Group-Based Cognitive Behavioral Training Improves Mental Health of SME Entrepreneurs
Experimental Evidence from Conflict-Affected Areas of Pakistan

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Abstract

Mental health, well-being and lasting economic outcomes are intimately connected. However, in geographies marked by fragility, conflict and violence, entrepreneurs of small and medium-size experience chronic stress and poor mental health on a regular basis. Few proven interventions are known. This paper describes the incremental effects of a five-week group cognitive behavioral training program—over and above the effect of receiving cash grants—on reducing depression and anxiety, as well as improving well-being among small and medium-size enterprise entrepreneurs in conflict-affected parts of Pakistan. Entrepreneurs in the treatment group received the intervention as well as cash grants, whereas those in the control group received only cash grants. The study, which was conducted with 235 entrepreneurs, found that cognitive behavioral training leads to significant improvements in mental health outcomes in the short run. Three months after the intervention, analysis of pooled data across two follow-up rounds (at five weeks and three months after) show that entrepreneurs in the treatment group experience statistically significant reduction in the intensity and prevalence of depression and anxiety symptoms (measured by the Patient Health Questionnaire Anxiety and Depression Scale) and higher levels of well-being (measured by the five-item World Health Organization Well-being Index) compared with the control group. The effect was marked for those experiencing mild/moderate levels of depression and anxiety, indicating the clinical value of such low-touch early interventions.
Group-Based Cognitive Behavioral Training Improves Mental Health of SME Entrepreneurs: Experimental Evidence from Conflict-Affected Areas of Pakistan

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1. Introduction

The increase in conflict and natural disasters around the world has affected nearly 132 million globally, with conflict continuing to be the main driver of growing humanitarian needs (UNOCHA, 2019). The pattern of fragility, conflict and violence (FCV) engulfing many parts of the world today is associated with long-term psychological consequences (Murthy and Lakshminarayana 2006). Parts of the Khyber Pakhtunkhwa (KPK) province and the Federally Administered Tribal Areas (FATA) of Pakistan have suffered from such armed conflict for the last 3 decades. The 2009-10 insurgency and subsequent security operations displaced an estimated 2 million people from both regions. Severe damage to infrastructure and livelihoods has negatively impacted the social and economic fabric of the entire region, which now ranks among the poorest in the country.

Epidemiological studies from these areas in Pakistan have shown high rates of common mental disorders (such as depression and anxiety) among the general population. A meta-analysis of a subset of relatively rigorous post-conflict surveys showed the prevalence of depressive symptoms to be around 17.3 percent\(^2\) (Steel and others 2009). Global estimates of productivity losses due to depression are estimated to be around US$1 trillion dollars per year globally (World Health Organization (WHO) 2017). In this context, the question of the impact of common mental disorders, such as depression and anxiety, on economic productivity in FCV regions is a critical one (British Psychological Society 2011).\(^3\) Since economic activity in FCV regions is heavily dominated by small and medium enterprises (SMEs) whose owners are prone to high levels of stress (Ang, 1991), it is pivotal to understand better the extent of prevalence of mental health challenges among SME entrepreneurs as well as its impact on their health and economic outcomes.

Mental health, well-being and lasting economic outcomes are intimately related. The WHO defines mental health as “a state of well-being in which every individual realizes his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to her or his community” (WHO 2014). There are several arguments to be considered for why researchers interested in improving economic outcomes in a broader sense need to focus on the mental health and well-being of SME entrepreneurs, rather than focusing on productivity alone. First, well-being is a multi-dimensional construct that is a robust predictor of health, productivity, and retention outcomes at the firm-level (Sears and others 2013). Second, depression in parents is associated with children’s poorer physical health, lower human capital attainment, and the onset of psycho-pathology later in life, leading to multi-generational suboptimal health and economic outcomes (National Research Council (US) and Institute of Medicine (US) Committee on Depression, Parenting Practices, and the Healthy Development of Children 2009). Finally, from a social justice point of view, freedom to achieve well-being is of primary moral importance, and is to be understood in terms of people's

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\(^2\) The unadjusted weighted prevalence rate of depression across all studies was found to be 30.6 percent. A more conservative estimate, based on 26 surveys that combined diagnostic interviews with representative samples, found the prevalence across the studies to be 17.3 percent.

