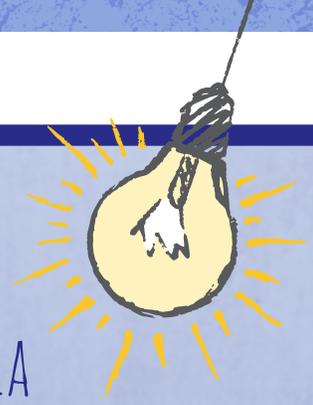


# SAFETY TECHNOLOGY TO IMPROVE TRAINING OPPORTUNITIES AND LABOR FORCE PARTICIPATION FOR WOMEN: EXPERIMENTAL EVIDENCE FROM INDIA



*Can app-based safety response systems help get more women into the labor force?*

## Skills Strengthening for Industrial Value Enhancement Operation (STRIVE)

### PROJECT STATUS:

Under Implementation

### OBJECTIVE:

Improve the access to quality and market-driven vocational training provided in Industrial Training Institutes (ITIs) and apprenticeship programs in India

### TARGET AREA:

Pan-India

### TIMELINE:

2017–2022

### IMPLEMENTING AGENCIES:

Ministry of Skill Development and Entrepreneurship

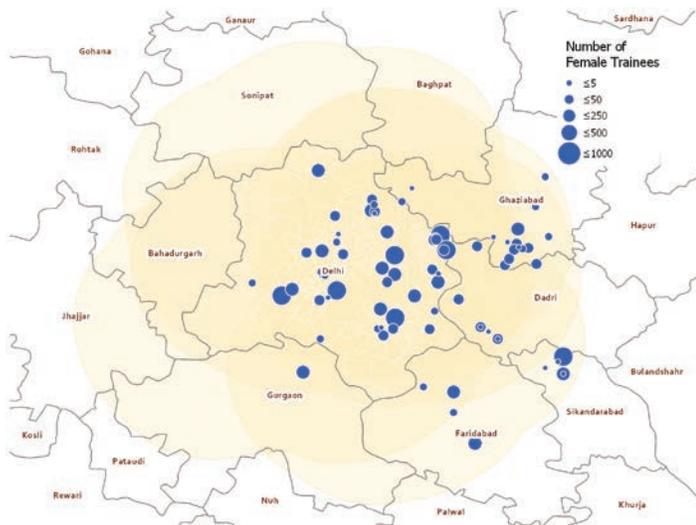
## Context

Violence against women (VAW) in public spaces affects women's physical mobility and consequently, their access to economic opportunities. Such limitations stem from the threat of physical violence and safety concerns for women in India. For instance, according to a 2016 survey by ActionAid UK, nearly four out of five women in India reported facing harassment in public spaces.

To provide and enhance skill training opportunities in India, the Ministry of Skills Development and Entrepreneurship (MSDE) has operationalized the national Skills Strengthening for Industrial Value Enhancement (STRIVE) program, which aims at improving access to quality and market-driven vocational training provided in Industrial Training Institutes (ITIs). This study will support STRIVE's operations to test a technology solution and determine the extent to which safety concerns limit women's access to professional opportunities. The technology solution will be in the form of a mobile application with an SOS provision, which when used will alert a specialized response team trained to provide assistance to victims of harassment at the location of the incident in under 15 minutes.

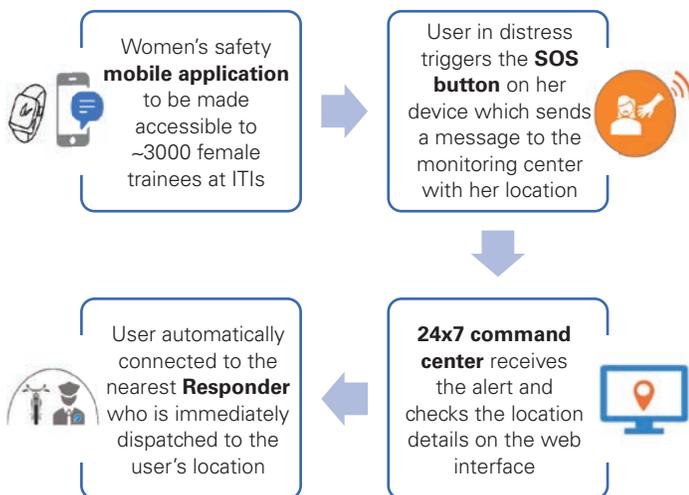
## Impact Evaluation Research

This impact evaluation (IE) aims to determine whether, and to what extent, providing access to a safety technology could affect the consistent participation in training and, later on, labor market decisions, made by both, women in ITIs and their parents. To answer these questions, a randomized-controlled trial (RCT) has been designed. Around 6000 female trainees attending 83 ITIs in Delhi and surrounding areas, as shown in Figure 1, will be randomly allocated into treatment and control groups. Treatment trainees will be granted access to the mobile application with the specialized response team, while control trainees will not. The details of the



**Figure 1. ITIs Within 20km of Delhi With >1 Female Trainee**

functioning of the application are explained in Figure 2. Data will be collected through multiple sources, including administrative data from the ITIs, real-time data from mobile application along with surveying trainees. A subset of parents will also be surveyed to determine their degree of influence on their daughters’ decision-making process and to assess their perceptions and decisions following the introduction of the technology. Such data will include information on women’s labor supply aspirations, route choices, and network of commuting. It will be used to quantify if, and by how much, safety may contribute to the observed rates of drop-out from ITIs as well as subsequent labor-market participation.



**Figure 2. Intervention: Safety Application with a Specialized Response Team**

## Policy relevance

Improving female labor force participation rates (LFPR) is a key policy interest in India. As per the ILO, female LBPR in India has been historically low, particularly in the North, where social norms have placed a constraint on how and where women can work and this rate has been declining. Data from the Labour Bureau indicates that women’s LFPR stood at just 31.1% in 2013–14, before falling to 27.4% in 2015–16. The Women and Men in India Report (Ministry of Statistics and Programme Implementation, 2018) noted that women’s work force participation in India is lower in urban areas (14.7%) than in rural areas (24.8 %). Further, the report found the total crime rate against women per 100,000 to be reported the highest in Delhi at 160.4 in 2016.

Regionally, except in Nepal and, to a lesser extent Bhutan, the female employment rate in South Asia is among the lowest in the developing world reflecting the notably low female LFPR. Participation rates are particularly low in the three largest countries: Pakistan, where almost four out of every five women do not participate in the labor force, and Bangladesh and India, where slightly more than two out of every three do not do so (More and Better Jobs in South Asia, World Bank, 2011). This makes addressing skills acquisition and subsequently improving LFPR a major policy goal. While multiple interventions have been considered to address such problems (e.g., creating bank accounts for women, self-defense classes), the empirical evidence to quantify if, and by how much safety concerns impinge on women’s skills acquisition has not been the subject of rigorous impact evaluations thus far.

This study will be one of the firsts to assess the effects of an intervention targeting VAW in public spaces in terms of the intervention’s contribution to improving women’s mobility in public spaces, skills acquisition, and LFPR. This will also be one of the first studies to assess the perceptions of parents about safety of their daughters in public spaces and how this affects the choices made by women. This is of enormous value to policymakers since it will help determine who needs to be targeted to influence the ultimate decisions made regarding women’s participation in skills acquisition and the labor market. Further, since women across the globe combat safety concerns, our findings will provide reliable indications on the efficacy of a high intensity and scalable technology-driven intervention. Finally, the research findings will address one of the UN’s key Sustainable Development Goals — to improve Gender Equality and Women’s Empowerment.