Building Behavioural Research Capabilities in UK Startups & Scaleups





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Executive Summary

BACKGROUND

This research project by Zinc VC examined how behavioural research is currently being conducted in startups and scaleups in the UK, and identified opportunities for building capability in such ventures. This builds on our previous work that has highlighted the opportunities presented by ventures as environments to conduct and advance behavioural research. The current project is part of a wider capability scoping study examining how behavioural research capability can be supported in the UK, conducted by the BR-UK consortium, funded by the Economic and Social Research Council (ESRC).

METHODS

We conducted a landscape analysis, which included a cross-sectional survey (N=69) and exploratory desk research on existing solutions for supporting capability. This included Google and LinkedIn searches on communities, networks, tools, and frameworks. We also conducted qualitative interviews (N=14) and workshops (N=11) with behavioural researchers and users.

FINDINGS

Behavioural research is being conducted and advanced across a range of sectors, including in healthcare, education, climate, and finance. Behavioural researchers are often found in senior leadership, design/UX, product, technology and IT teams, and their roles are often broad; their time is not spent wholly (or even largely, in some cases) on behavioural research. In these highly interdisciplinary environments, they often don't explicitly distinguish behavioural research from other types of research.

The main goals of behavioural research in ventures include achieving behaviour change, including increasing user engagement; addressing a societal challenge; and supporting product credibility and marketing. Behavioural researchers measure the success of their research by measuring changes in behaviour, commercial metrics, and (informally) internal company responses to the research. Models, theories, frameworks, and insights from the behavioural research literature are used at various stages of venture and product development.

Behavioural researchers in these contexts face several challenges that limit their value and impact. For example, finding and choosing models, theories, and frameworks relevant to venture environments can be difficult, and the cost of paywalled academic research and commercially available research tools is often unaffordable for early-stage ventures. Further, a lack of buy-in from leadership, and competing priorities in these resource-limited environments, can negatively impact behavioural researchers' progress and potential. Internal alignment on the purpose and value of the research is critical.

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OPPORTUNITIES

There are a range of opportunities for how we might bolster and advance behavioural research capability in startups and scaleups in the UK. Potential solutions, however, are likely to be more impactful if they consider wider barriers (e.g. around buy-in and competing responsibilities) and – given how interdisciplinary these environments are – if they consider the wider scope of research and science within the venture, rather than attempting to isolate behavioural research.

Advancing behavioural research in ventures requires leadership buy-in, and this can be targeted directly (e.g. through incentives from investors and other funders), and indirectly through supporting behavioural researchers to better communicate and advocate for their work.

It is also important that existing tools, methods, frameworks, and findings from behavioural research are made more interactive, accessible, and relevant to these commercial contexts, and/or that new, more tailored resources are developed. Behavioural researchers may also value opportunities for training (although they will often be time-poor) and opportunities for sharing their work externally.

There may be a particular opportunity to consider behavioural research capabilities, and approaches to behavioural research more generally, among investors and funders—given the resources and sway of these key stakeholders.

CONCLUSION

Building on our previous work, this research has reinforced the opportunities that exist to connect and advance behavioural research capability in UK startups and scaleups. There is value in scoping and spotlighting this capability, better understanding its nature and impact, and – crucially – connecting and bolstering it, in order to maximise its potential. It is clear that there is a role for investors and funders to play in supporting behavioural research, and we see this as a key area for future exploration.



Overview

Introduction

Behavioural research is the systematic study of human behaviour. Tech startups and scaleups (referred to as 'ventures' throughout this report) offer valuable opportunities to apply and advance behavioural research. By understanding the complex behavioural challenges involved in commercial innovation, ventures are better able to deliver products which are both engaging and effective, at scale.

Zinc's mission is to make the UK the best place to successfully start a Science-for-Impact health or environment venture. Since 2017 we have backed hundreds of mission-led entrepreneurs through our venture building cohorts, as well as working with dozens of academics and clinicians through our research and innovation programmes (e.g. the Healthy Ageing Catalyst Awards, which we run in collaboration with UKRI, and our Innovation Fellowships programme). More information can be found in our 2024 Impact Report.

We have seen the importance of behavioural research in operationalising and maximising a venture's impact, and it is clear that there is a large amount of behavioural research (variably defined) happening in these contexts. However, there is scant visibility of this behavioural research, including its challenges and opportunities.

Building on earlier work we conducted, including a project with the Economic and Social Research Council (ESRC), we undertook this research to build a more thorough understanding of the current landscape of behavioural research in UK startups and scaleups, to identify the gaps and opportunities for the field, and to set strategic priorities for the future. This work is part of the wider <u>Behavioural Research UK (BR-UK)</u> consortium, of which Zinc is a member.

BR-UK is a research consortium funded by UK Research and Innovation (UKRI) via the ESRC, comprising 8 universities and 5 public and private sector partners. The consortium serves as a leadership hub that is part of a wider ESRC programme to build national capability for behavioural research. BR-UK has been awarded funding over five years from November 2023 to conduct interdisciplinary behavioural research to contribute to addressing societal challenges. This initial piece of work is one of the consortium's first undertakings, which will set priorities for future work, establish a national network, and inform the commissioning fund.

Zinc VC joined the consortium to explore the scope, scale, and nature of behavioural research in early-stage ventures and identify opportunities to support and advance behavioural research for this sector specifically. This report features the findings from our research thus far. It explores the current state of behavioural research in UK startups and scaleups, the challenges faced, and the opportunities for advancing this work. This will be useful for informing future research, commissioning and policy, but also for informing and advancing behavioural science across ventures (e.g. highlighting the current state of the field and how ventures can begin to build capability within their organisations).

Approach

SCOPE

For the purposes of this project, we defined "behavioural research" as research that aims to understand what influences, characterises, changes or results from people's individual or collective behaviour. To differentiate behavioural research from other types of research being conducted in startups and scaleups (e.g. User Experience Research, Market Research), we conceptualised behavioural research as research that draws upon theories, frameworks, and existing evidence from the behavioural science literature.

We included "behavioural researchers", who actively conduct behavioural research as part of their work, and "behavioural research users", who draw upon the results of behavioural research (either internal or published/public) as part of their work.

We were focused specifically on behavioural research in UK startups and scaleups, which we conceptualised as:

- Commercial businesses, which seek funding from Venture Capital investors, Angel investors, or non-dilutive grant funding
- Technology-driven or technologyenabled businesses
- Currently Venture or Angel backed and privately held

We included early-stage tech businesses, and those which are beginning to grow and scale. We excluded large, mature companies, major corporate businesses, or publicly traded companies. We also excluded agencies conducting behavioural research and focused solely on behavioural researchers operating "in-house" within businesses.

AIMS

- Understand the scope, scale, and nature of behavioural research in startups and scaleups.
 - i.e., who is doing what

- Identify opportunities to support and advance behavioural research in startups and scaleups.
 - i.e., what is needed to increase the capacity for and impact

APPROACH 07

Specifically, we focused on the following research questions:

Behavioural research implementation

- 1. What are the characteristics of individuals and startups/scaleups conducting or drawing upon behavioural research in startups/scaleups?
- 2. When in the startup/scaleup journey and product journey is behavioural research conducted or drawn upon?
- 3. How does behavioural research influence products and their development?
- 4. What research activities do behavioural researchers perform?
- 5. How do behavioural researchers define behavioural research in this environment?

Behavioural research aims and measures of success

- 6. What are the aims of behavioural research conducted in startups/scaleups?
- 7. How do behavioural researchers measure whether their projects have been successful?

Capability gaps and opportunities

- 8. What barriers and enablers to conducting behavioural research exist in startups/scaleups?
- 9. What are the tools, networks, and communities available to support behavioural researchers in startups/scaleups?
- 10. Through what means can behavioural research capability be strengthened?

To answer these research questions, we conducted a landscape analysis and qualitative research.¹

METHODS

First, we wanted to explore the current state of behavioural research in the UK. We started by doing **desk research** to examine communities and networks available for supporting behavioural researchers working in startups and scaleups.

We conducted a **survey** with 50 behavioural researchers in startups and scaleups, and 19 behavioural research users.

We then invited survey participants to take part in a **qualitative interview**, to give in-depth data on behavioural research in startups. We interviewed ten behavioural researchers, three behavioural research users, and conducted one exception interview with a behavioural research consultant outside of the UK who has a birds-eye view on industry trends. We used thematic analysis following <u>Braun & Clarke</u>'s approach to generate themes inductively.

We also conducted **two workshops** with behavioural researchers and users (11 participants total). The workshops allowed us to gather feedback on the barriers and enablers previously identified in our research, allow participants to ideate solutions, and receive feedback on solutions for building capability that we came up with in earlier phases of the research.



Findings

What is behavioural research?

Behavioural researchers tend to define 'behavioural research' broadly, involving a variety of types of research

One key question we wanted to explore was how people define and conceptualise "behavioural research". We expected that with behavioural research, as with other newer disciplines, there can be diverging definitions of what the field encompasses, and understanding how behavioural research is defined within ventures was an important prerequisite for building capability knowing how behavioural researchers and users define their roles and work can help us understand who we are designing capability solutions for. We had defined behavioural research as: Research that aims to understand what influences, characterises, changes or results from people's individual or collective behaviour – particularly that draws upon theories, frameworks, and existing evidence from the behavioural science literature.

We included this latter part as we felt it was important to differentiate this from other types of research being conducted in startups and scaleups (e.g. User Experience Research, Market Research). However, we found that the participants we interviewed were mostly much less specific with how they define behavioural research. For several participants, the definition was broadly about understanding/investigating behaviour, what contributes to it, and how it can be changed.

"How would I define it? That's a good question, I would say that it's a multidisciplinary approach to understanding human behaviour and from my perspective trying to affect change for the better."

HANNAH MCCARTHY, CHIEF BEHAVIOURAL SCIENTIST AT A HEALTH AND SUSTAINABILITY SCALEUP, BETTERPOINTS

"I would define it as research that broadly aims to either understand a persona's motivations and barriers, so maybe learning about the users of the platform and what's preventing them from doing a certain behaviour or what's blocking them or what their motivations are. That's probably the main bulk of the type of research that we do, which is probably more under standard personas. I'd say the second part would be more the design and validation of interventions to change behaviour."

