

Helping Female Entrepreneurs Manage Stress: Lessons from Nigeria

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- This study examines the impact of cognitive behavioural therapy (CBT), using virtual reality and talk therapy, on the business performance of female entrepreneurs in Lagos, Nigeria.
- Findings from a randomised evaluation engaging 500 female entrepreneurs revealed an increase in risk tolerance—a trait closely linked to investment and growth decisions— although this did not yet translate to measurable firm growth.
- Policymakers should treat psychological interventions as a complement to, not a substitute for, existing access-to-finance and business-training programmes and pilot flexible, low-burden delivery formats before scaling.

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Introduction

Small and Medium Scale Enterprises (SMEs) are widely recognised as engines of job creation and inclusive economic growth, particularly in developing economies such as Nigeria. Yet, owner-managers who run these firms operate under intense and sustained stress: role conflict, long working hours, high time pressure, past business failures, and the burden of managing competing economic demands are all common features of entrepreneurial life. This chronic stress can impair psychological functioning and well-being, distorting the economic decision-making that underpins sound business judgement and ultimately constraining firms' ability to grow sustainably.

The cognitive health of employers is important for three reasons. First, the cognitive complexity and responsibility inherent in owner-manager roles are demanding. Second, owner-manager roles are often characterised by social isolation and loneliness, both risk factors for poor cognitive health. Third, many owner-managers absorb the negative emotions and behaviours of their employees, compounding their own psychological burden. Given the importance of an employer's cognitive health—not only for the individual, but also for their employees and the wider organisation —this project set out to test whether a low-cost, scalable stress-management therapy could improve the well-being and business outcomes of female owner-managers (entrepreneurs) in Lagos State, Nigeria.

Methodology

This study used a randomised evaluation design, structured around a baseline survey, an intervention phase, and follow-up surveys. We recruited 500 female business owners operating in Lagos State, Nigeria. Participants were randomly assigned to one of two interventions or a comparison group. The intervention included receiving virtual reality cognitive behavioural therapy (VR-CBT) or talk-based CBT. The comparison group only received a nominal fee for survey participation. This study aimed to determine how these interventions impacted the business performance of female business owners.

All interventions were offered free to the female entrepreneurs in the selected group. The VR CBT and the psychotherapy sessions were facilitated by trained counsellors. The sessions were held in a private and quiet environment within the business premises. Each session was conducted under strict confidentiality and ensuring that female entrepreneurs were at ease. The project's original design called for delivering the intervention across a maximum of eight sessions per female entrepreneur, spread over 16 weeks, allowing for a gradual, sustained engagement with the therapeutic content. However, feedback gathered during preliminary sessions revealed a practical constraint: female

entrepreneurs were reluctant to step away from their businesses for such an extended period, as doing so risked disrupting daily operations and income generation. In response to this field-level insight, the project team adapted the intervention design, condensing delivery to a single session per female entrepreneur completed within just 2 weeks — a shift that better accommodated participants' time constraints while still aiming to preserve the intervention's core content and intent. The duration of each session was between 20 – 50 minutes. Each female entrepreneur in the treated group experienced one session and received an incentive at the end of the session.

Findings

We did not find clear, reliable evidence that either the virtual reality or talk-therapy programme increased sales, profits, or the number of people working in the business. A couple of individual results looked promising at first glance (for example, a short-term rise in profit among the talk-therapy group), but they faded away after a couple of months.

We did not find clear evidence that either program reduced the women's depression, stress, or anxiety levels in the first few months. There was a hint of improvement in depression scores among the talk-therapy group, but this result was not strong or consistent enough to be confident in it. The clearest and most consistent change we found was that women in both programmes became more willing to take sensible risks in their businesses. This matters because being willing to take reasonable risks is closely linked to decisions such as investing in the business, expanding, or trying new opportunities. However, we did not see this greater willingness to take risks translate into higher sales, profits, or more workers within the timeframe of this study.

Our results are comparable to findings in similar contexts. The closest parallel is the paper by Haushofer et al. (2020), which compares psychotherapy to cash transfers in rural Kenya. They found that a standalone psychotherapy programme had no effect on either economic outcomes or psychological wellbeing a year later—even among people who entered with poor mental health. Cash transfers, by contrast, improved both. Combining cash with psychotherapy performed no better than cash alone. Our results echo this closely: two different forms of psychotherapy, delivered to female entrepreneurs, moved neither business performance nor depression, stress, or anxiety. This suggests that our result is not a one-off, but part of a recurring pattern—psychotherapy on its own often struggles to move economic outcomes in low-income settings, even when well-designed.

Our findings diverge from studies with stronger, longer or combined treatments. Two bodies of evidence show that psychological interventions can move economic outcomes, though under different conditions than ours. Baranov et al.

(2020) in a thinking health programme in Pakistan treated clinically depressed new mothers with cognitive behavioural therapy delivered repeatedly by community health workers over roughly a year. Seven years later, treated women show greater financial empowerment within the household as well as increased time-and money-intensive investments in their children. This was a far more intensive dose than our single, condensed session. Bossuroy et al. (2022) multi-faceted programme in Niger show that adding a psychological component to an existing package of cash transfers, savings groups, and entrepreneurship coaching produced real economic gains.

Consequently, two factors likely explain why some psychological interventions move economic outcomes, and ours did not. First, dose and intensity matter. Our redesigned, single-session format—adopted for good reason, given entrepreneurs' time constraints—is far lighter than the sustained, repeated-contact therapy in the Pakistan study. Second, psychological change alone may not be sufficient without complementary resources. The Niger study suggests psychological support pays off economically mainly when paired with capital or credit. Our entrepreneurs became more risk tolerant, but without accompanying access to finance, there may be nothing for that new risk appetite to act on.

In summary, our study shows that a short, low-cost stress management programme can shift how female entrepreneurs think about risk-taking, even when delivered in just a single session. However, it was not sufficient to produce a clear improvement in either their mental health or their business results within the period we measured. This could be because the programme was too light-touch, because business results simply take longer to show up, or because women need extra support — such as access to credit or new customers — to turn a change in mindset into a change in their bottom line.

Discussion and policy recommendations

Our findings carry three main implications for how psychological support is positioned within a broader women's economic empowerment agenda. Taken together, they suggest that stress-management therapy is best understood not as a standalone business catalyst, but as one input among several that, combined thoughtfully, could help female entrepreneurs translate psychological readiness into tangible business outcomes. The recommendations below elucidate what this means in practice for programme design, financial-sector partners, and future research.

First, stress-management support should be integrated as a complementary—not standalone—component of existing women's economic empowerment programmes, supplementing support systems like access to capital, business training, and market-access interventions, rather than replacing them.

Second, the clear shift we observe in entrepreneurs' risk tolerance points to an unexplored opportunity for financial institutions and inclusion-focused organisations: exploring whether this change in mindset can be paired with tailored credit or investment products, so that greater psychological readiness creates a viable route to actual business growth.

Third, programme design must prioritise flexible, low-burden delivery formats from the outset. Our experience redesigning the intervention in direct response to field feedback illustrates this well: it showed how essential it is to build female entrepreneurs' time constraints into programme design from the outset, rather than treating it as a late-stage adjustment.

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