\(^3\) Common mental disorders are defined as depression, generalized anxiety disorder (GAD), panic disorder, social anxiety disorder, phobias, obsessive-compulsive disorder (OCD) and post-traumatic stress disorder (PTSD).
capabilities, that is, opportunities to do and be what they have reason to value (Sen 2000). Lack of mental health affects this freedom as well as the ability to lead a productive and healthy life.

Despite this, there is very little research about interventions that could address the poor mental health among small business owners in rebuilding the economy of conflict-affected regions. Most interventions for SME entrepreneurs restrict themselves to improving sales or profits at the firm level (which are important for growth and job creation), but tend not to look more deeply at questions of quality of life, human capital, and related inter-generational effects of SME entrepreneurs. Towards filling some of the gaps in this area of work, the aims of this study are threefold: 1) to develop a research toolkit to enable rapid and safe collection of data from conflict-affected settings to inform intervention development; 2) to develop a feasible and culturally appropriate psychosocial training intervention to improve mental health and well-being outcomes of SME entrepreneurs; and 3) to evaluate the feasibility and impact of implementing the intervention in this population.

As peace has returned to the region, the 2012 World Bank-supported Economic Revitalization of KPK and FATA Project (ERKF) is working toward the rehabilitation of SMEs and the creation/restoration of jobs. This support is in the form of financial cash transfers, or grants, provided to individuals who then use the funds to establish and run a business in their locality. The envisioned mental health and well-being intervention, which aims to improve psychosocial and business outcomes of SME entrepreneurs, was built on the ERKF program in KPK.

The key questions explored in this study are:

- What is the incidence of mental health conditions among SME entrepreneurs in low-capacity or FCV contexts? Is it a problem - why focus on it?
- Are there existing psychosocial interventions that can be leveraged to improve mental health among SME entrepreneurs in FCV contexts? How can these interventions be adapted to the local/ KPK context?
- To what extent is the chosen psychosocial intervention effective in improving mental health and well-being of SME entrepreneurs in the KPK region, when combined with business grants?
- To what extent does the chosen psychosocial intervention improve business outcomes?

The first two questions are addressed through the literature review and a qualitative analysis conducted at the baseline. The midline evaluation of the intervention is used to answer the third question. As it is associated with business performance outcomes, the fourth question requires a longer period to be properly addressed. *This paper, therefore, focuses on the first three questions, with the fourth being the subject of a longer-term endline assessment to be completed 18 months post intervention.*

This paper documents the incremental effects of a five-week group cognitive behavioral training (CBT) intervention - over and above the effect of receiving cash grants - on reducing depression and anxiety, as well as improving well-being among SME entrepreneurs in conflict-affected parts of Pakistan. Entrepreneurs in the treatment group received the intervention as well as cash grants, whereas those in the control group received only cash grants. The study, conducted with
235 SME entrepreneurs, found that CBT leads to improvements in mental health outcomes in the short run. Three months after the intervention, entrepreneurs in the treatment group experience statistically significant reduction in depression and anxiety symptoms (measured by the Patient Health Questionnaire Anxiety and Depression Scale) and higher levels of well-being (measured by the WHO-5 Well-being Index) compared to the control group. The decline in prevalence of depression and anxiety (odds ratio of 0.46 relative to control group after 3 months) was also large, though statistically significant only when the data are pooled. An endline survey is planned at 18 months to assess the longer-term impact of the intervention on mental health and well-being as well as its impact on business performance.

2. Why Focus on the Mental Health and Well-Being of SME Entrepreneurs?

2.1 Global Literature Review

It is widely recognized that SMEs are a lifeline for job creation and economic growth in developing countries, including those affected by fragility, conflict and violence (FCV). However, SME entrepreneurs deal with unusually high levels of uncertainty and experience cognitive resource depletion, which have high psychological and physical health costs (Fernet and others 2016; Monsell 2003). Studies show that individuals with a leadership predisposition and independent work arrangements, including entrepreneurs, tend to be more vulnerable to stress, alienation, loneliness, emotional turmoil, and burnout (Rokach 2014; Akisal and others 2005). Given the co-morbidity of stress prevalence with physical and mental health conditions, the risk of rising health care costs due to job stress for entrepreneurs can be significant (Buttner 1992; Jamal 1997; Jamal and Badawi 1995; Lewin-Epstein and Yuchtman-Yaar 1991).