PARTICIPANT WORKING FOR A STARTUP IN THE CYBERSECURITY SECTOR

Participants did not necessarily actively think about differentiating between behavioural research and other types of research. When prompted to make the differentiation, their responses diverged from one another. User research was described as both more all-encompassing than behavioural research and more specific than behavioural research. For some participants, the two terms were seen as interchangeable. One participant described how behavioural research can be seen as multidisciplinary and looked at it as a Venn diagram of multiple adjacent fields (data science, engineering, computer science).

"I guess user research to me is the super high umbrella of any kind of research that is about people who may use the product in the broader sense, right? It could include even market research, which I often include in user research as well. It can be anything like attitudinal research, sentiment research, it can be usability testing like all of that jazz. Including what I guess I was thinking about in terms of behavioural research is more coached in that behavioural science background of hey, let's either understand behavioural barriers and levers for behaviour, behavioural analysis, like that kind of narrow thing or interventions and intervention testing."

UX RESEARCHER FOR A PHYSICAL ACTIVITY STARTUP

"It's a tricky one because from my perspective user research is looking into engagement behaviour, right, which I see as kind of behavioural science work."

OLIVER MILES, UXR IN WEB3 AND PREVIOUSLY IN MULTIPLE HEALTH STARTUPS

When building capability for behavioural research in ventures, it is worth considering the extent to which it is useful and feasible to differentiate "behavioural research" from other types of research within these types of businesses.

What does a behavioural researcher look like?

Specific "behavioural research" roles are not common, and most people are working across a number of functions and activities, in a variety of roles.

We found that although there are plenty of opportunities to apply and advance behavioural research in early-stage ventures, it is uncommon to have a full-time role dedicated entirely or even mostly to it in early-stage ventures. Relatedly, we saw a lot of variability in terms of job titles. Only 8 out of 50 behavioural researchers in our survey had a title that explicitly mentioned behaviour. Other common role categories were CEO/Co-founder, other research roles (UX, design, user), and product roles. Only 26% of behavioural researchers felt this term describes them very well.

Behavioural researchers and users predominantly sit within senior leadership, design/UX, product, technology and IT teams.

Behavioural researchers often have their time divided across lots of different kinds of work, of which behavioural research is just one type. Most (70%) were spending up to 1–2 weeks a month on behavioural research projects, with less than 20% spending most of their time on this. Of behavioural research users, around half were drawing on behavioural research for most or all of their work.

Other functions behavioural researchers commonly perform include user research, design, project, product, or people management, data analytics, communications, and marketing. The majority of researchers (62%) handle between 1 to 4 additional functions (N=50) [FIG. 1]. A smaller proportion (38%) perform between 5 to 10 additional functions, and two researchers were engaging in up to 14 additional functions, indicating extreme role diversification. Overall, the findings demonstrate that behavioural researchers have significant role versatility.

This role versatility might be rewarding for some; however, our qualitative research demonstrated that this can present challenges when trying to find and maintain a role specific to behavioural research. In addition, several participants in our interviews mentioned researchers or behavioural scientists being made redundant, showing that the current job market may be difficult for these types of roles. Some participants reported having to craft their own roles within organisations, while others chose to integrate behavioural research into other roles through their own volition. It can also be challenging as there isn't a clear career path in industry when it comes to behavioural research, which means it is often up to the individual to take responsibility for their professional development. On the other hand, one participant mentioned that having competing priorities within their role allowed them to learn faster and more than they would have been able to in a traditional research role.

"Because they cut down the size of the user research team who I would often work with to co-design some of these types of projects we just do it less frequently now than what we were doing a year ago. A year ago we would do more behavioural research than what we do now."

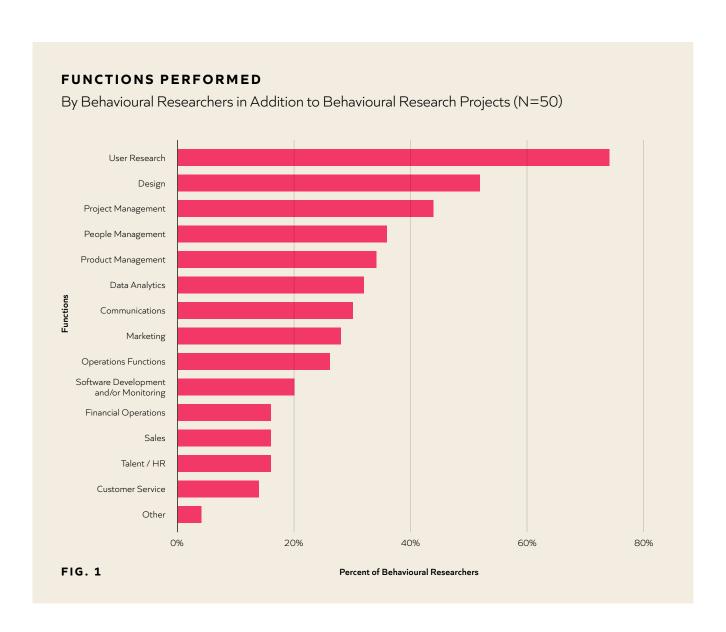
PARTICIPANT WORKING FOR STARTUP IN CYBERSECURITY SECTOR

"So my job title slightly pivoted at that point, so I went from being a behavioural scientist to a user researcher. I find the roles are very similar, it's just kind of your skills that you bring into user research, but it made me more employable so I changed my job title specifically to find that role."

OLIVER MILES, UXR IN WEB3 AND PREVIOUSLY IN MULTIPLE HEALTH STARTUPS

"In my particular sector, [behavioural research is] still not very known about I don't believe so. Or if it is – the opportunities that I see that are out there everybody needs a PhD and five years research experience. So as a kind of person that's just come into it now, it's very difficult to kind of see any way through"

ALEX WILLIAMS, FOUNDER OF NATURE-BASED LEARNING HUB, A STARTUP FOCUSED ON OUTDOOR LEARNING



OPPORTUNITIES

Given the extent of interdisciplinarity in ventures' teams and the breadth of behavioural researchers' roles, it may be inadvisable to design and deploy solutions that individually target behavioural research(ers) without considering the full scope of research and science within the venture. Since these researchers will often have direct knowledge of other functions and priorities of the business, supporting the breadth of their work is also likely to have a wider and more sustainable impact on the business.

In this context, it is worth considering the options for how ventures might choose to resource behavioural research (e.g. externally vs in-house). Matt Wallaert (behavioural scientist and entrepreneur) and Brooke Struck (Strategist at Converge) have discussed this previously on The Decision Corner. They concluded that in some cases, outsourcing behavioural research may be more effective than upskilling an employee with diverse priorities, especially if behaviour change is not core to the business.

Where are behavioural researchers working?

Behavioural researchers are working across a variety of startup domains, stages, and sizes – but their teams still tend to be quite small.

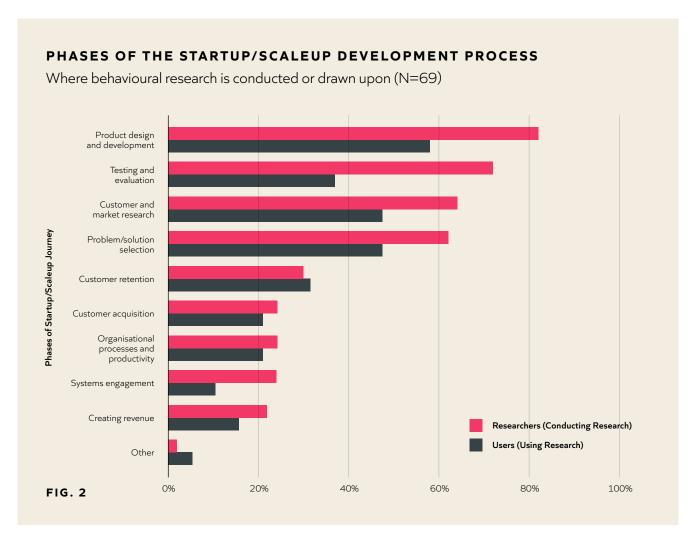
Our research also explored the context in which behavioural researchers and behavioural research users are working. Of our respondents, 33% are operating in the healthcare sector, followed by education (19%), climate (13%), and finance (10%). In terms of product categories, the majority of participating startups and scaleups are working on software as a service (42%), followed by AI/ Machine learning (33%), consumer-facing software (33%), and generative AI (17%). Many of the behavioural researchers conducting behavioural research projects in these commercial environments are trying to address societal issues. Most of the issues being addressed are in health and social care, mental health, and environmental sustainability.

Our respondents spanned a range of startup stages, with the majority of behavioural researchers we engaged with being in a startup that has preseed level funding (30% of behavioural researchers) and small teams of 1–9 people.

We found that behavioural researchers are often working in small teams, with fewer than 10 people actively working on behavioural research projects in 88% of ventures with behavioural researchers. More people tend to draw upon behavioural research within ventures rather than conduct it (38% of ventures with behavioural researchers had 10 or more people drawing on behavioural research). This is unsurprising as it is unlikely that small, less funded companies would have more people allocated to any task. For behavioural research users, 11 out of 19 reported that there is at least one person in their organisation who works on behavioural research projects and 17 out of 19 reported that their co-workers use or draw upon behavioural research. In our interviews, we found that being part of a larger organisation with more employees and resources doesn't always benefit behavioural researchers. If they are operating solo in a larger organisation, it can be harder to get behavioural research to be conducted and taken up. Being a smaller team can allow behavioural researchers to share and act on their insights faster once they have the time and resources to do it.

