.

When asked "How useful did you find this app?," all respondents reported finding it at least slightly useful with 63.6% saying it was very or extremely useful.

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Conclusions

SUMMARY: What We Learned and What's Next

Key Findings

Our study with the Ohio Department of Developmental Disabilities taught us important things about how AI can help people with autism and ADHD:

1. Families and caregivers often focus on different priorities than autistic/ADHD adults themselves.

2. Autistic/ADHD adults want tools to help prevent nervous system overload before it happens.

3. Many autistic/ADHD adults struggle to find healthcare providers who understand their whole health picture.

4. AI tools like our Decide app can help reduce daily stress that leads to burnout.

5. For AI tools to gain trust, users need to control how their data is used.

6. If users choose to share their data, we can learn more about what causes burnout and how to prevent it.

What People Used the App For

Looking at how people used the app, we found many needed help with everyday decisions that seem small but add up. Common questions were about:

- Whether to shower
- When to sleep
- Basic self-care activities

People who often need help with these basic activities might be at higher risk for burnout.

Future Plans

We launched Decide to the public in February 2025. The free version lets users make unlimited random choices from their own lists and 10 guided decisions per month. For $4.99 per month,

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users get unlimited guided decisions and extra AI features.

In March 2025, we'll add voice support and the ability to provide more context about decisions.

Decide is just the first tool in what we call the "Armory" - a collection of support tools for Autistic and ADHD adults and the wider disability community. Our next projects include:

1. A personalization tool that helps users set goals and keep a journal to improve Decide's recommendations.

2. An AI-powered case management system to help neurodivergent adults better understand their healthcare and communicate with providers.

We still need to do more research to make sure our tools work well for people with higher support needs.

Our biggest goal is to create flexible supports that change based on what each person needs at different times - helping people stay well when possible and quickly connect to help when needed.

The DODD-funded study yielded several key insights into how AI-powered supports can improve the medical and behavioral health of Autistic / ADHD adults. These include:

- Family and caregiver perspectives do not align with Autistic / ADHD adults' perspectives on the importance of preventing NSD to their medical and behavioral health.
- Autistic / ADHD adults view preventing NSD as a desirable frontline strategy to improve their medical and behavioral health.
- Autistic / ADHD adults identify access to holistic neurodivergent-focused mental and physical healthcare as a key missing support mechanism, the lack of which undermines their medical and behavioral health.
- AI-powered executive function supports such as Decide can be leveraged effectively to disrupt the daily stressors that feed into NSD and the burnout cycle.
- In order to gain and maintain Autistic / ADHD adults' trust in an AI-powered support tool, use of their data for training the LLM or for research should remain within their control.
- If users opt in, the data gathered through Autistic/ADHD adults' use of AI-powered executive function supports could be instrumental in flagging individual burnout risk as well as in identifying additional areas of support to improve neurodivergent wellbeing.

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The word cloud in figure 10 illustrates the latter insight. It represents word frequency among the prompts neurodivergent beta users put to the app. Frequent key words such as *clean, dinner, coffee*, and *drive* point to the significant need for daily support for perceived low-impact decisions around routine activities. Example prompts include: “Should I take the dog on a walk when I’m not feeling well?” “Should I shower?” “Should I go to sleep or work on my resume?” “Should I get up or try to fall back asleep?”

Many decisions revolve around showering, sleep, and other small energy trade-offs. Users needing frequent support in these areas may be at high risk of burnout.

Figure 10

Word Cloud Illustrating Guided Decisions

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Future Directions for ITI's AI-powered Supports

ITI launched Decide publicly in February 2025 using a freemium pricing model. Free users may access unlimited Random decisions from lists they generate themselves and 10 Guided decisions per month without the option to get instructions. For $4.99/month, premium users may access all AI-powered features, including list generation and get instructions, as well as unlimited Guided decisions.

Based on beta users' feedback, ITI will roll out voice support and the option to add context for a decision to premium users of Decide in March 2025.

Decide is ITI's first entry in what we call the Armory, a proposed "suite" of support tools meant to provide adaptive support centered on the needs of Autistic / ADHD adults and the wider disability community.

ITI's next entry in the Armory focuses on a supplementary personalization tool that allows users to set goals and input more complex data through journaling. This data may then be linked to a user's profile on Decide to better inform its recommendations.

To address the systemic healthcare access issues identified in this study, ITI has also begun discovery for an AI-powered, open-source case management platform to transform social services by prioritizing self-advocacy. This system would help neurodivergent adults articulate their experiences, understand care plans summarized for them in plain language, and access self-advocacy tools, while enabling case managers to create truly person-centered support plans.

Additional research is needed to ensure that adults with high visibility support needs are able to access ITI's tools for purposeful communication, supported decision-making, and maximum autonomy.

ITI's ultimate goal is to create a flexible system of supports that adapt to users' current level of need. For example, a regulated Autistic/ADHD adult may use the Armory to keep NSD to manageable levels; however, when overload inevitably occurs, they may opt in to making specific data available to support professionals through our case management platform, minimizing the time and effort it will take for them to access appropriate care.

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References

A tojisha-kenkyu group for people with neurodiversity, by people with neurodiversity Laboratory—Research Center for Advanced Science and Technology (RCAST), Barrier-Free Research Laboratories COPRO. (n.d.). COPRO. Retrieved March 12, 2025, from https://en.copro.social/researches/ki-05/

Adult ADHD Guidelines Development. (n.d.). *CHADD*. Retrieved March 12, 2025, from https://chadd.org/policy-positions/adult-adhd-guidelines-development/

Alshak, M. N., & Das, J. M. (2024). Neuroanatomy, Sympathetic Nervous System. In *StatPearls*. StatPearls Publishing. http://www.ncbi.nlm.nih.gov/books/NBK542195/

At-a-Glance IACC 2019-2020 Autism Research Portfolio Analysis Report. (n.d.).

Barbier, A., Chen, J.-H., & Huizinga, J. D. (2022). Autism Spectrum Disorder in Children Is Not Associated With Abnormal Autonomic Nervous System Function: Hypothesis and Theory. *Frontiers in Psychiatry*, *13*, 830234. https://doi.org/10.3389/fpsyt.2022.830234

Bentum, J. van, Sijbrandij, M., Huibers, M., & Begeer, S. (2024). Occurrence and predictors of lifetime suicidality and suicidal ideation in autistic adults. *Autism*, 13623613231225901. https://doi.org/10.1177/13623613231225901

Blaxill, M., Rogers, T., & Nevison, C. (2023). Retraction Note: Autism Tsunami: The Impact of Rising Prevalence on the Societal Cost of Autism in the United States. *Journal of Autism and Developmental Disorders*, *53*(8), 3315. https://doi.org/10.1007/s10803-023-06016-4

Brosnan, M., Lewton, M., & Ashwin, C. (2016). Reasoning on the Autism Spectrum: A Dual Process Theory Account. *Journal of Autism and Developmental Disorders*, *46*, 2115–2125. https://doi.org/10.1007/s10803-016-2742-4

Bureau, U. C. (n.d.-a). *About Well Being*. Census.Gov. Retrieved March 13, 2025, from https://www.census.gov/topics/income-poverty/well-being/about.html