Compared to large enterprises, SME entrepreneurs are at a greater risk for depression, anxiety and other mental health conditions (Akande 1994; Ang 1991; Boyd and Gumpert 1983; Cocker, Martin, Scott, Venn, and Sanderson 2013). SME entrepreneurs lacking diversified capital, stable sources of income, or delegation opportunities tend to suffer from more stress and anxiety compared with their peers in salaried jobs or those working in larger firms. The high cognitive burden experienced by SME entrepreneurs can lead to weakened psychological health that can hinder their capacity to decide and act, thereby increasing counter-productive work behaviors. This can result in lower sales turnover over the long run (Akende 1994; Dewe and Guest 1990; Harris and others 1999).

In FCV contexts, the combination of regular business-related entrepreneurial stressors with the uncertainties in the external environment can amplify poorer psychological outcomes and hamper business performance (Saraf and others 2018). The high levels of unpredictability, perceived risk, and cognitive depletion among entrepreneurs in such contexts can, in turn, lead to poor psycho-emotional and psycho-pathological outcomes (Ahmad and Salim 2009; Grant and Ferris 2017; Rockmore 2016; Tahir 2016).

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4 See Saraf and others (2018) for a detailed literature review of this topic.
The literature points to three mechanisms by which stress can affect the business performance of SME entrepreneurs, namely: (i) the depletion of psychological resources, which lowers performance by reducing their capacity to cope with work-related stress, as well as their ability to perform complex tasks (Fernet and others 2016; Harms and others 2017; McGuire and Botvinick 2010; Meglino 1977; Spears 2011; Vohs and others 2008); (ii) erosion of their influencing and motivating role within the organization due to anxiety and depression, which leads to a negative mood contagion effect on employees, including communication barriers, an increase in conflict and absenteeism, and lower team performance (Brummelhuis and others 2014; Harms and others 2017; Johnson 2008; Sy, Côté, and Saavedra 2005); and (iii) counterproductive work behavior as a result of reduced self-regulation capacity and weakened cognitive controls (Boye and Jones 1997; Tucker and others 2009). All these result in lower productivity, which is defined as lost value for the enterprise, typically defined as being away from work (for example, short-term absenteeism), or not being fully productive in meeting expectations while at work (defined as presenteeism) (Sears and others 2013).

Even though there are several programs targeting SME growth and entrepreneurship policy in FCV contexts, most of these do not focus on improving the psychological well-being of entrepreneurs, which could be a path to improved productivity through the expansion of their capability to function (Sen 2000). To the best of our knowledge, almost no empirical work exists in the domain of understanding what would enable a sense of greater well-being among SME entrepreneurs, and whether enhanced well-being is linked to better business outcomes. These are some of the gaps the study aims to fill.

Despite the strong empirical evidence regarding the poor mental health status of SME entrepreneurs, market failures and constraints in FCV-affected countries prevent appropriate support services from reaching them. These constraints are well-acknowledged in the economic, public health, and anthropology literature: information asymmetries in the health system that collect information only from in-coming patients, a crippling shortage of trained health providers, cultural norms that regard adult breadwinners (esp. men) as invincible, to name a few.

The training intervention was not aimed at resolving the market failures mentioned above but it helped to test two mechanisms that contribute to alleviating them. On the supply side, the pilot tested whether rapidly trained non-specialist providers (NSPs) could help in executing psychosocial well-being interventions effectively. On the demand side, it gathered evidence on the type of framing and messaging which would help navigate the cultural norms and increase demand for such services. These results would inform policy decisions on how to scale approaches that were piloted in addition to undertaking a systematic reform of the health system. These reforms are, however, outside of the scope of discussion of this paper.

2.2 Rapid Needs Assessment of Stressors in Pakistan’s KPK Province

To seek a deeper understanding of the contextual factors and training needs of SME entrepreneurs working in Pakistan’s KPK areas, a needs assessment was conducted using a semi-structured interview guide that explored the nature of the problems entrepreneurs face,
perceived causes and their effects, as well as current practices in dealing with the impact of these challenges. This was piloted among a small sample of 17 SME entrepreneurs who were ERKF grantees (see Annex 1 for details on the rapid needs assessment sample).

