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Reconfiguring Psy Expertise in the Digital Age

Two Cases from India

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Abstract

Mental health platforms and apps provide technologies and techniques for self-work, diagnosis, and management of everyday crises. Therapeutic interventions designed to work outside the clinic, they distribute and reconfigure psy expertise. Using the cases of a chatbot-based mental health app and a digital mental health platform, both developed in Bengaluru, India, this article ethnographically attends to new forms of expertise that emerge within digital mental health ecologies. What does it mean when software specialists, AI programmers, or conversational designers emerge as novel experts in mental health care, along with psychologists? How do they build on or depart from more conventional forms of expertise? How is psy expertise enacted in these spaces? Psy technologists, I argue, engage conventional psy expertise, even while establishing their psy technological expertise as alternative, sometimes even superior, ways of responding to emotional crises and mental distress. I first turn to the ways psy technologists conceive of mental health as a technical problem, reconfiguring mental health expertise. Next, I delineate some of the practices through which they enact expertise: engaging (and contesting) psychological expertise and conducting clinical trials. Finally, I investigate what it means to care for mental health digitally.

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Keywords

Digital Technologies, Mental Health, Expertise, Automation, India.

> I thought if I combine technology, which is something that everyone uses these days, with psychology, maybe we could reach out to a lot of people.
>
> –Richa Singh, founder of YourDOST

> The world is on fire. So many people are suffering. And although we have fire alarms, there is often no brigade coming to help. I wanted to build such a fire brigade.
>
> –Jo Aggarwal, founder of Wysa

> How can we lead happier, better lives because of the presence of technology in our lives?
>
> –Jo Aggarwal, founder of Wysa

Introduction

Commercial mental health platforms and automated therapy apps provide technologies and techniques for self-work, diagnosis, and management of everyday crises. Apps move mental health out of the clinic into homes or pockets, and platforms connect therapists with users. Psy technologists like Richa Singh or Jo Aggarwal who develop these devices become new experts in mental health care, responding to the hopes and hypes disseminated by interventionists in global health who celebrate digital technologies as scalable and low-cost solutions to the presumed mental health treatment gap (Bhugra et al. 2017). I refer to technologists like Richa and Jo as psy technologists, with ‘psy’ referring here to psychology and psychotherapy. Proponents and developers aspire digital mental health technologies to ‘leapfrog’ infrastructural constraints, circumvent stigma, and attend to needs where conventional mental health care fails. A techno-optimism of caring for wellbeing at scale becomes obvious in digital mental health proponents’ and developers’ dreaming about the digital future. It is a future in which mental health care becomes cheaper, more widely available and freed from geographic and temporal constraints. Governments, business companies, and institutions worldwide have endorsed digital mental health technology as a cost-effective, accessible alternative or supplement to face-to-face support. Seen from the perspective of their proponents, the crisis of the COVID-19 pandemic has accelerated this development, an opportunity for digital mental health reform and

development (Stein, Naslund and Batjes 2022). More recently, ChatGPT has exposed the possibilities and risks of AI in mental health care (Reardon 2023).

In contrast to proponents' and developers' techno-optimism, critics worry about neoliberal self-governance, inequality and exclusion, and global psy imperialism. Digital mental health technologies, they argue, are 'techno-fixes' (Morozov 2014) or 'band-aids' that fail to address pathological social, political, and economic milieus through which mental health problems emerge. Critics are also concerned about cutbacks in conventional mental health systems through investing in digital mental health, data surveillance, and psy coloniality (Lupton 2017; Pendse et al. 2022). Conventional mental health experts, regulatory agencies, and consumer rights protection organisations are concerned about a lack of regulation and professional standards. Others warn that chatbots cannot replace humans in therapy and that the 'cold' binary logic of computer science is not equipped to respond to humans' dramas; they argue that automated therapists are dehumanising, uncaring, and tempt humans into improper, bogus intimacies (Semel 2022).[1] In other words, critics argue that digital or robotic care is nothing but a technological fix, and its proponents' digital solutionism and neophilia obscure decaying mental health infrastructures and broader structural and environmental precarity.

Within this emergent and contested field of digital mental health, software specialists, AI programmers, and conversational designers emerge as new kinds of mental health experts, or what I call 'psy technologists', who use digital technologies for mental health interventions. I distinguish psy technologists from more conventional mental health providers. Providing therapeutic interventions designed to work outside the clinic, they distribute and reconfigure mental health expertise. They do so by including IT professionals along with psychologists (but in the case of the two Indian startups I worked with, excluding psychiatrists). The psychologists in both teams each hold at least a master's degree in psychology. In this article, I use 'therapeutic' in a broader sense to refer to practices like therapy, counselling, coaching, or support, and I distinguish this broader notion of 'the therapeutic' from psychotherapy proper provided by trained professional therapists.