Copyright 2025 ITI Assistive Technologies Inc

Bureau, U. C. (n.d.-b). *Extended Measures of Well-Being: Living Conditions in the United States: 2011*. Census.Gov. Retrieved March 13, 2025, from https://www.census.gov/library/publications/2013/demo/p70-136.html

Cakir, J., Frye, R. E., & Walker, S. J. (2020). The lifetime social cost of autism: 1990–2029. *Research in Autism Spectrum Disorders*, *72*, 101502. https://doi.org/10.1016/j.rasd.2019.101502

Cassidy, S., Au-Yeung, S., Robertson, A., Cogger-Ward, H., Richards, G., Allison, C., Bradley, L., Kenny, R., O'Connor, R., Mosse, D., Rodgers, J., & Baron-Cohen, S. (2022). Autism and autistic traits in those who died by suicide in England. *The British Journal of Psychiatry*, *221*(5), 683–691. https://doi.org/10.1192/bjp.2022.21

Cooper, K., Smith, L. G. E., & Russell, A. (2017). Social identity, self-esteem, and mental health in autism. *European Journal of Social Psychology*, *47*(7), 844–854. https://doi.org/10.1002/ejsp.2297

Croen, L. A., Zerbo, O., Qian, Y., Massolo, M. L., Rich, S., Sidney, S., & Kripke, C. (2015). The health status of adults on the autism spectrum. *Autism: The International Journal of Research and Practice*, *19*(7), 814–823. https://doi.org/10.1177/1362361315577517

Dekkers, T. J., Agelink van Rentergem, J. A., Huizenga, H. M., Raber, H., Shoham, R., Popma, A., & Pollak, Y. (2021). Decision-Making Deficits in ADHD Are Not Related to Risk Seeking But to Suboptimal Decision-Making: Meta-Analytical and Novel Experimental Evidence. *Journal of Attention Disorders*, *25*(4), 486–501. https://doi.org/10.1177/1087054718815572

Di Salvo, G., Perotti, C., Filippo, L., Garrone, C., Rosso, G., & Maina, G. (2024). Assessing suicidality in adult ADHD patients: Prevalence and related factors. *Annals of General Psychiatry*, *23*(1), 42. https://doi.org/10.1186/s12991-024-00528-8

Duke, A. (2019). *Thinking in Bets: Making Smarter Decisions When You Don't Have All the Facts*. Portfolio. https://www.penguinrandomhouse.com/books/552885/thinking-in-bets-by-annie-duke/

Elbers, J., Jaradeh, S., Yeh, A. M., & Golianu, B. (2018). Wired for Threat: Clinical Features of Nervous

Copyright 2025 ITI Assistive Technologies Inc

System Dysregulation in 80 Children. *Pediatric Neurology*, *89*, 39–48. https://doi.org/10.1016/j.pediatrneurol.2018.07.007

Elbers, J., Rovnaghi, C. R., Golianu, B., & Anand, K. J. S. (2017). Clinical Profile Associated with Adverse Childhood Experiences: The Advent of Nervous System Dysregulation. *Children (Basel, Switzerland)*, *4*(11), 98. https://doi.org/10.3390/children4110098

Furczyk, K., & Thome, J. (2014). Adult ADHD and suicide. *ADHD Attention Deficit and Hyperactivity Disorders*, *6*(3), 153–158. https://doi.org/10.1007/s12402-014-0150-1

Ganz, M. L. (2007). The Lifetime Distribution of the Incremental Societal Costs of Autism. *Archives of Pediatrics & Adolescent Medicine*, *161*(4), 343–349. https://doi.org/10.1001/archpedi.161.4.343

Garfinkel, S. N., Tiley, C., O'Keeffe, S., Harrison, N. A., Seth, A. K., & Critchley, H. D. (2016). Discrepancies between dimensions of interoception in autism: Implications for emotion and anxiety. *Biological Psychology*, *114*, 117–126. https://doi.org/10.1016/j.biopsycho.2015.12.003

Gornik, A., & Salgado, R. (2022, August). Healthcare Disparities and ADHD. *Attention: Living Well with ADHD*, 14–17.

Hirvikoski, T., Mittendorfer-Rutz, E., Boman, M., Larsson, H., Lichtenstein, P., & Bölte, S. (2016). Premature mortality in autism spectrum disorder. *The British Journal of Psychiatry*, *208*(3), 232–238. https://doi.org/10.1192/bjp.bp.114.160192

Hours, C., Recasens, C., & Baleyte, J.-M. (2022). ASD and ADHD Comorbidity: What Are We Talking About? *Frontiers in Psychiatry*, *13*, 837424. https://doi.org/10.3389/fpsyt.2022.837424

Huang, Y.-H., Wu, S.-I., Lee, M.-J., Chen, Y.-L., Yang, Y.-H., Kuo, T.-Y., Hung, T.-H., Dewey, M. E., Stewart, R., & Chen, V. C.-H. (2024). Excess Mortality in Individuals with Autism Spectrum Disorder: A Population-Based Cohort Study. *Neuropsychiatric Disease and Treatment*, *20*, 247–255. https://doi.org/10.2147/NDT.S437766

Inderbitzen, S. (2023). *October 2023 talk in Anaheim for the Psychotherapy Networker Conference*.

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Psychotherapy Networker Conference, Anaheim, CA.

Inderbitzen, S. (2024). *Autism in Polyvagal Terms: New Possibilities and Interventions*. Norton Professional Books.

Inderbitzen, S. (2025, March 17). *Feedback to ITI Assistive Technology* [Personal communication].

Kirby, A. V., Conner, C. M., & Mazefsky, C. A. (2024). Are autistic females at greater risk of suicide? A call for clarity to advance suicide prevention for the whole community. *Autism Research: Official Journal of the International Society for Autism Research*, *17*(5), 898–905. https://doi.org/10.1002/aur.3120

Kumagaya, S. (2015). Tojisha-Kenkyu of autism spectrum disorders. *Advanced Robotics*, *29*(1), 25–34. https://doi.org/10.1080/01691864.2014.967723

Lam, G. Y. H., Sabnis, S., Migueliz Valcarlos, M., & Wolgemuth, J. R. (2021). A Critical Review of Academic Literature Constructing Well-Being in Autistic Adults. *Autism in Adulthood*, *3*(1), 61–71. https://doi.org/10.1089/aut.2020.0053

LaPoint, S. C., Kiernan, B., Heinly, J., Hector, B. L., Benevides, T. W., & Maddox, B. (2025). Quality of Life Defined by Autistic People: A Thematic Analysis. *Autism in Adulthood*. https://doi.org/10.1089/aut.2024.0180

Lawson, R. P., Rees, G., & Friston, K. J. (2014). An aberrant precision account of autism. *Frontiers in Human Neuroscience*, *8*, 302. https://doi.org/10.3389/fnhum.2014.00302

Leitner, Y. (2014). The Co-Occurrence of Autism and Attention Deficit Hyperactivity Disorder in Children – What Do We Know? *Frontiers in Human Neuroscience*, *8*. https://doi.org/10.3389/fnhum.2014.00268

Lewis, L. F., & Stevens, K. (2023). The lived experience of meltdowns for autistic adults. *Autism: The International Journal of Research and Practice*, *27*(6), 1817–1825. https://doi.org/10.1177/13623613221145783