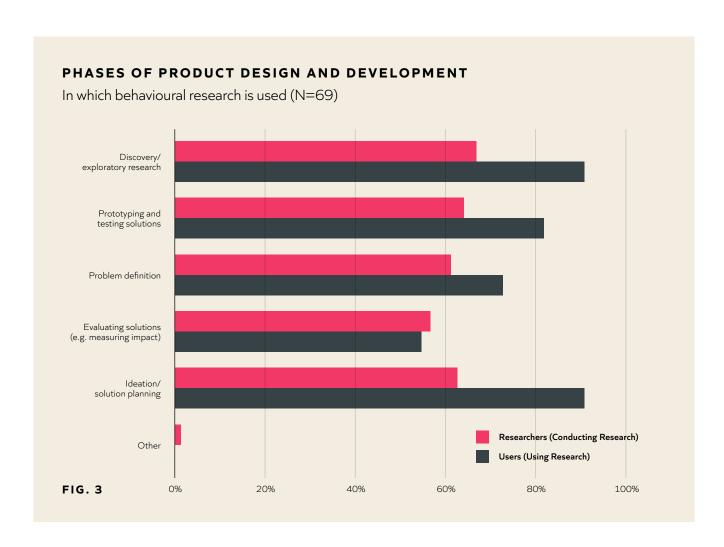
What are behavioural researchers working on?

Behavioural research is conducted and used at diverse stages of startup development, but most frequently in the phases of product design and development, testing and evaluation, customer and market research, and problem/solution selection [FIG. 2].



Given that product design and development is a key area for behavioural research, we explored this more deeply. We found that behavioural research can support all stages of the product design and development process (supported by both our quantitative and qualitative research), including discovery, problem definition, ideation, prototyping, user testing, and evaluating, with at least 80% of behavioural researchers employing it as every phase [FIG. 3]. During discovery and definition, they use it to understand problems and then define them.

During ideation, it might include ideating completely new solutions based on the primary and secondary insights they collected with a particular population/focus area, but it may also include an integration of interventions and solutions previously tested in behavioural research. In addition, we found testing solutions in the sense of changes in engagement or other business indicators was feasible, however, evaluation of actual changes to behaviour or the consequences of behaviour change (e.g. health outcomes, climate outcomes) was much more challenging.



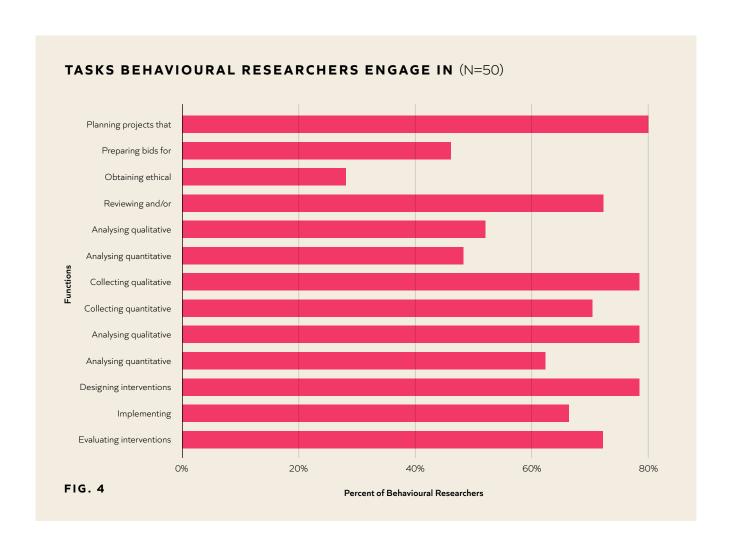
Behavioural researchers and users similarly drew upon behavioural research for testing and prototyping, but employing behavioural research for evaluation was seen by more researchers (81%), compared to users (55%).

"People want to jump straight into the creation of an idea, the creation of the solution and so often I think the trickiest part is to actually do that problem identification thing first with them to say, what is it we're really trying to do here, identify which barriers do we know are standing in the way, not do we think, but where's our evidence?"

FOUNDER & STARTUP ADVISOR

"So far, I've developed the solution by applying the Behaviour Change Wheel framework, going through the entire process—from identifying target behaviours to selecting the most suitable intervention techniques. At this stage, my focus is on refining the tool by selecting the intervention options that are most effective in different contexts and for various audiences. I believe the most valuable part of behaviour change research in practical applications is leveraging resources like the Taxonomy of Behaviour Change Techniques or the Behaviour Change Technique Ontology. These tools allow me to identify the most suitable interventions that I can introduce into my platform."

EDUARD POGORSKIY, FOUNDER OF COURSEONTIME.COM, AN ONLINE LEARNING AND TIME-MANAGEMENT PLATFORM



Within their behavioural research work, people are undertaking several tasks, including planning and preparation work, primary research, secondary research, as well as designing, implementing, and evaluating interventions to change behaviours [FIG. 4].

What are the goals of behavioural research, and how is success measured?

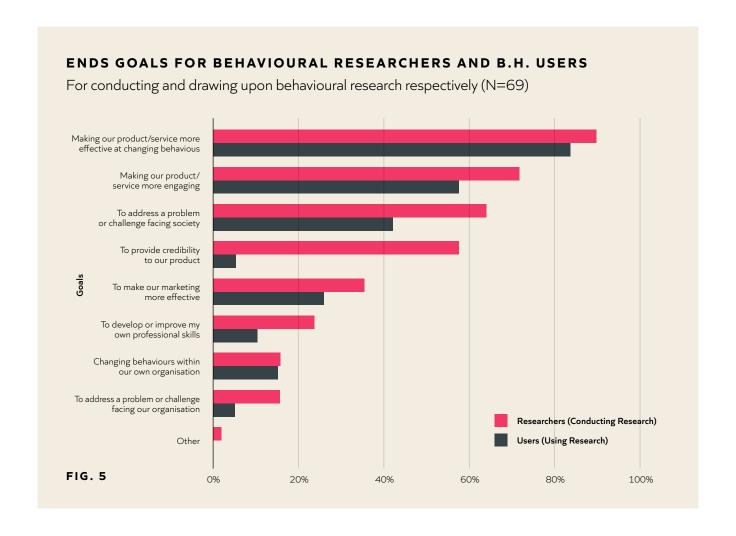
Many behavioural researchers are seeking to deliver behaviour change for positive societal outcomes.

The end goals of behavioural researchers and users are varied [FIG. 5]. Achieving actual behaviour change in product users is the most common goal, followed second by changing engagement with products. Behavioural researchers are working on behavioural goals such as exercise behaviours, environmentally friendly behaviours, and reducing the unwanted behaviour of spending too much time online, amongst others. The desire to cause and measure behaviour change can come from diverse motives including external ones such as regulatory or industry standards, the need to stand out from competitors, or internal ones such as the desire to create effective products, and leave an impact.

Nevertheless, cases where creating behaviour change was not a priority for the venture, but was important for the behavioural researcher can create a tension between behavioural researchers, their findings and other stakeholders. This was a frustration of some of the interview participants.

"Because fundamentally our platform is all about changing behaviour, our outcomes are behavioural. And I think this is a real strength of what we do because most digital platforms that are aimed at let's say lifestyle change or they are aimed at a specific condition, they are measuring their success, their adherence from the perspective of how people are engaging with the platform."

DR. LOU ATKINSON, HEAD OF RESEARCH AT EXI, AN EXERCISE PRESCRIPTION PLATFORM



"I personally think that's mainly a little bit to do with the sector that we're in, which is cybersecurity it's quite a new market and there's no external levers to demonstrate that your product does what it says on the tin if I'm being perfectly honest. If you look at anti-smoking apps or health behaviour change apps I think there is probably more of a regulatory lever that's encouraging and asking for evidence that it works. We don't have that in cybersecurity, there's no government or industry leaders that incentivise startups like ours to demonstrate or prove it."

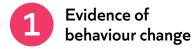
PARTICIPANT WORKING FOR STARTUP
IN CYBERSECURITY SECTOR

"In an organisation, everyone has different motivations for successive projects, everyone defines success differently. I am a user-centered researcher. My goal is to bring the user perspective into a product. And that is not always seen as a successful metric, right? This is a constant push and pull between perspectives within organisations that typically the decision makers within an organisation see success in terms of financial gain or financial loss that is as black and white as it is, right if they're not seeing any return on investment, then the one thing you're doing is completely redundant and they don't care about the users."

OLIVER MILES, UXR IN WEB3 AND PREVIOUSLY IN MULTIPLE HEALTH STARTUPS



Behavioural researchers use a variety of metrics and sources to determine whether their behavioural research projects have been successful, including:







Company responses to research

1 EVIDENCE OF BEHAVIOUR CHANGE

Evidence of behaviour change (i.e. measurable changes in behaviour) was the most common way in which behavioural researchers measured the success of projects [FIG. 6]. However, our interviews suggested that doing this in early-stage ventures can come with a number of challenges. This can include a lack of stakeholder interest in testing effectiveness, having a large enough user base to conduct experiments, having access to the right tools or data to measure behaviours beyond products, or having to prioritise other tasks.

As a result, whilst some participants measured behavioural outcomes directly, others had to rely on self-reports or had no ability to measure this indicator of success. For many, change in behaviour was the desired metric of success and the inability to measure it caused frustration. Attributing the cause of the behaviour change can also be hard in startups as it can be difficult to separate effects in an environment where multiple things (e.g. other product/service changes) are influencing user behaviours at the same time. In addition to behaviour change, some researchers sought to measure the consequences of behaviour change on various health or environmental outcomes. Attributing such impacts can be challenging for ventures.

"Yeah I mean in a dream scenario, it would be moving towards more that experimentation a/b testing, but we don't do any of that. The company is just not mature enough and the platform is not mature enough to allow that type of ability so yeah it's very much I'd say the type of research we do is very much desk-based and qualitative with very little experimentation research. And I like doing experiments, personally, I would prefer to be able to statistically compare and evaluate different products on the outcomes but yeah we're just very immature compared to other companies that use behavioural science yeah."