Psy technologists embark on a vision of accelerated digital and future-oriented world-building in the context of mounting social and financial costs of mental disabilities (Chisholm et al. 2016). As the epigraphs illustrate, psy technologists merge digital technology and psychology to provide what they describe as 'tech for good' in the field of mental health. In this article, I attend to the reconfiguration

[1] Although others show that different affective relations between humans and health care technologies such as care robots may blur those oppositions between cold technology and warm human care (Pols and Moser 2009).

of mental health expertise by focusing on new forms of expertise that emerge within and through new digital mental health ecologies of care.. What are these new forms of expertise? And what does it mean when software engineers, AI programmers, or conversational designers emerge as novel experts in mental health care, along with psychologists? How do they build on or depart from more conventional forms? How do they frame and address mental health? How are new forms of psy expertise and authority enacted and contested? What does it mean for mental health care? Psy technologists, I argue, engage conventional psy expertise, even while they establish their psy technological expertise as alternative, sometimes even superior ways of responding to emotional crises and mental distress.

This article is based on narrative and semi-structured interviews, casual talks, and focus group discussions with the developers of the mental health app Wysa and the mental health platform YourDOST. These conversations took place in open-plan offices in Bengaluru, in Boston, and in online interactions since 2019. I visited the two startups several times and continued talking to team members in their offices, in cafés, and online during and after the COVID-19 pandemic. At Wysa, I had conversations with the founders, software specialists, psychologists, AI engineers, conversational designers, and product developers. At YourDOST, I talked to software engineers, managing psychologists, and therapists. I also interviewed psychologists who work for other mental health platforms. I use the real name of the app, the platform, and their founders and designers, because they have asked me to do so. I have discussed the insights of my research with the designers and psychologists throughout different stages of my research. This ongoing process between analytical work and feedback from my interlocutors set in motion a mutual learning process and contributed to forging relationships of trust. I did not feel constrained in my analysis by this collaboration due to my focus on grasping the designers' perspectives and visions and reading them through an anthropology of expertise, aspirations, and future-making.

This article proceeds in three steps. I first turn to the ways the founders of Wysa and YourDOST conceive of mental health as a technical problem to solve and reconfigure mental health expertise. In the next section, I delineate some of the practices through which psy technologists enact expertise: engaging (and contesting) psychological expertise and conducting clinical trials. Finally, I investigate how psy technologists put IT expertise into practice, and what it means to care for mental health digitally.

Reconfiguring expertise in mental health

Software specialists, AI programmers, and conversational designers emerge as novel experts in mental health care. Who are these new experts? How do they build upon or diverge from more conventional forms of expertise? In order to address these questions, a brief overview of conventional mental health expertise is necessary.

Conventionally, expertise in mental health care has been located in the disciplines of psychiatry, psychology, psychotherapy, and psychoanalysis: psychiatrists, psychologists and therapists have expert status and authority in terms of knowing, intervening in, and governing mental health. Conventional mental health expertise has been grounded in and legitimised by institutions that educate, train, and license experts (Hacking 2007). Such institutions are obliged to meet quality and ethical standards through licensing bodies, although these vary globally. This rendering of mental health expertise focusing only on psy practitioners ignores, as anthropologists have long shown, the important role and position of other practitioners, such as ritual healers or non-biomedical practitioners, in knowing and intervening in mental health afflictions (Halliburton 2009; Kirmayer and Pedersen 2014; Kleinman 1980; Sax and Lang 2021). This situation still broadly applies despite recent efforts to establish forms of collaboration between psy experts and other kinds of practitioners, a process that is also characterised by a range of challenges (Read, Sagar and Singh 2023). With the emergence of mental health service user and patient groups, psychiatrists' and psychologists' expertise has been complemented by a newly articulated kind of expertise: lived experience. People with lived experience of mental illness have been engaged in shaping policies and interventions. Moreover, with mental health's digitisation and the rise of 'therapy tech' (Hiland 2021), people with lived experience of mental illness are also increasingly engaging in online peer-to-peer counseling and care, and some even become online expert mediators or social media influencers (Avella 2023; Egher 2023; Hiland 2021; Zeavin 2021). In global mental health contexts, conventional mental health expertise has been deprofessionalised and democratised by training and including lay health workers as part of 'task shifting' or 'task sharing', whereby they become effective and cost-effective actors in under-resourced health care systems (Bemme 2018; Lovell, Read and Lang 2019).

Meanwhile, psychological ideas and language, 'therapy-speak' (Waldman 2021), have travelled to the everyday (Chua 2013; Duncan 2018; Illouz 2008; Matza 2018; Vorhölter 2019; Zhang 2017) and into the digital realm. The global rise of psychology carries particular imaginaries of mental and emotional wellbeing and suffering and is linked to broader social and economic changes, such as the emergence of a new middle class, consumerism, rapid urbanisation, and the rise

of humanitarian and global mental health activities. These new 'technologies of the self' aim to promote and cultivate self-knowledge, articulation, responsibility and empowerment, rendering people their own experts in themselves (Foucault 1988; Rose 1996). While often linked to neoliberal transformations of governance, political economy and subjectivity, 'psy regimes' also provide orientations and new forms of care in worlds that are rapidly changing or falling apart (Duncan 2018). Although global psy ideas potentially transform people's ways of relating to their own and others' suffering, they are also transformed as they are appropriated and adapted around the globe. Many of these transdiagnostic and popular therapeutic practices are based on ideas about the universal value of behavioural activation, the verbal articulation of distress and self-work grounded in an agentic, responsible self that rationally works through everyday forms of distress and conflict.