Copyright 2025 ITI Assistive Technologies Inc

Luke, L., Clare, I. C. H., Ring, H., Redley, M., & Watson, P. (2012). Decision-making difficulties experienced by adults with autism spectrum conditions. *Autism: The International Journal of Research and Practice*, *16*(6), 612–621. https://doi.org/10.1177/1362361311415876

Mantas, V., Pehlivanidis, A., Papanikolaou, K., Kotoula, V., & Papageorgiou, C. (2022). Strategic decision making and prediction differences in autism. *PeerJ*, *10*, e13328. https://doi.org/10.7717/peerj.13328

Martino, B. D., Harrison, N. A., Knafo, S., Bird, G., & Dolan, R. J. (2008). Explaining Enhanced Logical Consistency during Decision Making in Autism. *Journal of Neuroscience*, *28*(42), 10746–10750. https://doi.org/10.1523/JNEUROSCI.2895-08.2008

Milton, D., & Sims, T. (2016). How is a sense of well-being and belonging constructed in the accounts of autistic adults? *Disability & Society*, *31*(4), 520–534. https://doi.org/10.1080/09687599.2016.1186529

Najeeb, P., & Quadt, L. (2024). Autistic well-being: A scoping review of scientific studies from a neurodiversity-affirmative perspective. *Neurodiversity*, *2*, 27546330241233088. https://doi.org/10.1177/27546330241233088

Nussbaum, M. C. (2000). *Women and Human Development: The Capabilities Approach*. Cambridge University Press.

O'Dell, L. (2024). *Selling Out the Spectrum: How Science Lost the Trust of Autistic People, and How It Can Win It Back*. Jessica Kingsley Publishers. https://us.jkp.com/products/selling-out-the-spectrum

O'Nions, E., Baou, C. E., John, A., Lewer, D., Mandy, W., McKechnie, D. G. J., Petersen, I., & Stott, J. (2025). Life expectancy and years of life lost for adults with diagnosed ADHD in the UK: Matched cohort study. *The British Journal of Psychiatry*, 1–8. https://doi.org/10.1192/bjp.2024.199

Oscarsson, M., Nelson, M., Rozental, A., Ginsberg, Y., Carlbring, P., & Jönsson, F. (2022). Stress and work-related mental illness among working adults with ADHD: A qualitative study. *BMC*

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Psychiatry, *22*, 751. https://doi.org/10.1186/s12888-022-04409-w

Pellicano, E., & Burr, D. (2012). When the world becomes “too real”: A Bayesian explanation of autistic perception. *Trends in Cognitive Sciences*, *16*(10), 504–510. https://doi.org/10.1016/j.tics.2012.08.009

Personal well-being frequently asked questions—Office for National Statistics. (n.d.). Retrieved March 13, 2025, from https://www.ons.gov.uk/peoplepopulationandcommunity/wellbeing/methodologies/personalwellbeingfrequentlyaskedquestions

Raymaker, D. M., Teo, A. R., Steckler, N. A., Lentz, B., Scharer, M., Delos Santos, A., Kapp, S. K., Hunter, M., Joyce, A., & Nicolaidis, C. (2020). “Having All of Your Internal Resources Exhausted Beyond Measure and Being Left with No Clean-Up Crew”: Defining Autistic Burnout. *Autism in Adulthood: Challenges and Management*, *2*(2), 132–143. https://doi.org/10.1089/aut.2019.0079

Retzler, C., Boehm, U., Cai, J., Cochrane, A., & Manning, C. (2021). Prior information use and response caution in perceptual decision-making: No evidence for a relationship with autistic-like traits. *Quarterly Journal of Experimental Psychology (2006)*, *74*(11), 1953–1965. https://doi.org/10.1177/17470218211019939

Robeyns, I. (2016). Conceptualising well-being for autistic persons. *Journal of Medical Ethics*, *42*(6), 383–390. https://doi.org/10.1136/medethics-2016-103508

Rogge, N. (2022). Exploring maximizing, satisficing and minimizing tendency in decision-making among autistic and neurotypical individuals. *Research in Autism Spectrum Disorders*, *92*, 101935. https://doi.org/10.1016/j.rasd.2022.101935

Rosebrook, H. M., Balistreri, K. S., & Seiber, E. (2019). *Demographic and Health Characteristics of Ohio’s Non-Elderly Adult Medicaid Population* [Ohio Medicaid Assessment Survey].

Santamaría-García, H., Migeot, J., Medel, V., Hazelton, J. L., Teckentrup, V., Romero-Ortuno, R., Piguet, O.,

Copyright 2025 ITI Assistive Technologies Inc

Lawor, B., Northoff, G., & Ibanez, A. (2025). Allostatic Interoceptive Overload Across Psychiatric and Neurological Conditions. *Biological Psychiatry*, *97*(1), 28–40. https://doi.org/10.1016/j.biopsych.2024.06.024

Sapey-Triomphe, L.-A., Leiros Costa, T., & Wagemans, J. (2019). Sensory sensitivity in autism mostly depends on contextual predictions. *Cognitive Neuroscience*, *10*(3), 162–164. https://doi.org/10.1080/17588928.2019.1593126

Schauder, K. B., Mash, L. E., Bryant, L. K., & Cascio, C. J. (2015). Interoceptive ability and body awareness in autism spectrum disorder. *Journal of Experimental Child Psychology*, *131*, 193–200. https://doi.org/10.1016/j.jecp.2014.11.002

Schein, J., Adler, L. A., Childress, A., Gagnon-Sanschagrin, P., Davidson, M., Kinkead, F., Cloutier, M., Guérin, A., & Lefebvre, P. (2022). Economic burden of attention-deficit/hyperactivity disorder among adults in the United States: A societal perspective. *Journal of Managed Care & Specialty Pharmacy*, *28*(2), 168–179. https://doi.org/10.18553/jmcp.2021.21290

Shah, P., Catmur, C., & Bird, G. (2016). Emotional decision-making in autism spectrum disorder: The roles of interoception and alexithymia. *Molecular Autism*, *7*(1), 43. https://doi.org/10.1186/s13229-016-0104-x

Sinha, P., Kjelgaard, M. M., Gandhi, T. K., Tsourides, K., Cardinaux, A. L., Pantazis, D., Diamond, S. P., & Held, R. M. (2014). Autism as a disorder of prediction. *Proceedings of the National Academy of Sciences*, *111*(42), 15220–15225. https://doi.org/10.1073/pnas.1416797111

Team, A. E. (2024, October 11). ADHD Burnout: Cycle, Symptoms, and Causes. *ADDA - Attention Deficit Disorder Association*. https://add.org/adhd-burnout/

Turjeman-Levi, Y., Itzchakov, G., & Engel-Yeger, B. (2024). Executive function deficits mediate the relationship between employees' ADHD and job burnout. *AIMS Public Health*, *11*(1), 294–314. https://doi.org/10.3934/publichealth.2024015

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UK Measures of National Well-being Dashboard—Office for National Statistics. (n.d.). Retrieved March 13, 2025, from https://www.ons.gov.uk/peoplepopulationandcommunity/wellbeing/articles/ukmeasuresofnationalwellbeing/dashboard

Van de Cruys, S., Perrykkad, K., & Hohwy, J. (2019). Explaining hyper-sensitivity and hypo-responsivity in autism with a common predictive coding-based mechanism. *Cognitive Neuroscience*, *10*(3), 164–166. https://doi.org/10.1080/17588928.2019.1594746