PARTICIPANT WORKING FOR A STARTUP IN THE CYBERSECURITY SECTOR

"What I found from our earlier studies is that the effectiveness of the applied intervention [in the product] started to drop after about three weeks (during a four-week measurement period). For me, when I look at it from a future perspective, understanding how behaviour change research contributed to the intervention's improvement, and whether it remains effective beyond three weeks or over a more extended period, would be a key indicator of success. Given this particular case, I am curious to learn if advances in AI could augment the corpus of behaviour change research to create more effective and scalable interventions."

EDUARD POGORSKIY, FOUNDER OF COURSEONTIME.COM, AN ONLINE LEARNING AND TIME-MANAGEMENT PLATFORM

2 COMMERCIAL METRICS AND DESCRIPTIVE DATA

Another common way behavioural researchers measure success in their ventures is through commercial metrics and descriptive data. This can include collecting qualitative feedback on product experiences, collecting measures of engagement, measuring net promoter scores, and measuring changes in costs or revenue (e.g. customer willingness to pay).

This combination of outcomes demonstrates that the work of behavioural researchers in startups and scaleups is often expected to positively impact both commercial and 'impact' outcomes, which can lead to tension or misalignment between stakeholders. "Our organisation uses very different types of success metrics. I would say they are more usage-based, to be honest, so how many customers use the product when it's released. That's how they would define success – but to me – I wouldn't personally as a behavioural scientist say that's success because it's not fundamentally anything to do with the outcome that the customer is using the product for."

PARTICIPANT WORKING FOR A STARTUP IN THE CYBERSECURITY SECTOR

3 COMPANY RESPONSES TO RESEARCH

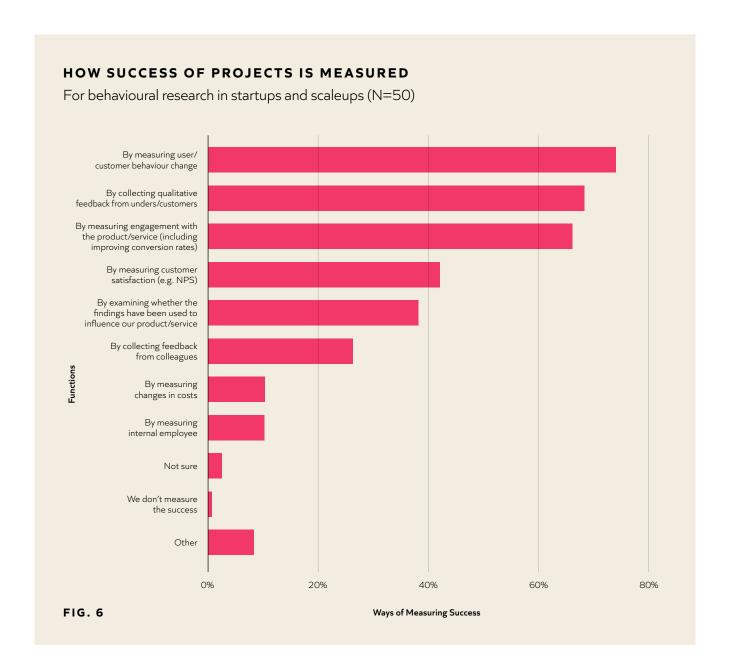
Another indicator of success for behavioural researchers in ventures is how the research is responded to and actioned within ventures. For behavioural research to be valuable, the findings need to be taken onboard, which isn't always a given. If research evidence is considered in the product development cycle, or if it delivers new information to stakeholders, this for many researchers is one way to feel they've achieved success.

"I guess on a personal level, it's worked if they do implement some of the changes that you've discussed and thought would be a good idea whether that's in the product itself or in how you evaluate the product like questionnaires or if they've made any changes to it, that would be a success because you can then go move forward and then retest and see how it works out"

PARTICIPANT WHO WORKED IN MULTIPLE HEALTH STARTUPS AS A RESEARCHER

"I think research is most successful within the company when it is surprising in some way. If research just confirms what we already know then its value is not as obvious, and really we ought to be more suspicious about how we reached those conclusions. It's very easy to lose sight of our biases and for research to become part of the armoury for winning arguments. But research is most effective when it discovers something that we haven't known previously. The surprise it generates can have an effect on a company level, generating interest, and it's in those moments that we see important shifts in design and strategy. So moments of surprise can often lead to moments of success."

STEPHEN HILLS, PRODUCT MANAGER AT CONNECTED KERB, A SUSTAINABILITY STARTUP



How do behavioural researchers use existing academic knowledge and other tools?

Behavioural researchers are using many models, frameworks, theories, and tools – but some academic resources are not fit for purpose, and accessibility and choice could be improved.

Usage of models, theories and frameworks from the behavioural science literature is widely varied, on a spectrum of barely ever using any models and frameworks to using them consistently at various stages of the startup's development.

They are used to:

- Explore and select problems/solutions
- Design products or features
- Evaluate current products and find areas of improvement
- As a way to communicate and format findings for stakeholders, or introduce stakeholders to the field
- To create credibility and effectiveness of products funded through public financing

"I do use the East framework and a lot of BIT old school stuff a lot of the time as a kind of introduction to get people thinking about the kind of the testing methodology that we're really talking about right because sometimes I feel like that's the thing that's hardest for people to get the muscle memory up and running."

FOUNDER & STARTUP ADVISOR

"I'm always trying to ground what we do in established frameworks and theories because we have to justify our decisions for how we're using public money. It's very important that we have a good grounding for what we're doing, that we have the credibility of using established theories and frameworks, and also of course there is evidence that suggests it's more effective if you do that."

HANNAH MCCARTHY, CHIEF BEHAVIOURAL SCIENTIST AT A HEALTH AND SUSTAINABILITY SCALEUP, BETTERPOINTS

When it comes to choosing which models, frameworks, or theories to use, some do this systematically based on their problem or objective (e.g., by reviewing resources such as the 'ABC of Behaviour Change Theories'. Other researchers reported that they choose their models much less systematically either based on their expertise and experience, current readings, or simply because of what they are familiar with or were taught in academic contexts. Where researchers were using models to communicate insights or align with stakeholders, they selected models based on accessibility to or familiarity with said stakeholders.

In addition to models and frameworks, participants also use an array of tools to support their behavioural research. The tools include behavioural science specific tools (e.g. <u>Theory and Techniques tool</u>), as well as research collection and synthesis tools, and project and team organisational tools. The models, frameworks, and tools used by behavioural researchers are outlined in Table 1. There was some demand for digitising existing tools (e.g. the <u>Behaviour Change Wheel</u>) and making them easier to interact and collaborate with. Some practitioners have already identified this gap and have begun creating such tools, one example being the Miro tools available from Aim for Behaviour.

"I would really like the behaviour change wheel that whole process, I'd really like that to be on a website somewhere. So it was a lot faster because at the moment I sit down and do it with paper and I'm like, why isn't this on a website?"

ALEX WILLIAMS, FOUNDER OF NATURE-BASED LEARNING HUB, A STARTUP FOCUSED ON OUTDOOR LEARNING

Behavioural researchers were also keen to access tools that would help them find and select:

- Relevant interventions for their field
- Methods for evaluating effectiveness
- Models to use in their work

People had their own approaches for these tasks (e.g. reviewing meta-analyses or other research papers), but many felt that a tailored tool-based approach would be useful. Some were aware that these tools exist, but felt that they weren't relevant to their field of work. During our workshops, "knowledge regarding methods and frameworks that work in a venture environment" was ranked as one of the most impactful barriers/enablers by one workshop group, and participants were particularly interested in solutions that could help them select frameworks and apply behavioural research in venture settings.

"I would love to have something similar to the Behaviour Change Technique Ontology project [bciontology.org], but in the context of education, to explore what kinds of interventions are available in my domain of interest - online learning. It would allow me to identify which interventions are effective in this specific context. If I could narrow down all the studies using this kind of comprehensive ontology system - currently focused predominantly on medical studies like reducing alcohol consumption, smoking cessation, or increasing physical activity - it would provide a snapshot of available evidence and highlight interventions that might work in my area of interest, which would be extremely helpful. Looking at the bigger picture, while educators have been reasonably cautious about applying behavioural principles to learning since the cognitive revolution reshaped our understanding of the learning process, merging recent advances in behavioural science with educational research could be a gamechanger, especially for online learning at scale."

EDUARD POGORSKIY, FOUNDER OF COURSEONTIME.COM, AN ONLINE LEARNING AND TIME-MANAGEMENT PLATFORM

Several participants had academic training in behavioural research and found it was beneficial for informing their approach to research outside of academic settings. However, once in industry settings, there are several challenges to taking advantage of insights produced in academia. Firstly, there is the practical issue of access.

Academic articles are often behind paywalls that aren't affordable to readers outside of academic institutions. A second barrier, which is more challenging to overcome, is that models, frameworks, theories, and tools from academia aren't always seen as relevant to participants in non-academic settings. These barriers led to some participants rarely using these resources. Some preferred to design a bespoke approach to problems informed by their own expertise. More experienced researchers often didn't actively use academic resources in an explicit way because they feel that they've shaped their thinking and thus they apply them indirectly through their ingrained thought processes and their general approach to the research.

"It's very difficult when you start using these frameworks from academia because they don't quite fit."

STEPHEN HILLS, PRODUCT MANAGER AT CONNECTED KERB, A SUSTAINABILITY STARTUP

"Models and frameworks are useful primarily for communication, if necessary. But for me, they often hinder more than help because they tend to oversimplify the complexity of the specific context at hand. For that reason, I find that relying on a generic model is less beneficial than building a tailored behavioural model that directly addresses the specific problem I'm solving"

SAMUEL SALZER, BEHAVIOURAL RESEARCH CONSULTANT AND CO-FOUNDER OF NUANCE BEHAVIOR

"Yeah, academic research is good because that's again what we're trained in, right, as practitioners is that you look at academic papers, you cite them to help structure your work, base your work and theory, etc. But that's not what the real world's like. The real world's pretty messy and you're going to do some pretty quick research as a corporation. That's the interesting stuff because that's actually applicable to the day-to-day."