The Assessment confirmed that the chronic adversities prevailing in KPK manifest themselves in the form of ‘distress’ for SME entrepreneurs (for example, inability to concentrate on work, poor sleep and appetite, low self-esteem, anxiety about future of their businesses, etc.). Participants linked these feelings of distress to low mood and low energy, impaired quality of life, poor self-esteem, and increased conflicts within the household. Distress also caused feelings of negativity, hopelessness, and agitation — leading to suicidal thoughts in some cases. In the long-term, these were linked with the inability to problem solve and innovate, low quality of work, and low return on investments. All of these, collectively, were impacting their sense of well-being and their productivity.

The Assessment also identified the potential utility of a psychological intervention program to improve the resilience, productivity, and personal efficacy of SME entrepreneurs. It highlighted the need to deliver training in the local language (Urdu), form groups based on ‘affinity’ (that is, key characteristics such as gender, education, and business type), and hold sessions in a central location that is accessible, acceptable, and safe for both male and female entrepreneurs. These provided useful guidance in the design of the intervention.

**BOX 1: Rapid needs assessment results: Major causes of perceived stress among SME entrepreneurs in the KPK region of Pakistan**

Findings show unacknowledged mental well-being issues experienced by SME entrepreneurs and their common causes. The following issues emerged as major causes of perceived stress:

i. **Safety and security concerns**: Due to frequent violence, people report being in constant fear for their safety and the safety of their loved ones. Their activities are strictly monitored through ongoing surveillance by law enforcement agencies. This restricts business activities by limiting the movement of international business delegates in the region, as well as by impeding the promotional, sales, and capacity-building activities of businesses.

ii. **Financial difficulties**: Since most businesses were either destroyed or experienced significant drops in sales due to the security crisis, financial difficulties were reportedly widespread. Most entrepreneurs say that they lack the financial resources to reestablish and sustain their businesses. As such, they have resorted to loans, which become difficult to repay due to unfavorable economic conditions for businesses, including inflation (which lowers sales).

iii. **Lack of appropriate skills**: Entrepreneurs perceive that they lack the appropriate technical and soft skills to run their businesses, and view such deficiencies as barriers to achieving higher productivity and product quality. The low quality leads to low returns on investments, and decreased profitability and earnings for everyone — lowering enthusiasm in consequence.

iv. **Disturbance in family life**: Entrepreneurs report that the uncertainties lead to distress and frequent disagreements in their personal, professional, and family lives. The unstable socio-political environment,

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5 More details are in Chapter 3 of the main report.
financial constraints, and long working hours are perceived to disturb their work-life balance. This in turn impairs their family and social lives, and for some, the lack of family support can make this situation worse.

v. Gender-specific issues for female entrepreneurs: Pervasive social and cultural barriers, lack of technical skills, limited availability of capacity building opportunities, household responsibilities, and lack of financial and emotional support from families were reported as additional barriers for female entrepreneurs.

Source: Field notes, 2018.

3. Psychosocial Training Interventions

3.1 Literature on Relevant Interventions

Behavioral economics and cognitive psychology provide a set of tested tools to address stress and cognitive resource depletion, including restoration of emotional well-being in the workplace. One key approach found across psychological interventions is Cognitive Behavioral Therapy (CBT). It has been commonly used in psychological settings, and more recently, in economic interventions with youth and adults in FCVs. Greater exploration of this approach in the context of mental health improvements for SME entrepreneurs in FCV situations is documented in the following paragraphs.