Wada, M., Umesawa, Y., Sano, M., Tajima, S., Kumagaya, S., & Miyazaki, M. (2023). Weakened Bayesian Calibration for Tactile Temporal Order Judgment in Individuals with Higher Autistic Traits. *Journal of Autism and Developmental Disorders*, *53*(1), 378–389. https://doi.org/10.1007/s10803-022-05442-0

Walker, N. (2021, August 1). *What is Autism? • NEUROQUEER*. https://neuroqueer.com/what-is-autism/

Ward, J. (2019). Individual differences in sensory sensitivity: A synthesizing framework and evidence from normal variation and developmental conditions. *Cognitive Neuroscience*, *10*(3), 139–157. https://doi.org/10.1080/17588928.2018.1557131

Watts, G., Crompton, C., Grainger, C., Long, J., Botha, M., Somerville, M., & Cage, E. (2024). "A certain magic" - autistic adults' experiences of interacting with other autistic people and its relation to Quality of Life: A systematic review and thematic meta-synthesis. *Autism: The International Journal of Research and Practice*, 13623613241255811. https://doi.org/10.1177/13623613241255811

Williams, Z. J., Suzman, E., Bordman, S. L., Markfeld, J. E., Kaiser, S. M., Dunham, K. A., Zoltowski, A. R., Failla, M. D., Cascio, C. J., & Woynaroski, T. G. (2023). Characterizing Interoceptive Differences in Autism: A Systematic Review and Meta-analysis of Case-control Studies. *Journal of Autism and Developmental Disorders*, *53*(3), 947–962. https://doi.org/10.1007/s10803-022-05656-2

Copyright 2025 ITI Assistive Technologies Inc

Zablotsky, B., Bramlett, M. D., & Blumberg, S. J. (2020). The Co-Occurrence of Autism Spectrum Disorder in Children With ADHD. *Journal of Attention Disorders*, *24*(1), 94–103. https://doi.org/10.1177/1087054717713638

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Appendix A: Demographics

Demographic goals shifted throughout this project and the table below reflects several iterations in data collection. Responses to S4 and S5 were excluded from the final study due to challenges with determining which data was clean and which was due to bot attacks or spammers. We include the demographics here for reference, but they are not included in the study or percent comparison of our results to Ohio Medicaid data. The formula for calculating our % comparison was ((*incl in study*/884)*100)%-(*goal*).

Characteristic	Goal	S1	S2	Int 1 (GBH)	Int 2 scr.*	Int 2 (CLL)	S3	Int 3 (UX)	S4 (171 omitted)	S5 (96 omitted)	Focus groups	S6	S7	In person events	App Data	Total included in study	% comparison *calculated as ((S[row#]/R2)*100)%-(C[row#])*
Total responses per instrument	**500**	**42**	**96**	5	**50**	11	**85**	**3**	**0**	**46**	**5**	**214**	**46**	**113**	**214**	930	
Total responses for whom we have some demographic data	**500**	4	96	5	37	0	52	3	0	46	5	214	44	113	214	833	
Age																	
18-44	**64%**	1	81	n/a	29	n/a	38	3	n/a	28	n/a	153	29	n/a	153	515	**-9%**
45-64	**36%**	3	11	n/a	n/a	n/a	n/a	0	n/a	n/a	n/a	58	13	n/a	58	143	**-21%**
Gender																	
Male	**42%**	1	35	n/a	n/a	n/a	8	0	n/a	12	0	70	14	n/a	70	210	**-19%**
Female	**58%**	3	45	n/a	n/a	n/a	30	0	n/a	24	5	86	17	n/a	86	296	**-26%**
Race/Ethnicity																	
White	**67%**	4	65	n/a	n/a	n/a	33	3	n/a	27	4	149	35	n/a	149	469	**-17%**
African-American	**23%**	0	15	n/a	n/a	n/a	6	0	n/a	13	1	13	4	n/a	13	65	**-16%**

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Other	**10%**	0	15	n/a	n/a	n/a	8	0	n/a	6	0	52	5	n/a	52	138	**5%**
County Type																	
Rural	**28%**	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3	n/a	27	4	n/a	27	61	**-21%**
Metro	**61%**	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	26	n/a	80	18	n/a	80	204	**-39%**
Suburban	**11%**	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	17	n/a	107	22	n/a	107	253	**16%**
Educational level																	
No more than high school diploma	**58%**	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	11	n/a	64	9	n/a	64	148	**-42%**
At least some college	**42%**	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	35	n/a	150	35	n/a	150	370	**-2%**
Household Type																	
No children	**53%**	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	32	n/a	160	37	n/a	160	389	**-11%**
Children	**48%**	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	14	n/a	54	7	n/a	54	129	**-34%**
Employment																	
Employed	**46%**	n/a	n/a	n/a	26	n/a	37	4	n/a	34	5	141	26	n/a	141	414	**-1%**
Not Employed	**55%**	n/a	n/a	n/a	11	n/a	15	1	n/a	12	0	73	18	n/a	73	203	**-33%**

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Appendix B: Instruments for Research Cycle 1

Survey 1: Feedback on assistive app ideas to help autistic people
Dates open: 8/20/23 - 10/11/23
Responses: n = 42; 28 identified as Autistic

We think these apps would help us. Do you? We will move forward with developing the most requested app idea first. Your feedback will help us convince non-autistic people to help us pay for development by showing autistic people would actually use the product.

1. **Danger, Will Robinson!**
   This app logs environmental data from a small wearable sensor and notifies the user when sound, lighting, or lack of movement become risk factors for sensory overload and prompts them to regulate their nervous system. Users may input other stressors as well. Over time, it learns the user's stress tolerances and becomes more customized to their needs. Users may also preprogram messages and prompts

   Addresses
   -Sensory overload
   -Nervous system dysregulation
   -Meltdowns / shutdowns

   - Yes, I think this would be useful.
   - No, I don't think I'd use this.
   - I might use this sometimes.

2. **Food with Friends**
   Users input a list of their safe foods, any allergies or dietary restrictions, and nutritional guidelines. The app then searches restaurant menus and reviews to see if the user would find something to eat there. Users can also report on the sensory environment (light/noise) to help others determine if their overall experience will be worth it.

   Addresses
   -Sensory overload
   -Executive function challenges
   -Social isolation

   - Yes, I think this would be useful.
   - No, I don't think I'd use this.
   - I might use this sometimes.

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3. **Magic 8 Ball**
   Users input their income, budget, and financial priorities, training the app on their values through machine learning. When they are considering making a purchase, they select the item in the app, which checks whether the user can afford it and whether the purchase aligns with the user's priorities and longterm financial health. The app returns its analysis in plain language to guide the user to make real-time decisions that align with their values and goals.

   Addresses
   -Executive function challenges
   -Financial instability

   - Yes, I think this would be useful.
   - No, I don't think I'd use this.
   - I might use this sometimes.

4. **Pick One**
   This decision facilitation app allows users to set the parameters for making a decision (e.g. cost, accessibility, color), input the options, and quickly eliminate any options that do not fit the parameters they've pre-selected. If more than one option is roughly equivalent, the user may opt to use randomization to determine the final selection.