OLIVER MILES, UXR IN WEB3 AND PREVIOUSLY IN MULTIPLE HEALTH STARTUPS

"I think there is an opportunity for more overlap between academia and startups to learn from each other. There are limitations in existing frameworks and both parties learning how to apply frameworks to their specific use cases would be great."

RIA VAIDYA, SENIOR UX RESEARCHER, VIRA HEALTH

Another challenge was raised that there is no well-adopted process for sharing insights from behavioural research in industry. This results in a lot of avoidable inefficiencies. Participants in our research felt that sharing methods and research between commercial ventures would be valuable. Solving this inefficiency is challenging as behavioural research, like other forms of research conducted in ventures, can create a competitive advantage that ventures may not want to forfeit.

"Do you think some of that research lacks commercial value and should be more openly shared? I understand the competitive barriers, but at the moment, there's no way we'd release anything – even acknowledging we're conducting certain research could provide an edge to competitors. The industry is highly competitive, with dozens of players. The work we do on behaviour change, for example, is something we'd never publish. But perhaps the methods could be more openly discussed. The problem is, when research is shared at industry conferences, it's often at such a high level that it becomes meaningless—everyone claims success, but no one really shares anything substantive."

STEPHEN HILLS, PRODUCT MANAGER, CONNECTED KERB, A SUSTAINABILITY STARTUP

"I feel like a lot of behavioural science research happens within organisations, not just in academic institutions. But other companies often don't have access to those findings. Imagine how much easier it would be if I could talk to people about how they applied it in their company, or what results they found, instead of only reading through academic papers which are often not applicable."

AMBER WALTON, PRODUCT MANAGER

The findings suggest that there is a desire for more events and partnership opportunities to share knowledge and experiences. However, there are numerous online communities which accept behavioural researchers and users from across sectors. More research needs to be done as to why such groups don't fill the gap of facilitating knowledge sharing of insights from industry. During our solution ideation workshops, participants discussed that facilitation of, and participation in, such communities can be burdensome.

"So imagine if this turns into some kind of quarterly update call where a community emerged that wasn't just the behavioural science side, but it was also the implementation side, for example, customer experience. There could be a mix of practitioners and researchers, sharing ideas and influencing how we utilise behavioural science. It would have the capacity to change the confidence in our conversations for clients and it would also pass more case studies across the fence to the world of behavioural science as well."

STEPHEN PRIESTNALL, FOUNDER OF OOMPH (CUSTOMER EXPERIENCE CONSULTANCY), DECISION JUICE (QUANTITATIVE AND QUALITATIVE RESEARCH PLATFORM), CIPO (CUSTOMER INTELLIGENCE PORTAL)

"I'm constantly looking for a network of researchers to learn from, but at the moment, I feel quite siloed."

STEPHEN HILLS, PRODUCT MANAGER AT CONNECTED KERB, A SUSTAINABILITY STARTUP

"I was interested that both of you [suggested] the networks of people doing similar work in similar organizations, as we've actually tried to do something like that in my field. So we've got a small network of people and we occasionally say yeah we should get together but when can we meet? not next week, not the week after – so nobody has time to do it."

Workshop participant: "Do you share information?" Soda: "Yeah, yeah, yeah we do email each other."

JUSSI TOLVI, DIRECTOR & BEHAVIOURAL ECONOMIST, CLUB SODA

When it comes to more generic research tooling, two themes arose – challenges around access to research tools on the market and the possibilities seen in AI technologies. Funding and cost were prohibitive for several tools, in particular, tools that support accessing participants for research, as well as tools for analysing churn and retention were

mentioned by participants (e.g. Amplitude). This presents one way for funding and partnerships to support behavioural research in early-stage ventures.

Concerning AI, participants felt that there is great potential to use these technologies for synthesising primary and secondary data, collecting data, generating data (such as via synthetic participants) or as a way to learn how to use other more complex tools. Some are already using AI to support their behavioural research [TABLE 1], or are even building tools that facilitate behavioural research, synthesis of it, or application of it and are using AI to support these processes. For example, one of our participants developed a tool that integrates quantitative and qualitative insights using AI to generate differences in population norms at scale. Another participant and her team gather and share behavioural research insights to support employee decision-making processes, which is also an Al-enabled tool.

OPPORTUNITIES

Overall, our research suggests that behavioural research in ventures can be supported by making existing tools, methods, frameworks, and findings more interactive, accessible and relevant to different fields looking to engage with behavioural research. There are many existing tools, but these are largely not seen as fit for purpose for venture-based behavioural researchers. Collating and offering access to these tools and resources (especially those currently behind paywalls) would be a useful start.

There is also an opportunity for the development of new technology-enabled (e.g. using AI) tools that can support the synthesis and analysis of primary and secondary data, as well as the implementation of behavioural research. There may also be room for more industry-specific frameworks and for new types of cross-sector partnerships and knowledge-sharing models. There is an opportunity to think about new ways of sharing industry research – balancing resources required, commercial confidentiality, trustworthiness, and access.

MODELS, FRAMEWORKS, AND TOOLS

Used to Conduct Behavioural Research in Startups and Scaleups

Tools		
Data Collection, Survey, Analysis & Visualisation Tools	Qualtrics (2), MS Forms, Useberry, Prolific (2), Gorilla (2), Neurons, Dovetail (3), UXCam, Streamlit, R Statistical Programming Language (2), SPSS (2), NVIVO, Asana, User Testing, ML, AI, Excel, Linguistic Inquiry and Word Count (LIWC)	
Project Management & Collaboration Tools	Microsoft Teams, Miro	
Behavioural Science Specific	Theory & Techniques Tool	
Other Platforms & Tools	Google Scholar, <u>Ecosystem Mapping Tools</u> , <u>Lean UX Tool</u> (2), Chat GPT	
Theories, Models & Frameworks		
Behavioural Theories	Framework for the study of individual behavior and social interaction, Theory of Planned Behaviour (2), Intention-Action Gap, Nudge Theory, Social Cognitive Theory, Self-efficacy Theory	
Behavioural Models & Frameworks	COM-B (29), EAST (4), MINDSPACE (3), Behaviour Change Wheel (11), Theoretical Domains Frameworks (4), Hooked, B-MAP (Fogg Model) (2), PRIME Theory of Motivation, 3B Framework, Kotter's 8 Step Change Model, Protection Motivation Theory, Jobs to be Done, BCT Taxonomy (4), Prototype Willingess Model (PWM), Transtheoretical Model, Behavioural change techniques ontology, DECIDE & CREATE	
Decision Making, Cognitive Models & Theories	DECIDE (2), Value-based Technology Acceptance Models, System 1 & 2, Miller's Law, Gestalt Principles, Prospect Theory, Confirmation Bias, Cognitive Biases (2), Recognition-Primed Decision (RPD) Model, Naturalistic Decision Making and Cognitive Task Analysis	

Systems Theory, Social Learning Theory, Social Identity Theory (2), Theory of Change (2), Kurt Lewin's Research, ADDIE Model, Eliciting Information

Framework, Self-determination Theory (5), Diffusion of Innovations Model, Grounded Theory, Buurtzorg's Model of Care, Operant Conditioning, Socio-technical Systems Theory, FRAM: The Functional Resonance Analysis

Method, The Common Sense Model of Illness

TABLE 1

Other Theories,

Models & Frameworks



Advocating for behavioural research

Leadership buy-in and competing priorities affect the ability to conduct behavioural research, and the impact it can have on the venture and its product(s).

A key factor determining the impact of behavioural research in ventures is the buy-in of members of the leadership team. Behavioural researchers can spend a lot of energy and time trying to advocate for the value of what they are doing internally.

One factor that seems to influence buy-in is the stakeholder's level of understanding of and belief in what behavioural research can do and how this can support a venture in achieving its goals. Participants felt that stakeholders sometimes held negative perceptions of behavioural research – for example, that it makes unachievable claims or has a reputation for reducing autonomy, which is not something that people want to be associated with.

"I think it would benefit from a coherent definition of behavioural science making clear 'this is what it does and here are the benefits'. Because it has this kind of Big Brother feel to it which can make those who aren't in the industry wary, simplification would be helpful. Inside the domain everyone is thinking this is great and doing great work, but often outside of it, there might be a view of there being a nudge theory approach making us do things we don't want to do."

STEPHEN PRIESTNALL, FOUNDER OF OOMPH (CUSTOMER EXPERIENCE CONSULTANCY), DECISION JUICE (QUANTITATIVE AND QUALITATIVE RESEARCH PLATFORM), CIPO (CUSTOMER INTELLIGENCE PORTAL)

"I also think it segways into another major challenge that we have as a profession, which is this is just snake oil challenge. So there's a lot of people who look at it and say that here's over claiming, correlation isn't causation and I think that's something that we should engage critically with, right, I think in some cases some of the criticisms are entirely valid and so I do think that's a big barrier. It's not necessarily that people think it's nonsense, but that they perceive it as something simpler than it is."

"I think sometimes we're talking about apples and oranges a little bit when you come into a company and they say, we want to use behavioural science for this and you have to ask a lot of follow-up questions to be like, do you want me to tell you how to sell it or do you want me to tell you how to make it work? Which is most important here and also is that the same thing? it might be the same thing, but it might not be the same thing in which case which is what are we trying to solve for here?"

FOUNDER & STARTUP ADVISOR

"I think it's being able to tell those compelling stories and being able to speak to behavioural science within business language. So yes, the methodology and the theory is important, but it's a lot of jargon for everyday business leaders. You need to be able to explain it and sell it to them in a way that resonates with them."

PARTICIPANT WORKING FOR STARTUP IN THE CYBERSECURITY SECTOR

At the same time, a lack of understanding of behavioural research doesn't always equate to a lack of buy-in from stakeholders in ventures. In some cases, there is interest in using behavioural research, but unrealistic expectations around its ability to generate quick fixes or solutions, or a lack of engagement with the evidence once it is presented.

"It's not exactly buy-in but it's almost like they want to buy too much. Unreasonable expectations and misunderstandings of what research is, how it works."