With the rise of digital technologies such as tracking devices and chatbots to know and intervene in mental health, software specialists, AI programmers, and conversational designers emerge as novel experts in mental health care, often working in conjunction with psychologists. In the process they reshape psychologists' therapeutic expertise and incorporate them in the platform economy (Garofalo 2024) and app development. While conventional experts of mental health have been well explored, little is known about these emerging experts in digital mental health that I call 'psy technologists'. It is to these new experts that I now turn.

As the epigraphs illustrate, psy technologists are excited about the question of how to use technology to respond to the mental health crises and to enable people 'to live better lives'. Instead of debunking digital solutionism (Morozov 2014), I take seriously psy technologists' framing and response to mental health challenges that, I suggest, is of course technical but not only technical. In doing so, I hope to provide some insights into the distribution and reconfiguration of expertise as mental health care becomes increasingly digitised. The psy technologists I have talked to in India show a genuine interest in not only responding to mental distress at scale but also changing the way people relate to mental distress and vulnerability, even if these responses are partial, minimal, and minor.[2] In both startups, I noticed a genuine interest amongst founders and employees in providing digital care and affective support and becoming 'agents of change' (Irani 2019). I learnt about what Jo Aggarwal and Richa Singh called the 'cultural change' that both founders imagined their innovations to afford through their rollout at scale: an increasing awareness of mental health as a fluctuating condition of human life, that everyone can work upon through venting, introspection and self-work, using digital technologies. While critics might see this psychological self-work as a

[2] For a similar argument on technologists building digital diagnostics in Tanzania, see Neumark 2023. For more on technological fixing and minimalism of care in global health see Birn 2005 and Storeng 2014.

neoliberal modality of power operating through subtle mechanisms to regulate conduct and the ways people relate to themselves (Foucault 2007; Rose 1996), Wysa's and YourDOST's psy technologists and psychologists imagined that this 'cultural change' could finally make societies more accepting towards psychological non-wellbeing as an everyday human condition and not as a pathological and stigmatised mental illness. Against a critique of digital solutionism, inequities of access, concerns about cutbacks in conventional mental health care, and psy coloniality, psychnologists envisioned a future in which digital mental health technology could positively transform how humans affectively and therapeutically relate to, care for, and accept themselves and others. It is a mental health future in which, they felt, psy technological expertise becomes increasingly important.

Jo Aggarwal and Richa Singh are each co-founders (with their respective husbands) of digital mental health startups, both located in the IT metropole Bengaluru, the 'Silicon Valley of India'. Both are female, middle-class, and trained at one of the prestigious Indian Institutes of Technology (IIT), Jo in software engineering, Richa in user experience design. Both are celebrated in Indian media reports as pioneers of digital mental health, shifting, or at least complementing, conventional mental health expertise. For both, it was personal confrontations with psychological crises, depression, and suicide within their social environment that motivated their exploration of technical ways to address mental health at scale.

YourDOST ('your friend') co-founder Richa Singh had seen the emotional effects of pressure from parents and peers. Aspirations are high in India's middle class for children to become either software engineers or doctors and to study in elite institutions. Not everyone makes it into an IIT, but millions enrol into preparatory courses for the highly contested entrance exam, especially in places like Kota, a small town in Rajasthan that boasts hundreds of coaching institutes. In this highly ambitious environment, Richa had witnessed how parental and peer pressure takes a toll on students' mental health and, not uncommonly, drives them into depression, anxiety, and even suicide. It was a decisive moment for Richa when a college friend committed suicide due to her fear that she might not get a good job. Many others, too, she said, suffered mental breakdowns due to the pressure. Although there was no dearth of psychologists on IIT campuses, Richa remembers that students avoided seeking their help, fearing stigma and potential negative impacts on future careers and relationship prospects. Later, when Richa worked for software companies in India, Germany, and the US, she was again struck by the gap between employees' suffering and the lack of adequate emotional support. 'There are these high aspirations, pressure from parents and peers. But our natural support systems are not there anymore; you are on your own. Yes, professional help is there, but this is highly stigmatising, people avoid them,' she told me.