   Addresses
   -Executive function challenges
   -Financial instability
   -Cognitive overload

   - Yes, I think this would be useful.
   - No, I don't think I'd use this.
   - I might use this sometimes.

5. **Next Step**
   This app would be developed to assist with apraxia. Users program in the various actions in multi-step tasks (comes with editable generic phrases by default) and then when the user selects that series, the task list loads and the app provides prompts to complete the next step in the series.

   The app then prompts the user to input when that step is done so it can proceed to the next. When the task series is done, the app signals completion and suggests related task series. This app comes in your choice of a minimalist or gamified design to suit different neurotypes and situations.

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Addresses
-Apraxia
-Executive function challenges
-Financial instability
-Cognitive overload
-Independence

- Yes, I think this would be useful.
- No, I don't think I'd use this.
- I might use this sometimes.

Demographic info

1. Autistic identity (check all that apply)
    - Formally-diagnosed
    - Self-diagnosed
    - Questioning if I or a loved one may be autistic
    - My bio or chosen family member is autistic
    - Post-Traumatic Stress Disorder (PTSD)
    - Overstimulation
    - Hypersensitivity
    - I don't identify as autistic or neurodivergent
    - Other:

2. Birth year _____
3. Gender
    - Nonbinary
    - Gender fluid
    - Female
    - Male
    - My gender identity isn't listed here.
    - Prefer not to answer

4. Race/Ethnicity
    - Black or African American
    - White, Non-Hispanic
    - Hispanic or Latinx
    - Indigenous
    - Asian / Pacific Islander
    - Multi-racial / Other
    - Prefer not to answer

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Survey 2: Staying on Task
Dates open: 10/14/23 - 3/16/24
Responses: n = 96; 73 identified as autistic and/or ADHD

Instrument
We are developing apps that address key challenges that autistic people and neurodivergent folks face, such as executive dysfunction and aphaxia.

Describe your experience with completing everyday tasks and chores.
Very difficult 1 - 5 Very easy

1. How difficult is it for you to start your morning and evening routine?
2. How difficult is it for you to finish your morning and evening routine?
3. How difficult is it for you to start paying your bills?
4. How difficult is it for you to finish paying all your bills?
5. How difficult is it for you to start doing self-care activities, such as exercising, showering, or eating meals?
6. How difficult is it for you to finish doing self-care activities, such as exercising, showering, or eating meals?

7. What supports do you currently use to get tasks and chores done? Check all that apply.
    - Apps or websites for organization
    - To-do lists
    - Friends and family
    - Emotional cycling (such as stress, procrastination, or shame)
    - Other: _____

8. How well do your current supports work for completing tasks?
   Very poorly 1 - 5 Very well

9. What barriers stop you from completing important tasks? Check all that apply.
    - External distractions
    - Bad tools
    - Anxiety
    - Lack of accountability
    - Overwhelm
    - Boredom
    - Other: _____

10. Describe your experience with productivity apps or websites

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11. Which of the following would be valuable to you? Check all that apply.
    - An app that helps you make decisions instantly
    - An app that picks where to eat based on your sensitivities and preferences
    - An app that guides you through your tasks step by step
    - An app that analyzes your different environmental triggers and predicts meltdowns
    - An app that tells you if you can afford to purchase something based on your budget

12. Are there other apps that you would want to see?

Identity Questions

13. What is your autistic identity? *Check all that apply.*
    - Formally-diagnosed
    - Self-diagnosed
    - Questioning if I or a loved one may be autistic
    - My bio or chosen family member is autistic
    - Post-Traumatic Stress Disorder (PTSD)
    - Overstimulation
    - Hypersensitivity
    - I don't identify as autistic or neurodivergent
    - Other: _____

14. What is your age range?
    - Under 18 years old
    - 18 - 24 years old
    - 25 - 34 years old
    - 35 - 44 years old
    - 45 - 54 years old
    - 55 - 64 years old
    - 65 - 74 years old
    - 75 years or older

15. What is your racial/ethnic identity? *Check all that apply.*
    - Black or African American
    - White, Non-Hispanic
    - Hispanic or Latinx
    - Indigenous
    - Asian / Pacific Islander
    - Multi-racial / Other
    - Prefer not to answer
    - Other: _____

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16. What is your gender identity? *Check all that apply.*
    - Nonbinary
    - Gender fluid
    - Female
    - Male
    - My gender identity isn't listed here
    - Prefer not to answer
    - Other: _____

17. Any other comments, questions, thoughts, or ideas?

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Appendix C: Instruments for Research Cycle 2

Screener for Qualitative Interviews

Dates open: 2/9/24 - 3/19/24

Respondents: n = 50; 50 identified as autistic and/or ADHD

1. How do you identify?
    - Autistic
    - ADHD
    - Autistic and ADHD
    - None of the Above

2. How often do you have a smartphone with you?
    - Almost always
    - Sometimes
    - Rarely
    - Never

3. Please indicate your age range.
    - 21 or under
    - 22-39
    - 40-65
    - 66+
4. Where do you live?
    - United States
    - Other (please specify)

5. What is your employment status?
    - Currently employed
    - Employed within the last 3 years
    - Employed prior to the last 3 years
    - Never employed

6. What is your first name? _____
7. What is your last name? _____
8. At what email address would you like to be contacted? _____

Survey 3: Decision-making Survey

Dates open: 2/5/24 - 3/11/24

Responses: n=85; 70 identified as autistic and/or ADHD

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Pre-survey Screener

1. How do you identify?
    - Autistic
    - ADHD
    - Autistic and ADHD
    - None of the Above

2. How do you support autistic/ADHD people?
    - I support an Autistic/ADHD adult in my personal life
    - I support Autistic/ADHD people professionally
    - I support Autistic/ADHD people professionally and in my personal life
    - I do not support Autistic/ADHD people in a systematic way

3. How often do you have a smartphone with you?
    - Almost always
    - Sometimes
    - Rarely
    - Never

4. Please indicate your age range.
    - 21 or under
    - 22-39
    - 40-65
    - 66+
5. Where do you live?
    - United States
    - Other (please specify) _____

6. What is your employment status?
    - Currently employed
    - Employed within the last 3 years
    - Employed prior to the last 3 years
    - Never employed

Conditional Logic, Path 1: Autistic, ADHD, Autistic and ADHD

Identifying possible problems

The average person makes 33,000 decisions a day and 2,000 decisions an hour.

7. Agree or disagree with the following statements.
(Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree)

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- I often struggle to make low-impact decisions such as what to eat, when to go to bed, what task to do first.
- I often struggle to make medium-impact decisions such as what specific item to purchase, whether to look for another job.
- I often get stuck when asked to make a decision.
- I often find myself overwhelmed when asked to make a decision.
- Making decisions I feel confident in takes me longer than I'd like.
- I generally make good decisions.

8. What tools and strategies do you currently use to help with decision-making? (select all that apply)
    - Research
    - Friends and family
    - Randomization tools (random answer generators, Magic 8ball, dice, etc.)
    - My own intuition or logic
    - Apps or websites that provide decision-making support
    - Emotional cycling (such as stress, procrastination, or shame)
    - Other _____

9. Agree or disagree with the following statements.
   (Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree)
    - I often make decisions blindly.
    - The tools and strategies I currently use to make decisions (including my own intuition and/or logic) meet my needs.
    - I am interested in a mobile app that helps me make low and medium-complexity decisions quickly and confidently.