JUSSI TOLVI, DIRECTOR & BEHAVIOURAL ECONOMIST, CLUB SODA

Additional challenges include: the need to frame problems behaviourally, which can be difficult for non-specialists; the need for buy-in from multiple areas of the business; the specific challenge of building an appetite for measuring the effectiveness of behavioural research interventions (although the latter may be influenced by government and industry laws or expectations around how evidence-based products should be). Overall, alignment on goals for behavioural research is key, otherwise, behavioural research may feel like it creates tension rather than complements the venture's priorities.

"We were so focused on the problem, weight gain, and I think once we made the shift to actually look at it from what's driving the behaviours asking those 'why', understanding the motivators. I think it really changed the business."

FRANCESCA ABALASEI, HEAD OF PRODUCT AT HEALTHCATERS

"I'm a product manager and often when you do a bit of digging, things aren't really related necessarily to the product. They might be related to more marketing or sales and how things are communicated that way. So it's getting all the areas of the business to sort of join up and come together to look at the problem"

AMBER WALTON, PRODUCT MANAGER

The challenge of buy-in sits within the context of a lack of resources, which requires rigorous prioritisation. For one of our workshop groups, this lack of resources was ranked as most impactful in affecting behavioural research capability. Startups & scaleups are not the most resourcerich environments when it comes to time, money, and labour available and as a result, behavioural researchers and users typically can't allocate most of their time to behavioural research tasks. In addition, the lack of time to allocate to research comes from the need to iterate the product and develop the company at a pace. A proper rigorous research project can take more time than a company has when it comes to their runway (i.e., how long they have until they run out of funding). This results in a

need to make the research approach 'good enough' when it comes to rigour. This can be particularly difficult for participants who have come from academic environments. However, researchers who have been working in industry for quite some time make the case that it is best to engage in the process to a smaller extent than to not benefit from a behavioural research informed approach at all. Additionally, taking the time to engage in research can be more efficient in the long-run than building the wrong thing – although getting team members to see this can be difficult.

"It's like doing research in order to figure out whether I should spend money on building a feature and the research costs half the amount of money I would need to spend to build the feature, it's obviously not going to be particularly sensible in an environment where you have to think we have a runway of eight months, our money is perpetually about to run out. So spending on research is completely out of the question."

UX RESEARCHER FOR A PHYSICAL ACTIVITY STARTUP

"I mean, it's always a resource issue. Compared to my last company where I had four behavioural scientists on my team. In this company I'm an individual contributor, which means I'm setting the strategy, but also delivering on all of it so resource issues I would say. I just can't do as much being one person. It's the reality of it."

PARTICIPANT WORKING FOR A STARTUP IN THE CYBERSECURITY SECTOR

"Often in startups, you just need to ship something and see what happens, rather than building a solid body of evidence for what you're doing. But I'd love to be able to learn from what others have tried and see what they've found out"

AMBER WALTON, PRODUCT MANAGER

Additionally, in some companies, quantitative behavioural research was considered of higher value than behavioural research which was not informed by data science (e.g. qualitative research), which could also lead to further challenges with buy-in.

"I also see that quantitative research and data science is always prioritized and kind of maybe more respected than qualitative research. And sometimes when you work with qualitative research, it's very very difficult to process the results in a way that kind of produces those respected valuable insights that are still seen as equally scientific. So nearly qualitative research is dismissed as just opinions and feedback rather than science. So I think there is a reputation of qualitative research there that is a very very important point because it's such a huge part of behavioural research and I don't think it's taken seriously, especially in any kind of work setting"

ORGANISATIONAL & DESIGN CONSULTANT

"The kind of the more mix methods like qualt/quant that is really emphasized like behaviour change approaches and things is newer and is I think only certain people have that understanding that the more kind of well-rounded research can lead to more kind of rich insights"

OLIVER MILES, UXR IN WEB3 AND PREVIOUSLY IN MULTIPLE HEALTH STARTUPS

OPPORTUNITIES

Enhancing buy-in from senior leadership in startups may present an opportunity. This could involve training and support for the behavioural researchers themselves (e.g. in introducing stakeholders to behavioural research, connecting behavioural research to business KPIs, or translating findings which can have academic theories or underpinnings into lay language). When we presented these solution ideas to behavioural researchers and users they felt they could be impactful. However, we also found that behavioural researchers are already attempting a lot of this persuasive and educational work.

It may also be beneficial to design solutions that target the various stakeholders within ventures. This could include sharing of success stories of how behavioural research supported startups and scaleups, or successful larger organisations (e.g. Google, Meta) in achieving their goals, to provide examples for venture decision-makers to learn more about behavioural research and how it can add value. When discussing these solutions with behavioural researchers, they cautioned that such success stories would require an initial level of buy-in for leaders to engage with them, and that it

may create the risk that methods will be repeated without full consideration of the context from which they came. They felt that solutions which teach decision-makers about behavioural research would be more impactful if the learnings were relevant to priorities of leaders in ventures to peak the attention of leaders (e.g. focus on commercial value, impact on evidence generation).

"I think probably instead of supporting learning about that it's actually about demonstrating commercial value of behavioural research so this way it would be I think much more impactful."

ORGANISATIONAL & DESIGN CONSULTANT

Incentives and funding from external bodies may also influence buy-in. In our workshops, it was felt that, while useful, such funding can be burdensome to apply for and that the restrictions that come with accepting certain funding offers can at times hold ventures back. Regulation was not seen as a positive way to influence buy-in as they felt it would create tick-box compliance rather than inspire quality behavioural research work.

Organisations with investment power (e.g. venture capital firms, grant institutions) encouraging evidence uptake and generation may be beneficial in driving buy-in, given that startups are so reliant on this funding. The behavioural researchers in our workshops felt that this may be effective; however, they felt that the market was already moving towards this, and it would likely only be effective if funding was specifically dedicated to behavioural research activities.

"I would not [say that it's most impactful] because those incentives and funding actually exist. But the access to it, the application, like that in itself I have to say that I've applied for some funding and I got the funding and it actually made my company worse because of their criteria. I think probably instead of supporting learning about that it's actually about demonstrating commercial value of behavioural research so this way it would be I think much more impactful because it's not just kind of learning how behavioural value, but actually how do you apply behavioural research to generate commercial."

ORGANISATIONAL & DESIGN CONSULTANT

"I think that these words like encouragement and support are all good, but unless they're backed by the almighty dollar, it doesn't make any difference in the reality of a startup or scaleup environment because even if a VC says to your CEO that they would like to see behavioural research conducted or they want to see the product feature set being more driven by behavioural science... unless there's actual money that is allocated to that activity the money will always go on delivery and sales first before anything else. So I think that the funding from external bodies has to be explicitly tied to that functionality if it's really going to support and encourage the integration of behavioural science because otherwise it will just be a nice to have."

HANNAH MCCARTHY, CHIEF BEHAVIOURAL SCIENTIST AT A HEALTH AND SUSTAINABILITY STARTUP, BETTER POINTS

"We're starting to see this more in venture—perhaps not explicitly in behavioural science metrics, but there's a growing emphasis on evidence. And, from what I've observed, it's not just box-ticking; there's genuine inquiry into the data, rather than just projections of future revenue. It feels like an important shift. But how do you accelerate that change? It does seem to be happening organically."

STEPHEN HILLS, PRODUCT MANAGER AT CONNECTED KERB, A SUSTAINABILITY STARTUP

To overcome resource and prioritisation challenges, it may be helpful to keep behavioural research as lightweight as possible. This can involve relying on expert opinion, making the most of research conducted from previous projects, or seeking support outside of the startup & scaleup. Also, engaging more people in the startup to conduct part of the research (e.g. sitting in on interviews) was suggested by one of our participants (a product manager at a sustainability start-up). This would help sell the research, but also solve the capacity problem. In our workshops, behavioural researchers suggested 'out-of-the-box' study design solutions, methods to support study re-design to not waste research when priorities change in ventures midproject, and mandatory days exclusively for research (which may be challenging to achieve in practice).

What training do behavioural researchers need?

Training is potentially attractive to behavioural researchers – but they are often lacking the opportunity and/or confidence to acquire and/or apply this learning.

In our survey, the majority of behavioural researchers (>50%) were interested in developing their skills related to behavioural research for tasks along the entire research project cycle, including designing, monitoring, evaluating interventions, using technology in data collection, and finding collaborators and advisors [FIG. 7]. In one of our workshops, 'knowledge regarding methods and frameworks that work in venture environments' was reported as a top barrier affecting behavioural research capability. Participants mentioned they would be interested in examples of how behavioural research is used in industry and in workshops to obtain academic knowledge regarding specific methods.

At the same time, participants acknowledged that there are plenty of resources available for skills development in behavioural research and suggested that the issue may be in having the time to acquire new skills. In addition, some participants reported that they feel they have acquired certain methodologies, but aren't confident in their execution. Echoing this, in our solution ideation workshops, participants came up with several solutions that tackle the concern of selecting the right methods in behavioural research and that support with navigation of existing findings. These solutions suggest participant skill building may be most impactful if focused on application and execution of behavioural research rather than introduction to concepts. Some participants mentioned they are using LLMs to navigate the existing literature, frameworks, and tools.

"So, it sounds like I'm one of the newer folks on the call to behavioural research and behaviour design more, but accessing training knowledge about it outside of academia I found really challenging.

Anytime I look it up or talk to people about it the answer is 'do a randomized control trial' and we don't have time or money for that. So yeah understanding more broadly the right approaches and the difference between those and user research methods more broadly is a challenge."

ABBIE MCLEOD, USER RESEARCHER AT A HEALTHTECH VENTURE

"I've just been kind of learning on the job all the time. I think not having the right knowledge isn't the barrier to anything that I do here, though. It's always possible to learn and find out how to do something. The barrier is really kind of time and resource constraints."

STEPHEN HILLS, PRODUCT MANAGER AT CONNECTED KERB, A SUSTAINABILITY STARTUP

"A wiki of research frameworks. Again, stuff kind of exists, [but] it's a bit disparate, and sometimes you just want to see a list. I started trying to make this myself. But you just want a list of things that might be useful and help you think about things especially when you're a bit lost."