It was this landscape that Richa set out to change, and she wanted to do so by using digital technology. She talked to psychologists to learn more about how they work and about the reasons why people would hesitate to approach them, and she started a blog in which she collected and documented stories of mental and emotional suffering. Richa regarded her own lack of psy expertise in articulating people's emotional problems as an asset. For her, it was the lay language of these stories rather than professional language that helped readers to relate to them. 'Instead of depression, I would say, she is going through a tough time, feeling low.' The stories she collected and documented also revealed to her that people were keen to get help but did not want to visit a conventional mental health professional. As she describes in the epigraph, Richa decided to combine digital technology with psychology in order to provide mental health support at scale. It was this idea of merging digital technology and psychology that the YourDOST mental health platform emerged from.

Wysa's co-founder Jo Aggarwal, too, is an IT expert. After working for a leading IT company in India, and later with young people in post-conflict zones in the Middle East, she and her husband, Ramakant Vempati, turned their attention towards mental health. For Jo, the impulse for this turn came from the sudden and unexpected suicide of a close friend, a young man. Another influential factor was her own struggle with depression. Similarly to Richa, Jo was struck by what she described as the lacunae and inadequacy of the mental health care ecosystem in India and the limits of conventional mental health expertise. Together with her husband, she started building a tool to detect mental illness, a software that predicted depression based on mobile phone activity and movement. Driven by technological possibility but weary about its limited effect of only diagnosing but not treating, Jo aimed for more. Predicting depression just by the way a phone moves about was cool from a tech point of view, she found, but could not change people's lives. Rather, according to Jo, people in distress needed 'emotional support, a place to vent, and learn how to reframe thoughts', and, like Richa, she wondered how this could be achieved through technology. While YourDOST uses digital technology to connect those in need of support with those who provide it, Wysa uses artificial intelligence to provide care and support. Artificial intelligence (AI) is a vernacular term Wysa's designers use for the chatbot. They were keen to stress that their AI is not machine learning, through which Wysa's algorithms would learn by themselves (Domingos 2015). Rather, the designers use user feedback, adherence, and dropouts to continuously adapt and improve its algorithms.

Both startups cater to everyday forms of mental distress by keeping the barriers to using their services purposefully low. For both founders, mental health is not only a technical problem to solve but also a business opportunity. Jo was upfront about it: 'As a company we want to make money. And mental health is a huge market.'

As entrepreneurs, these psy technologists combined IT expertise, psychological expertise, and an entrepreneurial ethos to embark on building what they call 'tech for good', combining social value with economic value. Instead of a problem located in the mind, the brain, in social relations, or even structural violence, for psy technologists, mental health becomes a technical problem to solve, using digital technologies, IT expertise, and the market.

Enacting expertise

Like other forms of expertise, psy expertise is a process of becoming rather than a state of being, something that people do rather than something people hold; it is enacted and relational (Carr 2010; Hogle 2002). How do psy technologists work towards recognition as experts? What are some of the practices through which they enact and perform expertise? How in turn is their expertise contested? Psy expertise, I show, is enacted through performative practices and evidentiary tools, interactively produced in relational labor with actors such as psychologists, venture capitalists, businesses, governments, hospitals or insurers, and linked to market and regulatory forces (Carr 2010; Hogle 2002). Psy technological expertise also works through and is contested by 'boundary work' (Gieryn 1983), especially of conventional mental health experts. In this section, I delineate two ways psy technologists enact expertise in digital mental health care: engaging psychologists in the team and conducting research trials and surveys.

Engaging psychological expertise

Wysa and YourDOST build on and engage psychological knowledge and expertise. Their founders have gathered psychological knowledge and employed experts, drawing eclectically from various sources of knowledge and therapeutic approaches. Although they draw on and engage with psychological experts and expertise, both startups challenge the way they observed therapy to be practised in India (and beyond) and aim to provide alternatives to professional approaches to emotional suffering and mental distress. They do so through deprofessionalisation of language, destigmatisation of care, and democratisation of knowledge. Both startups stress, in the words of their founder psychologists, the importance of 'lay language', free of 'diagnostic jargon', and 'stigmatising diagnostic terminology'. The mobilisation of broader vocabularies such as 'emotional wellbeing' or 'stress', of transdiagnostic therapeutic approaches, and of stand-ins like 'friendship' for therapeutic relations sits within a larger trend in global psy and global mental health interventions to rearticulate professional language in everyday and nonstigmatising terms (Bemme 2019).

Employing psychologists in their teams is one way that Wysa and YourDOST establish expertise and quality in the context of concern amongst mental health

professionals about insufficient standards and regulations in the field of digital mental health. In both startups, IT expertise is combined with psy expertise to create novel forms of digitally mediated mental health care.

At YourDOST, those who provide counselling—the experts in the company's terms—have a master's degree in clinical psychology or counselling; however, the awarding of degrees in this field is rather unregulated in India. Before starting their employment, they undergo a written test, internal rating processes, and supervision, and they receive some basic training for online counselling within the company. They are supervised by an in-house senior psychology or counselling 'expert' during their first months of employment.