10. How much would you pay per year for a mobile app that helps you make low and medium-complexity decisions quickly and confidently? _____

<u>Product Interest</u>

Now you'll be shown a concept for a potential decision-making app that could be available to the public. Please read the description thoroughly and answer the following questions:

Decisions is an app designed to reduce decision fatigue and paralysis by making simple and complex decision-making clear for neurodivergent minds. A simple phone widget supports instantaneous decision-making for low-risk situations like ordering a specialty coffee, while the full app uses AI to minimize set-up while breaking down complex decisions, assessing risk levels, weighing your criteria, and visually presenting the decisions that best fit your values or logic-based decision-making style. Over time, Decisions learns your preferences and becomes hyper-personalized.

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11. Based on the description you just read, how likely would you be to use this decision-making app?
    - Very likely
    - Likely
    - Neither likely nor unlikely
    - Unlikely
    - Very Unlikely

12. Below is a list of **features focused on how the app may make decisions.** Please indicate how important or unimportant you feel each feature is to the app.
    (Very important, Somewhat important, Neutral, Somewhat unimportant, Unimportant)
    - AI that becomes hyper-personalized to you over time
    - An instantaneous random decision option
    - Rank importance of decision-making criteria
    - Switch between values- or logic-based decision-making
    - Visual breakdown of factors considered in decision
    - Mental health safeguards

13. Below is another list of **features that focus on how you may interact with the app**. Please indicate how important or unimportant you feel each feature is to the app.
    (Very important, Somewhat important, Neutral, Somewhat unimportant, Unimportant)
    - Sensory-friendly UX
    - Simple set-up
    - Personalized display options
    - Ability to view decision-making history and analytics
    - Data privacy safeguards

14. Please share any other comments, questions, thoughts, or ideas about this product that you think we should consider. _____

Conditional Logic, Path 2: Support personnel who are not neurodivergent

Identifying possible problems - Support

Please answer the questions on the next two pages according to your knowledge and experience of the Autistic/ADHD adult(s) you support.

7. Agree or disagree with the following statements.
   (Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree)
   - They often struggle to make low-impact decisions such as what to eat, when to go to bed, what task to do first.
   - They often struggle to make medium-impact decisions such as what specific item to purchase, whether to look for another job.

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- They often get stuck when asked to make a decision.
- They often find themselves overwhelmed when asked to make a decision.
- Making decisions they feel confident in takes them longer than they'd like.
- They generally make good decisions.

8. What tools and strategies do they currently use to help with decision-making? (select all that apply)
    - Research
    - Friends and family
    - Randomization tools (random answer generators, Magic 8ball, dice, etc.)
    - My own intuition or logic
    - Apps or websites that provide decision-making support
    - Emotional cycling (such as stress, procrastination, or shame)
    - Other _____

9. Agree or disagree with the following statements.
   (Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree)
    - They often make decisions blindly.
    - The tools and strategies they currently use to make decisions (including their own intuition and/or logic) meet their needs.
    - You would consider recommending they use a mobile app that helps them make low and medium-complexity decisions quickly and confidently.

10. How much do you think is reasonable to pay per year for a mobile app that helps the adult(s) you support make low and medium-complexity decisions quickly and confidently?

    Product Interest - Support

    Now you'll be shown a concept for a potential decision-making app that could be available to the public. Please read the description thoroughly and answer the following questions:

    Decisions is an app designed to reduce decision fatigue and paralysis by making simple and complex decision-making clear for neurodivergent minds. A simple phone widget supports instantaneous decision-making for low-risk situations like ordering a specialty coffee, while the full app uses AI to minimize set-up while breaking down complex decisions, assessing risk levels, weighing your criteria, and visually presenting the decisions that best fit your values or logic-based decision-making style. Over time, Decisions learns your preferences and becomes hyper-personalized.

11. Based on the description you just read, how likely would you be to recommend the adult(s) you support use this decision-making app?
    - Very likely

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- Likely
- Neither likely nor unlikely
- Unlikely
- Very Unlikely

12. Below is a list of **features focused on how the app may make decisions.** Please indicate how important or unimportant you feel each feature is to the app.
(Very important, Somewhat important, Neutral, Somewhat unimportant, Unimportant)
    - AI that becomes hyper-personalized to you over time
    - An instantaneous random decision option
    - Rank importance of decision-making criteria
    - Switch between values- or logic-based decision-making
    - Visual breakdown of factors considered in decision
    - Mental health safeguards

13. Below is another list of **features that focus on how Autistic/ADHD adults may interact with the app.** Please indicate how important or unimportant you feel each feature is to the app.
(Very important, Somewhat important, Neutral, Somewhat unimportant, Unimportant)
    - Sensory-friendly UX
    - Simple set-up
    - Personalized display options
    - Ability to view decision-making history and analytics
    - Data privacy safeguards

14. Please share any other comments, questions, thoughts, or ideas about this product that you think we should consider. _____

Demographics (all neurodivergent or support personnel)

15. What is your autistic identity? *Check all that apply.*
    - Formally-diagnosed with autism spectrum disorder (ASD). ASD includes diagnoses previously known as autistic disorder, pervasive developmental disorder not otherwise specified (PDD-NOS), and Asperger syndrome.
    - Self-diagnosed with autism spectrum disorder (ASD)
    - Question if I may be autistic
    - I do not identify as autistic

16. What are your other areas of neurodivergence? Check all that apply.
    - I have Attention deficit hyperactivity disorder (ADHD)
    - I am dyslexic
    - I am a stroke survivor

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- I am undergoing chemotherapy
- I have long Covid.
- None of the above

17. What are your other relationships to neurodivergence, if any? Check all that apply.
    - I am parenting one or more high-needs children
    - I support neurodivergent people professionally
    - My bio or chosen family member is neurodivergent
    - I do not have other relationships with neurodivergence

18. What is your gender identity? *Check all that apply.*
    - Nonbinary
    - Gender fluid
    - Female
    - Male
    - My gender identity isn't listed here
    - Prefer not to answer
    - Other: _____

19. What is your racial/ethnic identity? *Check all that apply.*
    - Black or African American
    - White, Non-Hispanic
    - Hispanic or Latino
    - Indigenous
    - Asian / Pacific Islander
    - Multi-racial
    - Prefer not to answer
    - Other: _____

Survey 4: Neurodivergent Decision Making and AI: participant screener

Dates open: 6/18/24 - 11/18/24

Responses: n=171; ; 166 identified as autistic and/or ADHD; however, some data was determined to have been compromised.

Overview

Hello! We're glad to see you're interested in participating in our research. We'd like to ask you a few questions to see if you're eligible for participation.

Who we are:

ITI Assistive Technologies is an autistic and ADHD team making apps for daily neurodivergent life. We are currently developing our first app, Decide, to help with decision fatigue and paralysis.

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Our research:
To help us make Decide, we are working with the Ohio Department of Developmental Disabilities to study the potential for artificial intelligence (AI) and large language models (LLMs) to support neurodivergent people with decision making.

Participation opportunities:
We are recruiting autistic and/or ADHD adults to participate in paid focus groups and product beta testing.