STEPHEN HILLS, PRODUCT MANAGER AT CONNECTED KERB

"I have found working with LLMs a really useful way to sort through different ideas and the huge sea of literature, because [for] financial incentives in digital interventions there are so many different avenues I could have gone down. I also found it useful for reviewing different research methodologies. We use them as a team to generate code for R, to run analytics on real-world data and give insights into different behaviours which then inform the design of incentives and content".

HANNAH MCCARTHY, CHIEF BEHAVIOURAL SCIENTIST AT A HEALTH AND SUSTAINABILITY STARTUP, BETTER POINTS

Data science was one area that behavioural researchers were keen to upskill themselves or their team in. This can allow behavioural researchers to better explore the problem and the users of their product, as well as provide them with a way to evaluate the products. Several participants expressed that they would like to have the skills and/or support on the team to be able to use data science to inform their behavioural research. For example, they would like to run more A/B tests on their products, using machine learning.

"It's easy to have a few calls with people and come away with a biased view of what everyone thinks, especially if they share similar feedback. I'm trying to move away from that and make more datadriven decisions. Using analytics helps me see people's blockers in a more quantitative way."

AMBER WALTON, PRODUCT MANAGER

'In an ideal world, I'd love to have a data analyst on the team that I could work with to get greater insight and make faster decisions. I'd love to have somebody that was skilled in ux analytics so we could do more front-end testing seamlessly and quickly. These are the two main roles that I'd love to bring in.'

HANNAH MCCARTHY, CHIEF BEHAVIOURAL SCIENTIST AT A HEALTH AND SUSTAINABILITY SCALEUP, BETTERPOINTS

OPPORTUNITIES

While there was some interest in skills building, offering training is unlikely to advance the impact and value of behavioural research in ventures.

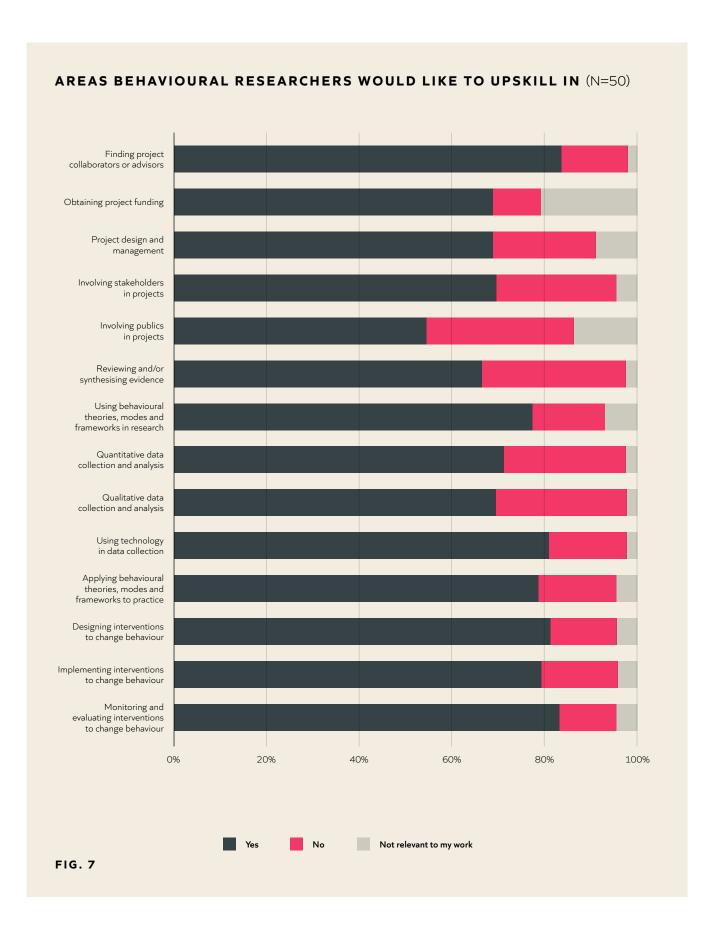
In some cases, it may be more beneficial to offer feedback or access to practitioners in similar fields to build confidence in conducting applied behavioural research. In addition, the interviews suggested that bringing in external research expertise where specialist skills are required may be more effective and realistic, although this may not be financially viable for some teams. More could be done to maximise the use and value of existing resources, e.g. through tailored curation to practitioners in early-stage ventures.

Of particular note is the finding that behavioural researchers in startups are interested in being upskilled in data science.

Given the increasing interest and activity around combining behavioural and data science (e.g. through computational social science and other emerging fields), there are opportunities here to leverage the interest from ventures and their researchers with a view to advancing both of these disciplines.

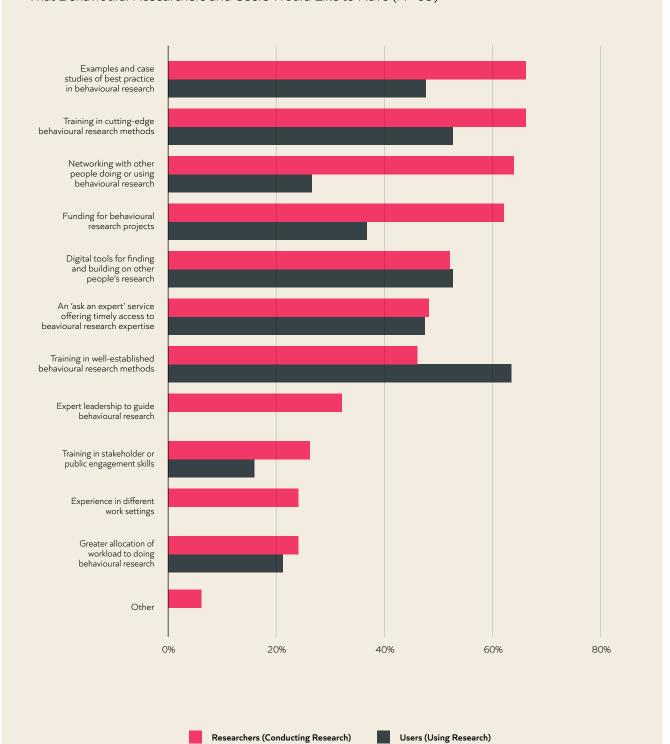
"So, I kind of have the same approach with behavioural science to be honest. I'll read enough to know to be dangerous, but I'm not dangerous with it because I go and find the people who know how to do it...So I will always go after the people, rather than try to have a go at it myself because even though clearly I've done some of it now, with the qualitative research, I always take other people in who've done lots more of it and we do it together essentially."

WENDY JEPHSON, CEO & CO-FOUNDER OF LET'S THINK, BEHAVIOURAL SCIENCE AI: REVEALING THE KNOWLEDGE THAT HELPS YOU THINK BRILLIANTLY.



FORMS OF SUPPORT

That Behavioural Researchers and Users Would Like to Have (N=69)



Researchers (Conducting Research)

FIG. 8



Conclusions

This work has added to our understanding of how behavioural research is currently being used in startups and scaleups, and identified a number of areas for further exploration and intervention.

Individuals conducting and advancing behavioural research in ventures are not always called 'behavioural researchers', and are often performing a broad range of tasks across the business. Our research suggests that there is no clear or consistent definition of behavioural research in this context. It is defined broadly around understanding/ investigating behaviour, what contributes to it, and how it can be changed – but it is not always possible to differentiate from other types of research in this context (e.g. user research, market research). Many of the barriers identified are common to the broader research and design space (e.g. lack of buy-in, accessing participants, etc.). Any solutions targeting capability-building need to take into account the 'whole role' the individual is performing and the breadth of work their research encompasses, rather than targeting behavioural research in isolation.

A key theme in this research was around the measurement of success. There is sometimes a misalignment between what success looks like in terms of behavioural outcomes vs business metrics; while it is entirely possible to align the two, potential tensions are not always surfaced which can hinder progress. In some spaces (e.g. in regulated areas of digital health), the markets in which startups and scaleups operate are more sophisticated in terms of impact measurement, which helps to align the definition of success (<u>Digital Health Ecosystem Global Q3, 2022; Landi, 2024</u>).

However, in many spaces, there will continue to be a potential disconnect, and we need to consider how to incentivise behavioural and other impact outcomes to be operationalised and measured.

In our research, buy-in appeared to be the most important barrier to conducting and advancing behavioural research, and to its impact. Again, alignment of desired outcomes is key to reconciling these issues. This often varies depending on the nature of the venture: for example, we saw that one startup was very focused on effectiveness, because this was required by their funders and customers. There is a role for investors to play in this: all investors will currently require ventures to demonstrate revenue and financial viability, but only a few require ventures to robustly measure impact. Essentially, including impact outcomes in ventures' primary KPIs and product testing plans is key to bolstering and advancing capacity in behavioural research in ventures. There is a lot of momentum and progress around this wider topic of ventures' impact outcomes (e.g. by Impact VC) that would be worth connecting into. More broadly, there may be a particular opportunity to consider behavioural research capabilities, and approaches to behavioural research more generally, among investors and funders-given the resources and sway of these key stakeholders.

There are huge opportunities to grow behavioural research capacity in UK startups and scaleups, building on the strong but fragmented landscape. It is clear that there is a role for investors and funders to play in supporting behavioural research, and we see this as a key area for future exploration.

References

REFERENCES 39

3B Framework: The Irrational Labs Approach to Behavior Change. (n.d.). Irrational Labs

A faster way to build and share data apps. (n.d.). Streamlit 🤣

Ajzen, I. (1991). The theory of planned behavior.

Organizational Behavior and Human Decision Processes, 50(2), 179–211

Asana. (n.d.). [Computer software] 🤣

Bandura, A. (n.d.). Social Foundations of Thought and Action: A Social Cognitive Theory 1st Edition (1st ed.). Prentice Hall

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review, 84*(2), 191–215

Bandura, Albert, and Richard H. Walters. Social learning theory. Vol. 1. Englewood Cliffs, NJ: Prentice hall, 1977. (n.d.)