At Wysa, psychologists provide mostly chat-, audio-, and video-based care and conduct and publish research based on anonymised data they collect. They also participate in designing algorithms and writing content, as well as collaborating with software specialists, AI engineers, and content writers—the psy technologists. In turn, the latter participate in writing questions and responses for the AI and suggest self-help exercises. Indeed, formulating prompts and responses and trying out conversations and exercises often involves the whole team. 'The best answers do not necessarily come from the psychologists,' Wysa's psychologist Chaitali said in discussion with Wysa's AI lead, its conversational designer lead, and me.

> What is the best way to make the user absorb an intervention or think through a problem or discuss their deepest fears or worries while feeling safe? These are questions that everyone in the team draws upon very experientially: what worked for me, worked for my friends, is it making sense to me? This helps us in refining Wysa further and further.

One of Wysa's conversational designers stressed the value of the deprofessionalisation of language that Wysa uses in conversations and exercises. The aim, she said, is to 'keep the language very simple; nothing above sixth grade language, no complicated words, just making sure everybody understands what's going on there.' In order for Wysa to work in heterogenous contexts and for a multiplicity of users, designers regarded as essential the collaboration of various kinds of expertise and lay approaches. YourDOST's co-founder Richa also argued for the use of lay language over professional jargon. 'For us it's about however lay we can make it so that people take it,' she said. 'If I make it heavy, if I'm using the word "anxiety" or "depression", I am not sure if our population is ready for it yet. So we keep it very light. As simple as we can keep it, this is how our awareness-raising is taking place.'

Similarly, the language of Wysa's chatbot and of the small audio, video and text 'self-help exercises' deploys everyday language rather than 'heavy' psy

professional diagnostic terms and explanations. For Richa, Jo and others, ‘heavy’ as an emic term refers both to experience-distance and to the stigmatising and pathologising effects of professional mental health language and concepts. It is precisely this ‘heaviness’ that they aim to replace with what they consider to be experience-near language, language that stresses not pathology but the ordinariness of mental and emotional suffering. For both Jo and Richa, lay formulations help people to relate to and identify with these descriptions.

Although digital mental health technologies’ users are mostly middle-class, this approach is reminiscent of Veena Das’ analysis of ‘quasi-events’ in the context of the urban poor, as the ‘moving line between what is and is not recognized as an illness’, where much happens ‘below the threshold of the sayable or even the knowable’ (Singh 2020, 157). It is at these thresholds, designers hope, that mental health apps or platforms can become points of entry into emerging, accessible, and less stigmatising mental health ecologies. This is especially relevant in India, where a mental illness diagnosis and treatment can jeopardise career prospects of both the diagnosed person and members of their larger family and kin network. Psy technologists are intervening to provide unstigmatised care. They do so by trying to make digital emotional support and care a part of the everyday rather than treating it as an exceptional clinical event.

While YourDOST and Wysa engage psy experts and expertise, they also face critique from more conventional mental health experts, who worry about the technologisation and dehumanisation of therapy, about lack of quality, standards, and regulations, and about data safety (Cox 2024; Hiland 2021; Singh and Sagar 2022; Turkle 1995). Some of this boundary work became clear to me while I discussed YourDOST in 2018 with a well-known psychiatrist who had worked at the National Institute of Mental Health and Neurosciences (NIMHANS) in Bangalore, a prominent site of specialist care, training and research that has been emblematic and formative of India’s mental health infrastructure. The psychiatrist has been prominent in the global mental health movement. He supported the democratisation of mental health care but was dismissive of what he called its ‘dilution’:

> They [YourDOST] say that at any time, there are about 800 psychologists providing service. That is about eight times the people in NIMHANS. [. . .] No matter what is troubling you, you get the support now, right here, right now. My concern is that there will always be efforts to make distress into a commercial commodity. There is no boundary of what conditions they will deal with, no criteria whether this person is capable of providing care or not. We are democratising on one level, on another level we are diluting [mental health care].

Engaging licensed psychologists in their teams, setting in-house standards, and complying with national standards in the countries they serve are ways for Wysa and YourDOST to address the critique of their 'diluting' mental health care, even while subscribing to its 'democratisation'. It is precisely democratised, deprofessionalised, and distributed psy expertise, knowledge, and care that psy technologists combine with IT expertise. Moreover, some psy technologists emphasise the power, even superiority of lay language for emotional wellbeing that they find more appealing and empowering to their users than professional psy language.

While the psychiatrist above was ambiguous in his evaluation of digital mental health as democratising on the one hand and diluting on the other, some psychologists were more favourable. Although they would not like to see automated or online therapy replacing conventional therapy, several acknowledged the possibilities of what has been called a 'blended approach' (Bhugra et al. 2017; Carpenter-Song 2020; Fairburn and Patel 2017). A psychologist and university professor in Bengaluru with a PhD from NIMHANS experimented with integrating Wysa in her own therapeutic practice, suggesting to some of her clients to use it in between (not instead of) face-to-face therapy sessions. This psychologist appreciated the agency and choice that Wysa provides to its users, the little exercises in mindfulness, gratitude and meditation, the app's immediate availability, and its cost-effectiveness as possibly complementing conventional therapy sessions. Wysa's and YourDOST's designers would agree. For example, Wysa collaborates with governments to bridge temporal gaps of waiting for a therapy place. The British NHS offers Wysa to young people as an interim solution while they wait for therapy with a human therapist.