Pre-survey screener

We need a little information about you before we get started.

1. How do you identify?
    - Autistic
    - ADHD
    - Autistic and ADHD
    - None of the Above

2. Please indicate your age range
    - 17 or under
    - 18-21
    - 22-39
    - 40-65
    - 66+

3. Where do you live?
   Ohio
    - Elsewhere in the United States
    - Other _____

4. Verifying your identity
5. Which one is NOT a number?
    - 1
    - 2
    - B
    - 3
    - 4
    - 5

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Conditional Logic Path 1: Disqualified

Thanks so much for your interest. Unfortunately, you aren't qualified to participate in our current line of research, but you may still be able to beta test the app.

If you'd like to hear about future opportunities and news from ITI, including when we open the app to beta users, submit your contact information below and we'll keep you in the loop.

1. Contact info
   Email address _____
2. Name (optional)
   First Name _____
   Last Name _____

Conditional Logic Path 2: Qualified

We'd love your participation!

Based on your previous answers, you qualify to participate in our research and testing opportunities. Sign up below to receive participation instructions.

1. Email address _____
2. First name (optional) _____
3. Last name (optional _____

4. How would you like to participate? Check all that apply
   - Beta testing for mobile and web applications
   - Paid focus groups (only for US residents)
   - I'm also interested in future opportunities to participate in neurodivergent research
   - None of the above

Next Steps

Focus Groups

We are starting paid focus groups in October. The purpose of this first round of focus groups is to define wellbeing for those who identify as autistic or ADHD.

Here's how to participate

1. Complete the research survey (if you're doing both focus groups and beta testing, only fill out the survey **once**)
2. Due to a security issue, we have temporarily closed the focus group session sign up. If you indicated interest in focus groups, we will follow up with more details.

You will receive a $25 gift card once you complete the survey and focus group.

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Beta Testing
Beta testing will be starting later in 2024.

Here's how to participate
1. Complete the research survey (if you're doing both focus groups and beta testing, only fill out the survey **once**)
2. That's it for now! We'll be in touch in a couple months with further instructions.

Survey 5: Neurodivergent Decision Making and AI: research survey
Dates open: 7/29/24 - 11/18/24
Responses: n=46 after data cleaning (original n=142; 131 identified as autistic and/or ADHD; however, some data was determined to have been compromised)

Overview
Purpose of this survey
This survey will help us better understand the demographics, decision making process, and wellbeing of the neurodivergent community. We ask all participants of focus groups and beta testing to complete this.

Who we are
ITI Assistive Technologies is an autistic and ADHD team making apps for daily neurodivergent life. We are currently developing our first app, Decide, to help with decision fatigue and paralysis.

About this research
To help us make Decide, we are working with the Ohio Department of Developmental Disabilities to study the potential for artificial intelligence (AI) and large language models (LLMs) to support neurodivergent people with decision making.

1. What is your email? (Please use the same email from the screener survey, if possible. The purpose of collecting your email is for ITI internal use only.)

Demographics
Please answer the following demographic questions about yourself. We use this information to make sure that we're reaching a diverse sample of our community.
2. What is your autistic identity? *Check all that apply.*
    - Formally-diagnosed with autism spectrum disorder (ASD). ASD includes diagnoses previously known as autistic disorder, pervasive developmental disorder not otherwise specified (PDD-NOS), and Asperger syndrome.
    - Self-diagnosed with autism spectrum disorder (ASD)
    - Question if I may be autistic

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- I do not identify as autistic

3. What are your other areas of neurodivergence? Check all that apply.
    - I have Attention deficit hyperactivity disorder (ADHD)
    - I am dyslexic
    - I am a stroke survivor
    - I am undergoing chemotherapy
    - I have long Covid.
    - None of the above

4. What are your other relationships to neurodivergence, if any? Check all that apply.
    - I am parenting one or more high-needs children
    - I support neurodivergent people professionally
    - My bio or chosen family member is neurodivergent
    - I do not have other relationships with neurodivergence

5. How old are you?
    - 17 or under
    - 18-21
    - 22-39
    - 40-65
    - 66+

6. What is your employment status?
    - Currently employed
    - Employed within the last 3 years
    - Employed prior to the last 3 years
    - Never employed

7. Where do you live?
    - Ohio
    - Elsewhere in the United States
    - Other (please specify)

8. What best describes the area that you live in most of the year?
    - Rural
    - Suburban
    - Urban
9. Which of the following options most closely aligns with your gender?
    - Nonbinary
    - Gender fluid

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- Woman
- Man
- My gender identity isn't listed here
- Prefer Not to answer
- Other (please specify) _____

10. I live with... (Check all that apply)
    - Pets
    - Parents
    - Partner - unmarried
    - Partner - married
    - My children
    - Other family members (not my parents, partner or children)
    - Roommates (not partner or family)
    - Caregiver
    - None of the above - I live alone
    - Other (please specify) _____

11. Which of the following best describes your racial/ethnic identity? If more than one applies and multi-racial doesn't feel right either, choose other and write in how you identify.
    - Black or African American
    - White, Non-Hispanic
    - Hispanic or Latino
    - Indigenous
    - Asian / Pacific Islander
    - Multi-racial
    - Prefer not to answer
    - Other: _____

12. What is the highest level of education you have completed? *Do not count a degree that is partially completed or in-progress*.
    - Some high school or less
    - High school diploma
    - GED
    - Associate's degree
    - Bachelor's degree
    - Master's degree
    - Professional degree beyond bachelor's degree (e.g. MD, DDS, DVM, LLB, JD)
    - Doctorate degree (e.g. PhD, EdD)

Decision Making

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13. I struggle with… (select all that apply)
    - Figuring out how to start my decision-making process.
    - Deciding between two things when there's no right answer.
    - Committing to a final decision.
    - Organizing information during the decision-making process.
    - Remembering all the factors I need to consider in a decision.

14. I struggle with… (select all that apply)
    - Making last minute decisions.
    - Making decisions quickly.
    - Making decisions at someone else's request.
    - Making decisions that could impact others.
    - Making decisions in a group.

15. What tools and strategies do you currently use to help with decision-making? (select all that apply)
    - Research
    - Friends and family
    - Randomization tools (random answer generators, Magic 8ball, dice, etc.)
    - My own intuition or logic
    - Apps or websites that provide decision-making support
    - Emotional cycling (such as stress, procrastination, or shame)
    - Other (please specific) _____

16. I generally make good decisions.
    (Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree)

17. The tools and strategies I currently use to make decisions (including my own intuition and/or logic) meet my needs.
    (Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree)

Well Being

18. Overall, I am satisfied with my life over the last two weeks.
    (Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree)
19. Overall, I feel that the things I've done over the last two weeks in my life are worthwhile.
    (Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree)
20. Overall, I felt anxious yesterday.
    (Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree)
21. Overall, I felt happy yesterday.
    (Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree)

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Verifying your identity

22. Which one is NOT a letter?
    - Q
    - L
    - T
    - 8
    - X

30-Minute Focus Group Protocol

Dates of included focus groups: 10/22/24, 11/1/24, 11/4/24, 11/8/24,
Responses: n=5 after data cleaning

Introduction (2 minutes)
- Welcome participants and thank them for their time
- Briefly explain the purpose of the focus group
- Outline the structure of the session

Proposed Definition Discussion (10 minutes)
1. Present the proposed definition of medical and behavioral health (helper pastes into chat)

> **Medical and behavioral health:** Knowing how your actions and behaviors affect your inner balance and your relationships with others and the world around you. Then, making choices in your daily life that help create and maintain that balance.
>
> **Inner balance:** Capacity to be present and react in your life

2. Ask participants:
   - What are your initial thoughts on this definition?
   - How well does this definition align with your understanding of medical and behavioral health?
   - What, if anything, would you add or change in this definition?
   - How might this definition impact your work or interactions with healthcare systems?