The simple idea behind CBT (figure 1) is that an individual’s unique patterns of thinking (cognition) and feeling are significant factors in how they experience their surroundings and the type of actions they take (behavior), both desirable and undesirable. As these patterns have such a significant impact on performance, it follows that addressing these patterns — where they have become maladaptive due to mitigating circumstances — can change the experience of the world and hence, actions and performance (Martin 2016). CBT workshops can help to generate a more positive outlook, developing resilience and improving decision-making abilities and will-power. CBT tends to be short (3-4 months) and inexpensive (US$300-$750 per participant). It can include somatic interventions, such as deep breathing exercises. In some cases, CBT has been delivered by Non-Specialist Providers (NSPs) with positive results.
Traditionally, CBT has been used in the context of mental health and has been shown to successfully reduce depression across various clinical demographic groups (Craigie and Nathan 2009; Fava and others 2004; Kessler and others 2009; Mataix and others 2015; Mohr and others 2005; Spector and others 2014; Rahman and others 2019). Evidence of successful CBT applications and similar psychosocial interventions is now growing to include non-mental health areas as well. One of the most effective applications of CBT is the “Becoming a Man” (BAM) program, which succeeded in significantly reducing violent crime arrests and improving both school engagement and graduation rates among at-risk adolescents in Chicago. The changes can be attributed to slowing down the thought process of individuals to allow for “slow”, deliberative reflection to override “fast”, automatic decision-making (Heller and others 2013, 2015).

A similar study in Liberia used a CBT module designed to foster self-regulation, patience, and a non-criminal identity and lifestyle for at-risk youth. It succeeded in dramatically decreasing crime and violence (especially when followed by a cash grant) (Blattman and others 2017). A study in the Netherlands, conducted with self-employed individuals, used two types of CBT. One was delivered by psychotherapists and the other was provided by labor experts. The goal was to successfully reduce the number of sick days taken due to psychological complaints (for example, anxiety, depression, burnout), and improve psychological outcomes (Blonk and others 2006).

More recently, a number of trials have been conducted using the CBT-informed Problem Management Plus (PM+) module. This intervention tends to be brief, group-based, and can be delivered by non-specialist providers (NSPs). One such study in rural SWAT, Pakistan, used a group-based CBT module to achieve clinically significant reductions in depression and anxiety among women with common mental disorders (Rahman and others 2019).

Some non-CBT approaches have proven effective to improve business outcomes. In an action-regulation training experiment, focusing on self-regulation and active behavior in entrepreneurship improved personal initiative behavior and led to increases in sales (27 percent) and the number of employees (35 percent) (Frese and others 2016). Using a similar approach, a

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6 Source: Cognitive Behavioral Therapy LA (http://cogbtherapy.com/about-cbt/).
recent study in Togo used a psychology-based, personal initiative training, which taught proactive mindset and focused on entrepreneurial behaviors. It led to an increase in firm profits by 30 percent (compared to an 11 percent increase with traditional business training) (Campos and others 2017). In both studies, however, there was no baseline verification to assess whether the participants were experiencing mental health challenges, and whether the training improved mental health and well-being outcomes.

A summary of the core themes, structure, and delivery of each curriculum is provided in Annex 2. However, the literature is relatively scant when it comes to rigorous impact evaluations of CBT-based approaches for entrepreneurs, which represents an area of opportunity for this study.

3.2 Development of PM+E (Problem Management Plus for Entrepreneurs) Curriculum for KPK Entrepreneurs

Among the several available CBT curricula, the Problem Management Plus (PM+) curricula was chosen and adapted for this intervention for three reasons. First, its focus on managing stress, problem management, behavioral activation, and strengthening social support was found to be relevant to the issues faced by entrepreneurs as revealed by the rapid needs assessment. Second, the literature showed that it has already been tested in KPK for contextual validity, albeit for different clinical beneficiary groups. This ensured that the language of the standard curriculum was appropriately tested for this local context, and that it could be further built on. Finally, compared to some other curricula, it could be delivered by trained, non-specialist providers (NSPs). This would be a critical factor for implementation in conflict-affected areas that report a crippling shortage of technical staff. All these factors would allow for the intervention to be implemented in time, at a low-cost, and at the appropriate scale.

Once the core PM+ curriculum was identified, the framing of the curriculum was adapted to make it feasible to implement among high-achieving SME entrepreneurs who are suffering from an unrecognized burden of mental health problems and not clinically diagnosed yet. The revised curriculum was called PM+E (Problem Management Plus for Entrepreneurs). The curriculum was contextualized in leadership and adaptive skills and focused on self-improvement for well-being and business outcomes rather than use the traditional language found in the PM+ curriculum. Such framing helped to improve the acceptability of the training program among SME entrepreneurs and circumvent the cultural reservations around “mental health”. For example, distress-generating scenarios and anonymized real-life case studies - pertinent to the business community - were included in the curriculum with lessons on stress management, problem solving, behavioral activation, strengthening social networks and self-care. In doing so, rather than targeting specific treatments for clinical individuals, the intervention focused on adaptive

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7 Permission obtained from WHO for use of the Urdu curriculum and its adaptation. (Source: https://www.who.int/mental_health/emergencies/problem_management_plus/en/)
8 Henceforth, PM+ and PM+E will be used interchangeably throughout the report.
skills for at-risk non-clinical populations which increased its acceptability among SME entrepreneurs.