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. Qualitative Research in Psychology, 3(2), 77–101

Cognitive Biases. (n.d.). The Decision Lab 🤣

Conner, M., & Norman, P. (2022). Understanding the intention-behavior gap: The role of intention strength. *Frontiers in Psychology, 13*, 923464

Digital Health Ecosystem Global Q3. (2022). Galen Growth & FINN partners &

Dolan, P., Hallsworth, M., Halpern, D., King, D., & Vlaev, I. (n.d.). *MINDSPACE*

Doody, S. (2017). How to Get Stakeholders to Buy Into User Research. Medium &

Dovetail. (n.d.). [Computer software] 🤣

Durlauf, S. N. (2001). A Framework For The Study of Individual Behavior and Social Interactions. *Sociological Methodology, 31*(1), 47–87

EAST Framework: Four Simple Ways to Apply Behavioural Insights. (n.d.). The Behavioural Insights Team \nearrow

Ecosystem Map. (n.d.). Service Design Tools 🤣

Erik, H. (2017). FRAM: The Functional Resonance Analysis Method: Modelling Complex Socio-technical Systems (1st ed.). CRC Press Faries, M. D. (2016). Why We Don't "Just Do It": Understanding the Intention-Behavior Gap in Lifestyle Medicine. *American Journal of Lifestyle Medicine*, 10(5), 322–329

Fogg Behavior Model. (n.d.) 🥏

Free Human Centred Behavioral Science Tools and Frameworks. (n.d.). Aim For Behaviour

Gibbons, F. X., Stock, M. L., & Gerrard, M. (2020). The Prototype-Willingness Model. In K. Sweeny, M. L. Robbins, & L. M. Cohen (Eds.), *The Wiley Encyclopedia of Health Psychology* (1st ed., pp. 517–527). Wiley

Glaser, B., & Strauss, A. (1967). The Discovery of Grounded Theory: Strategies for Qualitative Research

Gorilla. (n.d.). [Computer software] 🤣

Guo, K. L. (2008). DECIDE: A Decision-Making Model for More Effective Decision Making by Health Care Managers. *The Health Care Manager, 27*(2), 118–127

Huxham, C. (2003). Action research as a methodology for theory development. *Policy & Politics*, 31(2), 239–248

IBM SPSS software. (n.d.). [Computer software] 🥏

Introducing LIWC-22. (n.d.). [Computer software] 🤣

Johnston, M., Carey, R. N., Connell Bohlen, L. E., Johnston, D. W., Rothman, A. J., De Bruin, M., Kelly, M. P., Groarke, H., & Michie, S. (2021). Development of an online tool for linking behavior change techniques and mechanisms of action based on triangulation of findings from literature synthesis and expert consensus. *Translational Behavioral Medicine*, 11(5), 1049–1065

Kahneman, D. (2013). *Thinking, fast and slow*. Farrar, Straus and Giroux

Kahneman, D., & Tversky, A. (1979). Prospect Theory: An Analysis of Decision under Risk. *Econometrica*, 47(2), 263

Klein, G. (1995). The Value Added by Cognitive Task Analysis. *Proceedings of the Human Factors and* Ergonomics Society Annual Meeting, 39(9), 530–533

Klein, G. (1997). The Recognition-Primed Decision (RPD) Model: A Description and a Review. Ablex Publishing

Klein, G. (2008). Naturalistic Decision Making. Human Factors: The Journal of the Human Factors and Ergonomics Society, 50(3), 456–460

Kotter, J. (n.d.). The 8 Steps for Leading Change. Kotter 🤣

Landi, H. (2024). More deal volume, lower check sizes for digital health in Q1, with Al investment leading the pack: Rock Health. Fierce Healthcare

Leventhal, H., Phillips, L. A., & Burns, E. (2016). The Common-Sense Model of Self-Regulation (CSM): A dynamic framework for understanding illness self-management. Journal of Behavioral Medicine, 39(6), 935–946

Lewin, K. (1947). Frontiers in Group Dynamics: Concept, Method and Reality in Social Science; Social Equilibria and Social Change. *Human Relations*, 1(1), 5–41 @

Marques, M. M., Wright, A. J., Corker, E., Johnston, M., West, R., Hastings, J., Zhang, L., & Michie, S. (2023). The Behaviour Change Technique Ontology: Transforming the Behaviour Change Technique Taxonomy v1. Wellcome Open Research, 8, 308

Michie, S. (2005). Making psychological theory useful for implementing evidence based practice: A consensus approach. *Quality and Safety in Health Care, 14*(1), 26–33

Michie, S., Richardson, M., Johnston, M., Abraham, C., Francis, J., Hardeman, W., Eccles, M. P., Cane, J., & Wood, C. E. (2013a). The Behavior Change Technique Taxonomy (v1) of 93 Hierarchically Clustered Techniques: Building an International Consensus for the Reporting of Behavior Change Interventions. *Annals of Behavioral Medicine*, 46(1), 81–95

Michie, S., Richardson, M., Johnston, M., Abraham, C., Francis, J., Hardeman, W., Eccles, M. P., Cane, J., & Wood, C. E. (2013b). The Behavior Change Technique Taxonomy (v1) of 93 Hierarchically Clustered Techniques: Building an International Consensus for the Reporting of Behavior Change Interventions. *Annals of Behavioral Medicine*, 46(1), 81–95

Michie, S., Van Stralen, M. M., & West, R. (2011). The behaviour change wheel: A new method for characterising and designing behaviour change interventions. *Implementation Science*, 6(1), 42

Michie, S., West, R., Campbell, R., Brown, J., & Gainforth, H. (2014). *ABC of Behaviour Change Theories*. Silverback publishing

Microsoft Excel. (n.d.). [Computer software] 🥏

Microsoft Forms. (n.d.). [Computer software] 🤣

Microsoft Teams. (n.d.). [Computer software] 🥏

Miller, G. A. (1956). The magical number seven, plus or minus two: Some limits on our capacity for processing information. *Psychological Review*, 63(2), 81–97

Miro. (n.d.). [Computer software] 🥏

Molenda, M. (2003). In search of the elusive ADDIE model. Performance Improvement, 42(5), 34–36

Monsen, K. A., & De Blok, J. (2013). Buurtzorg: Nurse-Led Community Care. *Creative Nursing*, 19(3), 122–127

Neurons. (n.d.). [Computer software] 🥏

Nickerson, R. S. (1998). Confirmation Bias: A Ubiquitous Phenomenon in Many Guises. *Review of General Psychology*, 2(2), 175–220

Noble, H., & Mitchell, G. (2016). What is grounded theory? *Evidence Based Nursing*, 19(2), 34–35

NVivo 14—Leading Qualitative Data Analysis Software with Al Solution. (n.d.). [Computer software]

Operant conditioning. (n.d.). APA Dictionary of Psychology 🔗

Participatory System Mapper. (n.d.) 🤣

Prime Theory of Motivation. (n.d.). Prime Theory of Motivation

Prochaska, J. O., & Velicer, W. F. (1997). The Transtheoretical Model of Health Behavior Change. *American Journal of Health Promotion*, 12(1), 38–48

Prolific. (n.d.). [Computer software] 0

Qualtrics Experience Management. (n.d.). [Computer software]

Rogers, E. (2003). *Diffusion of Innovations*. New York: Free Press

Rogers, R. W. (1975). A Protection Motivation Theory of Fear Appeals and Attitude Change 1. *The Journal of Psychology, 91*(1), 93–114

Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, 55(1), 68–78

Sienkiewicz, A. (2022). *7 biggest UX designer challenges*. Big Picture

REFERENCES 41

Skinner, B. (1938). *The Behavior of Organisms:* An Experimental Analysis. Appleton-Century

Streamlit. (n.d.). [Computer software] 🥏

Sunstein, C., & Thaler, R. (2008). *Nudge: Improving decisions about health, wealth, and happiness*

Tajfel, H., & Turner, J. (1979). An integrative theory of inter-group conflict. W. G. Austin & S. Worchel (Eds)

The Complete Guide to the BOOST Feedback Model. (n.d.). Codengo

The Decision Corner. (n.d.). [Broadcast] 🥏

The Eliciting Information Framework: A Vehicle For Research Into Practice. (n.d.). Centre for Research and Evidence on Security Threats

The Hooked Model: How to Manufacture Desire in 4 Steps. (n.d.)

The Lean UX Canvas. (n.d.). Jeff Gothelf 🤌

The R Project for Statistical Computing. (n.d.). [Computer software]

Theory and Technique Tool. (n.d.). Theory and Technique Tool *⊘*

Theory of Change Template. (n.d.). Miro 🤌

Trist, E. L., & Bamforth, K. W. (1951). Some Social and Psychological Consequences of the Longwall Method of Coal-Getting: An Examination of the Psychological Situation and Defences of a Work Group in Relation to the Social Structure and Technological Content of the Work System. Human Relations, 4(1), 3–38

Ulwick, T. (n.d.). Jobs-to-be-Done. Stratygen 🥏

Useberry. (n.d.). [Computer software] 🤣

User Testing. (n.d.). [Computer software] 🤣

UXcam. (n.d.). [Computer software] 🤣

Wendel, S. (2014). Designing for Behavior Change: Applying Psychology and Behavioral Economics (1. ed). O'Reilly

Wertheimer, M. (1938). Laws of organization in perceptual forms. In W. D. Ellis (Ed.), *A Source Book of Gestalt Psychology*. (pp. 71–88). Kegan Paul, Trench, Trubner & Company

Wilkinson, L. A. (2011). Systems Theory. In S. Goldstein & J. A. Naglieri (Eds.), *Encyclopedia of Child Behavior and Development* (pp. 1466–1468). Springer US

Youn, S., & Lee, K.-H. (2019). Proposing value-based technology acceptance model: Testing on paid mobile media service. *Fashion and Textiles*, 6(1), 13

Zuber-Skerritt, O. (2002). A model for designing action learning and action research programs.

The Learning Organization, 9(4), 143–149