Wellbeing Experience (8 minutes)
1. Ask participants to reflect on their personal experiences of wellbeing:
   - How does wellbeing feel in your body? (e.g., relaxed muscles, steady breathing)
   - How does wellbeing feel in your brain? (e.g., clear thoughts, positive outlook)
   - Can you describe a recent time when you felt a strong sense of wellbeing?
   - How does your state of wellbeing impact your daily life and work?

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Burnout Experience (8 minutes)

1. Guide participants to consider their experiences with burnout:
   - How does burnout manifest in your body? (e.g., fatigue, tension)
   - How does burnout affect your brain? (e.g., difficulty concentrating, negative thoughts)
   - Can you share a situation where you've experienced burnout?
   - How does burnout influence your daily activities and job performance?

Closing (2 minutes)

- Summarize key points from the discussion
- Thank participants for their valuable input
- Provide information on next steps or how their feedback will be used

Notes for Facilitator

- Encourage all participants to share their views
- Use probing questions to delve deeper into responses when necessary
- Be mindful of time and gently redirect if discussions go off-topic
- Ensure a respectful and open environment for all participants

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Appendix D: Instruments for Research Cycle 3

Survey 6: Beta Test Onboarding

Survey 7: Beta Test App Survey

Responses: n=214 for onboarding, n= 46 for app survey

	Onboarding Demographics only to minimize burden on user. Helps us understand who we receive feedback from	**App Survey** Helps us understand attitude about app and how decision making is impacted using the app
DEMOGRAPHIC (ONBOARDING ONLY)		
Location	Which state do you live in?	N/A
ND identity	What is your neurodivergent identity? Check all that apply. ● Autistic (includes Asperger's and PDD-NOS) ● ADHD (includes ADD) ● Stroke survivor ● Undergoing chemotherapy ● Long COVID ● Other: Type in ● None of the above	N/A
Other relationships with ND	What are your other relationships to neurodivergence, if any? Check all that apply. ● I am parenting one or more high-needs children ● I support neurodivergent people professionally ● My bio or chosen family member is neurodivergent ● I do not have other relationships with neurodivergence ● Other: Type In	N/A

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	Onboarding Demographics only to minimize burden on user. Helps us understand who we receive feedback from	**App Survey** Helps us understand attitude about app and how decision making is impacted using the app
Age	How old are you? ● 18-24 ● 25-34 ● 35-44 ● 45-54 ● 55-64 ● 65+	N/A
Employment Status	What is your employment status? ● Currently employed ● Employed within the last 3 years ● Employed prior to the last 3 years ● Never employed	N/A
Race	Which of the following best describes your racial/ethnic identity? ● Black or African American ● White, Non-Hispanic ● Hispanic or Latino ● Indigenous ● Asian / Pacific Islander ● Multi-racial ● Prefer not to answer	N/A

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	Onboarding Demographics only to minimize burden on user. Helps us understand who we receive feedback from	**App Survey** Helps us understand attitude about app and how decision making is impacted using the app
Gender	Do you identify as transgender? ● Yes ● No ● Prefer not to answer Which of the following options most closely aligns with your gender? ● Nonbinary ● Gender fluid ● Woman ● Man ● My gender identity isn't listed here ● Prefer not to answer	N/A
Area	What best describes the area that you live in most of the year? ● Rural ● Suburban ● Urban	N/A
How often you have phone	How often do you have a smartphone with you? ● Almost always ● Sometimes ● Rarely ● Never	N/A

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	Onboarding Demographics only to minimize burden on user. Helps us understand who we receive feedback from	**App Survey** Helps us understand attitude about app and how decision making is impacted using the app
Education	What is the highest level of education you have completed? *Do not count a degree that is partially completed or in-progress* ● Some High School or Less ● High school diploma / GED ● Associate's degree ● Bachelor's degree ● Master's degree ● Professional degree beyond bachelor's ● Doctorate degree	N/A
Household Arrangement	I live with... *(Check all that apply)* ● Pets ● Parents ● Partner - unmarried ● Partner - married ● My children ● Other family members ● Roommates ● Caregiver ● Other ● None of the above	N/A

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	Onboarding Demographics only to minimize burden on user. Helps us understand who we receive feedback from	**App Survey** Helps us understand attitude about app and how decision making is impacted using the app
Tools Used for Decision Making	What tools and strategies do you currently use to help with decision-making? (select all that apply) ● Research ● Friends and family ● Randomization tools (such as coins, dice, random pickers) ● My own intuition or logic ● Decision-making apps or websites ● Emotional cycling (such as stress or shame) ● Other ● None of the above	N/A
DECISION MAKING		
Ease	N/A	When I use the app, decision making feels… ● Very easy ● Somewhat easy ● Neither easy nor hard ● Somewhat hard ● Very hard

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	Onboarding Demographics only to minimize burden on user. Helps us understand who we receive feedback from	**App Survey** Helps us understand attitude about app and how decision making is impacted using the app
Emotional State	N/A	When I use the app to make decisions, I feel… ● Very anxious ● Somewhat anxious ● Neither anxious nor calm ● Somewhat calm ● Very calm
Speed	N/A	When I use the app, I make minor decisions… ● Very slowly ● Somewhat slowly ● Neither slow nor fast ● Somewhat quickly ● Very quickly
Quality	N/A	When I use the app, the recommendations I receive are… ● Very good ● Somewhat good ● Neither good nor bad ● Somewhat bad ● Very bad

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	Onboarding Demographics only to minimize burden on user. Helps us understand who we receive feedback from	**App Survey** Helps us understand attitude about app and how decision making is impacted using the app
Depth of Consideration	N/A	When I use the app, my decision-making process feels… ● Very thorough ● Somewhat thorough ● Neutral ● Somewhat careless ● Very careless

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	Onboarding Demographics only to minimize burden on user. Helps us understand who we receive feedback from	**App Survey** Helps us understand attitude about app and how decision making is impacted using the app
Process	N/A	When I use the app, my decision-making processes are… ● Very disorganized ● Somewhat disorganized ● Neutral ● Somewhat organized ● Very organized The app helps me think through how my actions affect my wellbeing. ● Strongly disagree ● Disagree ● Neutral ● Agree ● Strongly agree The app helps me think through how my actions impact others. ● Strongly disagree ● Disagree ● Neutral ● Agree ● Strongly agree

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	Onboarding Demographics only to minimize burden on user. Helps us understand who we receive feedback from	**App Survey** Helps us understand attitude about app and how decision making is impacted using the app
Usefulness	N/A	How useful did you find this app? ● Not at all useful ● Slightly useful ● Moderately useful ● Very useful ● Extremely useful
Open Feedback	N/A	Any other feedback or comments on Decide?

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