Psy technologists enact expertise not only by engaging psychologists and collaborating with governments, but also through pedagogy, providing a platform for a range of practitioners and scholars of mental health in India. For example, YourDOST has an online training wing that they call 'YourDOST Academy' (YourDOST Academy 2023), which offers webinars led by what they promote as 'leading experts' on topics such as hypnotherapy, cognitive behavioural therapy (CBT), acceptance and commitment therapy (ACT), or queer-affirmative therapy. These webinars feature psychologists and other mental health practitioners and researchers, including an anthropologist who gave a talk on work and recovery from schizophrenia in India (YourDOST Academy 2021).

By engaging licensed psychologists in their teams and borrowing authority from mental health practitioners, Wysa's and YourDOST's psy technologists enact expertise and quality and make claims to authority. But they also conduct research.

Conducting research

Conducting research is another way for psy technologists to enact expertise and claim authority. The psychologists and IT specialists working in psy startups collaborate with hospitals, academic institutions, and health professionals to conduct clinical trials and user studies at the intersection of knowledge production, evidence claims, and market placement. Wysa has its own research wing, in which in-house psychologists and software specialists partner with psychologists, psychiatrists, and surgeons in the US, UK, and India to conduct clinical trials (Leo et al. 2022; Sinha, Cheng and Kadaba 2022), qualitative thematic analyses (Malik, Ambrose and Sinha 2022), thematic and impact mixed-methods analyses of use (Inkster, Shubhankar and Subramanian 2018; Saha, Sinha and Kadaba 2022), and therapeutic alliances (Beatty et al. 2022). These studies deploy both quantitative and qualitative analytic tools, using Wysa as a case to probe, for instance, into the therapeutic alliance with conversational agents (Beatty et al. 2022) or the adherence and use of AI mental health apps in chronic pain (Saha, Sinha and Kadaba 2022; Sinha, Cheng and Kadaba 2022). Other studies investigate Wysa's effectiveness and users' engagement with the app, analyse the themes that emerge in the chats between users and the bot, and explore adherence and drop-offs. The questions that Wysa's clinical trials explore can be described as a kind of post-facto, self-validating knowledge (see Nguyen 2009 for post-hoc evidence in global health): does mental health care delivered by a chatbot lead to similar or even better outcomes than face-to-face care? Is an automated therapy better than no therapy at all?

Wysa's in-house studies claim to have shown that users improved by using Wysa, but this was dependent on the depth and frequency of engagement with the app. Another study showed that users can build up a therapeutic alliance with a bot. Qualitative analyses reveal some of users' experiences with the app (Beatty et al. 2022; Malik, Ambrose and Sinha 2022) and identify challenges related to relationships, location change, loss or bereavement, and career changes as the major events reported by users (Inkster, Shubhankar and Subramanian 2018). The studies on perceived needs and digital engagement of chronic pain patients (Leo et al. 2022; Sinha, Cheng and Kadaba 2022) stress 'user-led research', which is 'guided by the voice of the user through co-design and qualitative methodologies.'[3] With user-led research, Wysa's researchers join trends in psychiatry to democratise clinical research by involving service users in research frameworks, design, and implementation (Faulkner and Thomas 2002).

For digital mental health startups, these kinds of trials and publications are a way to enact scientific expertise. They are performative in the double sense: they both

perform and (at least aspirationally) generate mental health expertise and authority. But clinical trials and studies are also a way to establish their products on the market. In Wysa's case, the startup has been awarded a Breakthrough Device Designation for adult patients with chronic pain, depression, and anxiety in orthopedic care by the US Food and Drug Association. This FDA designation enables speeding up the development, assessment, and review of medical devices, which has, in Wysa's case, resulted in a flurry of new investments. For Wysa, the Breakthrough Device Designation as a medical device is an important step towards moving Wysa from a wellbeing tool to a therapeutic tool. But psy technologists not only reconfigure and enact expertise, they also put their expertise into practice of mental health care and support.

Psy technological expertise in practice

What does it mean to care for mental health digitally? What implications for care arise if software specialists, AI programmers, or conversational designers emerge as novel experts in mental health care alongside psychologists? I will now discuss the applications in more detail.