The PM+E intervention was designed to provide the entrepreneurs with a skillset that could be applied to stressful situations in their everyday life and work to help them to negotiate such challenges in an adaptive fashion. The core content of the 5-week training intervention is summarized below.

1. **Stress management:** The stress management strategy improves the management of stress related to business and personal problems and helps participants to remain calm during moments of stress. This includes somatic and deep breathing exercises.

2. **Problem solving:** This is a strategy to apply in situations where a participant is experiencing practical problems (for example, loss in business, conflict in the family, and so on). It gives participants real-time tools to deal with daily problems, such as breaking down a complex problem into what is within their control and what is outside, and strategies to respond to both categories.

3. **Behavioral activation:** This strategy is aimed at improving participants’ levels of activity (relevant particularly where regular activity has been affected due to stressful conditions). In addition, it introduces participants to an “experimental mind-set” to encourage them to break out of the vicious cycle of the problems/adversity by trying out different ways of managing the challenges of everyday life.

4. **Strengthening support network:** Individuals with distress can isolate themselves from supportive people and organizations. The module focuses on strategies for strengthening a participant’s social support network (for example, with trusted friends, family members, co-workers, or community organizations) that can promote well-being.

5. **Self-care:** This strategy is centered around the triangle of peace and calm that participants can use to take better care of themselves and improve their physical and mental health.

The training is brief, consisting of five days of face-to-face training spread over five weeks, followed by Whatsapp reminder messages. A ‘cascade’ model of training and supervision was used that involves the training of local coaches in the curriculum by master trainers. The cascade model of training and supervision was tailored to address the lack of specialists, as well as mobility restrictions and security concerns of delivery agents and participants in such settings. More details about the training the trainer model can be found in a forthcoming full report.

**4. Theory of Change and Key Outcomes**

It is hypothesized that the PM+E intervention would improve mental health outcomes through reduced intensity and prevalence of depression and anxiety symptoms. Because mental health and well-being are intimately linked, concurrent improvements in well-being are expected as the mental health of entrepreneurs improves. Over time, this would lead to better business performance, such as increased sales, reduced employee turnover, and lower absenteeism rates within the firm. These tangible improvements at the firm level are likely to be mediated by a number of potential impact pathways (or pro-adaptive behaviors), which enable entrepreneurs to be more productive in the workplace. While the current literature does not provide concrete
evidence on the types of pro-adaptive behaviors that facilitate improvements in business performance of SME entrepreneurs in FCV environments, we hypothesize these to include behaviors such as better social networking, lower counterproductive work behavior, better work-life balance that prevents burnout, and proactive decision-making (see Figure 2).

In this sense, the theory of change posits that improved individual mental health (as measured by a reduction in the prevalence and intensity of depression and anxiety symptoms) and, relatedly, improvements in well-being, will result in improved business performance via pro-adaptive behaviors.

**Figure 2: Theory of Change**

Since changes in firm performance take longer to manifest, the primary focus of this midline report is improvements in the intensity and prevalence of depression and anxiety symptoms. This was measured using the Patient Health Questionnaire- Anxiety and Depression Scale (PHQ-ADS), where a score of 10 or above indicates prevalence of anxiety and depression (ranging from mild to severe). A secondary, but closely related outcome variable, is well-being, measured by the WHO (Five) Well-being Index (WHO-5). In addition to these key variables, we also measure additional variables at both baseline and the subsequent rounds to understand some current behaviors of entrepreneurs and, eventually, to shed light on the pathways through which improved mental health and well-being could lead to better business performance. At this juncture, business performance indicators are not reported. These variables will be collected during the endline survey. See Annex 3 for details on short-term and long-term business-relevant outcome measures that will be reported at endline.