YourDOST is a commercial mental health platform for counselling and emotional support. Promoted as a 'counseling and emotional wellness coach', it connects clients online and anonymously with what YourDOST calls 'experts' or 'special friends', that is psychologists, across India. Clients book either single counselling sessions or packages, either in English or an Indian language. Sessions are based on chats as well as audio or video calls. The platform had started with texting, assuming that many young people are more comfortable with expressing problems on chat than through audio or video calls, but later added audio and video calls to respond to multiple needs. Clients select a category for their problem, such as career and academic, domestic abuse, family and friends, love-relationship or self-improvement. They then either choose a counsellor from a list or receive suggestions by the system based on topic and availability.

Most clients are between 18 and 35 years of age. Richa told me that many address YourDOST with problems such as job uncertainty and unsatisfaction, problems with studying, performance-anxiety, loss of self-esteem, or family issues. Clients talk about pressures from parents and peers, relationship breakups, and problems with studies, addiction or stress. Some suffer from depression, anxiety or panic attacks. Many, she stressed, feel unable to talk with others about their problems; stuck in a spiral of silence, they reach out for what she saw as non-judgmental and anonymous listening and advice provided by her platform. YourDOST also sells counselling packages to educational institutions and companies that offer the platforms' services to students and employees for free.

YourDOST's contract psychologists are mostly women in their thirties. After each session clients rate the experts. These ratings appear on the psychologist's profile, along with their educational background and a photo. If the psychologists receive a negative client evaluation, the software generates a ticket that prompts an in-house team member to reach out to the psychologist in question. Senior, permanently employed psychologists also perform audits by observing their sessions. If a client needs a professional intervention by an outside specialist, the psychologist creates a ticket, and the in-house team coordinates a crisis intervention. The psychologists' therapeutic or coaching approaches differ, but most offer an eclectic and customised mix of CBT and ACT. Most of the psychologists work on a contract basis. Apart from contracted psychologists, YourDOST has around thirty permanent employees including psychologists as well as technology, marketing, and operation teams. Neoliberal employment conditions of YourDOST's 'experts' challenge the idea of expertise by submitting them to performance audit, rating, and voting. The platform's reconfiguration of therapeutic labour changes the client-therapist relationship, influences the search for a therapist through algorithmic and 'swiping' techniques, and seeks to produce accountability in therapeutic work through rating and digital surveillance. It also blurs the boundaries between therapy and non-therapy spaces and times (Garofalo 2024).

In the case of Wysa, psy technologists have built a therapeutic chatbot, designed to be what its designers call a 'digital couch', an 'AI friend', or a 'happiness buddy' who checks in daily, an emotional resilience tool built into your smartphone. It listens, asks questions, and provides support. Designed and developed by software engineers, psychologists and conversational designers, and using natural language processing and interpreting speech patterns, it aims to help users in reducing their distress, get in touch with their emotions and thought patterns, deal with distressing situations, and develop resilience. Conversations are exclusively in English as of now, but Wysa is working on a Hindi version that mostly targets users from lower socioeconomic backgrounds in India. The chatbot is a wellbeing tool that is, designers emphasised, anonymous, available around the clock, and fits in your pocket. The app relocates the therapeutic encounter, and the therapeutic relationship, into a digital encounter with a machine and bridges temporal and spatial obstacles. It provides chats with a chatbot, self-help exercises in mindfulness, managing anxiety and sleeping problems, or developing coping and problem-solving skills, and, for a fee that differs according to geographic location, chats with one of Wysa's human 'wellbeing coaches', as they call them. The 'wellbeing coaches' have a minimum qualification of a master's degree in psychology, and those who provide coaching services in the UK or US, have the respective countries' coach license.

Wysa's developers imagine that the chatbot enables venting and the experience of being listened to, independently from a human listener, and this requires IT expertise. Programmers and content writers see one of their key tasks to be developing and adapting algorithms to respond empathetically enough for users to feel listened to and gain trust.[4] For Wysa's designers, programming a chatbot to listen like a therapist that involves compassionate questions, nudges, and empathetic responses, is key. Wysa's psy technologists designed the app to intervene not only by providing a space for venting through effective listening, but also by offering strategies to deal with distressing thoughts, emotions and situations and, in Jo's words, to 'acquire wisdom'—after all, Wysa is pronounced 'wiser'. Wysa's psy technologists program Wysa's algorithms and self-help exercises with an eclectic mix of diverse therapeutic approaches, oriented towards self-care such as CBT, ACT, Rogerian principles, and mindfulness. Wysa's designers draw on the experimental approaches of the designers of early computer therapists, notably ELIZA, the world's first such automated therapist, which also used Rogerian principles in its technique of repeating statements of the users (Weizenbaum 1966).

Wysa's psy technologists draw on conventional therapeutic expertise. CBT and mindfulness approaches have been widely established as being evidence-based. Both approaches seem to be 'chatbot-able', and many wellbeing apps on the market are based on either mindfulness or CBT or both (Jablonsky 2021). In many conversations, the bot plays back users' verbal utterances, asks about the emotional effects of particular thoughts, and nudges them to reframe them. This also involves a distancing from negative ideas (or 'beliefs') by imagining supportive others' reactions to maladaptive cognitive and emotional orientations. Following up on keywords and phrases, the bot suggests self-help exercises with short meditations, autogenic trainings and tutorials that suggest acceptance, gratitude, compassion and empowerment. Science and technology scholar Sherry Turkle (1995) sees a direct correlation between the emergence of automated therapy and the shift in psychotherapy from psychoanalysis to less personal, less intimate, more scientific therapeutic techniques such as CBT or mindfulness. Since the latter are based on self-governance, self-responsibilisation, and self-care—characteristics of neoliberal governmentality, subjectivity, and power wherein people effectively become their own experts (Foucault 1988; Rose 1996)—it is not surprising, Turkle (1995) argues, that a chatbot could take over the therapist's task.

For Richa, two features of the platform are decisive for helping people to open up: anonymity and agency. The digital encounter—whether through chat, audio or video—remains anonymous in the sense that the therapists do not get to know the

[4] For a detailed analysis of the programing of empathy and therapy in Wysa, see Lang and Sathaye, forthcoming.

names and other data of the client. Moreover, the therapists and clients are connected across India and are therefore often not in the same town. Finally, in stark contrast to conventional face-to-face therapeutic encounters, clients are in control of the therapeutic process. They decide what they want to talk about and how, and whether and when to end the therapy. As 'experts' themselves, endowed with authority over the therapeutic encounter and process, they develop a very different relationship to clinical encounters than they would with a mental health provider. With a click, they end a session. 'As soon as the browser closes, the coach is closed out of a client's life,' Richa framed it.

Wysa is designed to not only provide anonymous care and what its designers see as nonjudgmental listening; it is also designed to provide round-the-clock support. Wysa's developers mark this immediacy and availability of app-based mental health care, independent from geographic and temporal constraints of conventional therapy, as another advantage of automated care. Wysa's virtual therapist and human therapists deliver automated and chat-based care instantly at the point of need. Similarly, clients get an audio or video appointment to a YourDOST expert relatively quickly, or they can connect immediately to somebody through chat. Instantly offering spaces to vent for immediate relief, automated and platformed mental health care responds to the need for immediate intimate encounters with a human being or a robot for minor, everyday, or ordinary mental health challenges. These forms of 'distance cure' (Zeavin 2021) enable new forms of 'distance intimacy', 'care from a distance' (Ahlin 2017) or 'virtual co-presence' (Baldassar 2016) mediated by digital technology such as in YourDOST; or 'techno-intimacy' (Allison 2006) with an AI where the digital is not the medium but the provider of care as such.

Conclusion

In this paper, I have attended to new forms of expertise that emerge within and through digital mental health ecologies of care. Using a commercial mental health platform and an app for automated mental health therapeutic care from India as examples, I explored the reconfiguration of expertise in global mental health or global psy through what I called 'psy technologists'. Treating experts as 'human subjects' (Boyer 2008) and expertise as enacted and relational—as something that 'people do rather than what people possess' (Carr 2010, 17)—helps us to understand the emergence and practice of novel mental health expertise in the digital age. The two startups' psy technologists come from a software engineering background and their technologies merge information technology with psy expertise, even as they challenge the practice of conventional mental health care as largely insufficient and inadequate.

Building mental health technologies for Indian and global markets, they enact expertise and claim authority. Conceiving of mental health as a technical problem to solve, psy technologists reconfigure expertise in mental health. While conventional mental health experts are trained professionals in psychiatry, psychology, and therapy, psy technologists engage technological expertise to address and intervene in everyday psychological and emotional suffering at scale. Using the case of a chatbot and an online platform for mental health care, I delineate what it means to put psy technological and psychological expertise into the practice of providing digital mental health care. Engaging psychologists and conducting research are some of the practices through which psy technologists enact expertise in mental health markets. Software specialists, AI programmers, or conversational designers emerge as novel experts in mental health care. And this impacts how mental health care is conceived of and delivered, for example by using chatbots as therapeutic agents and platforms as ways to connect mental health care providers and clients.

Merging technology, psychology, and entrepreneurship, psy technologists exemplify social entrepreneurs that design ‘tech for good’ (Irani 2019) in the global mental health market (Neumark 2023). Although psy technologists render mental health technical by framing it as a problem to be solved through digital interventions and expertise (Li 2007), their work is not mere ‘techno-fixing’ but reaches out to change larger systems. Although commercial platforms like YourDOST and automated therapeutic care like Wysa differ with regard to the types and degrees of engagement of humans in the therapeutic process, they share some significant commonalities. Both respond in innovative ways to (new and old) needs that, their designers feel, mental health infrastructures and systems fail to sufficiently address. By providing anonymous, 24/7 care and support, they also bridge temporal, spatial, and social constraints of conventional mental health care.

Authorship statement

The article was conceived and written in its entirety by the author.

Ethics statement

I state the compliance with ethical standards. Informed consent was obtained from all individuals interviews for this paper. I state that there is no conflict of interest.

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