



**Tufts**  
UNIVERSITY

Labor  
Lab



## SEM Brief 3: Training Needs

Ana Antolin  
Laura Babbitt  
Drusilla Brown  
Le Dang Trung

**10 June 2020**

**Main conclusion:** In addition to asking workers about the training they have already received, we ask workers about training they feel like they need. In the reduced form, workers in Better Work factories feel like they need less additional training than workers in non-Better Work factories. There are several drivers of demand for training. The channel activated by Better Work is verbal abuse. When workers feel verbally abused, but not to the extent that they feel dehumanized, they are more likely to think that they need additional training. Verbal abuse may occur when workers lack skills or do not understand how their pay is calculated. Tolerance for verbal abuse is lower in Better Work factories, which in turn, lowers the demand for additional training.

In Brief 11, we explore whether workers seek their demand for training as a consequence of planning for the future.

### 1. Training Needs

Workers were asked, “What kind of training do you think it is necessary for your future?” Options are None, Basic skills, Upgrading skills, Workers' rights, Labor Law, CBA, OSH, Safe machine operation, Pay procedures, Benefits, Fines, Work Hours, Overtime Regulations and Grievance Procedures. Training indicators were strongly correlated. Therefore, we constructed a simple average.

Workers in Better Work factories believe they need less training for their future ( $b=-0.0377$ ), as reported in Table 3.2. The question is why? What is it about Better Work factories that reduces the belief that they need more training?

### 2. Personality Traits

Training needs may simply be driven by personality traits. We report in Brief 1, that there is a Better Work selection effect on personality traits. Perhaps these Better Work mediated personality traits are reducing demand for training.

Results are reported in Table 3.2. First note that the more well trained a worker is the more they demand additional training ( $b=0.0240$ ). Second, note that the only personality trait that predicts demand for training is one of the measures of growth mindset (Intelligence R,  $b=0.00814$ ). The Better Work treatment variable is still statistically significant and, in fact, even larger in absolute value.

### 3. Simultaneous Equation Modeling

So, perhaps conditions of work driving a demand for training. Results are presented in the Figure 3.1.

In the SEM, Better Work is reducing the workweek ( $b=-1.392$ ), increasing formal representation ( $b=0.0836$ ), increasing comfort seeking help ( $b=0.0939$ ), reducing work stress ( $b=-0.162$ ) and

reducing verbal abuse norms ( $b=-0.162$ ). Training needs are reduced when pay increases ( $b=-0.000166$ ), reduced when workers feel dehumanized at work ( $b=-0.0436$ ), increased when workers feel comfortable seeking help ( $b=0.0183$ ) and increased by in verbal abuse norm ( $b=0.0425$ ). The Better Work treatment variable is no longer statistically significant in the training need equation, indicating that we have captured the mediation process of Better Work.

First, note that the higher monthly pay is the less demand there is for training. This relationship may be occurring because the higher the income of a worker the less likely they are to be looking for a different job (refer to Brief 10). It also appears that a somewhat positive relationship between workers and their supervisors is necessary to make workers receptive to training. Workers who feel dehumanized are not receptive to training. They may perceive training as simply another opportunity for supervisors to abuse them. In contrast, workers who feel comfortable seeking help from supervisors, the union, HR, etc., are more receptive to training.

The one negative workplace characteristic that promotes a demand for training is a norm for verbal abuse. Verbal abuse often occurs when workers do not understand how their pay is calculated or they lack skills. These results suggest that when verbal abuse is common, but not so common that workers feel dehumanized, the verbal abuse drives a need for training.

These results tell an important story about the process through which Better Work affects training. Better Work reduces verbal abuse. The reduction in verbal abuse, in turn, reduces the demand for training.

## Data Construction

### **Training Needs** ( $a=0.9191$ ) Binary

*What kind of training do you think it is necessary for your future?*

Response options are

- \* 1=None
- \* 2=Basic skills
- \* 3=Upgrading skills
- \* 4=Workers' rights
- \* 5=Labor Law
- \* 6=CBA
- \* 7=OSH
- \* 8=Safe machine operation
- \* 9=Pay procedures
- \* 10=Benefits
- \* 11=Fines
- \* 12=Work Hours
- \* 13=Overtime Regulations
- \* 14=Grievances

### **Personality Characteristics** 5-point agree scale

*IntelligenceR* You can learn new things, but you can't really change your basic intelligence.

*ResilienceR* ( $a=0.7198$ )

*Stressful\_Events* I have a hard time making it through stressful events.

*Setbacks* I tend to take a long time to get over set-backs in my life.

*Change\_Behavior* I can change my life by changing my behavior.

*Manage\_Challenges* I am able to successfully manage the challenges in my life.

*Develop\_Ability* You can always greatly develop your ability

*Bounce\_Back* I tend to bounce back quickly after hard times.

*ControlR* In the last month, how often have you felt that you were unable to control the important things in your life?

### **Dehumanization** ( $a= 0.7523$ ) 5-point common scale

*Unimportant* How often do you feel small or unimportant after talking to your supervisor?

*Angry* How often do you feel angry or frustrated after talking to your supervisor?

*Unappreciated* How often do you feel unimportant or unappreciated in the factory?

*Embarrassed* How often do you feel embarrassed or humiliated at work?

**Representation** (a= 0.6703) Binary

*Union* Are you a member of union?

*Factory\_Union* Which of the following do you have in your factory? Union

*Factory\_Bargaining* Which of the following do you have in your factory? A collective bargaining agreement

*Factory\_Committee* Which of the following do you have in your factory? Worker-manager committee

**Help** (a= 0.8239) 5-point comfort scale

*Supervisor\_Help* If you have a complaint or concern about work, how comfortable would you feel seeking help from Your supervisor

*Coworker\_Help* If you have a complaint or concern about work, how comfortable would you feel seeking help from A co-worker

*HR\_Help* If you have a complaint or concern about work, how comfortable would you feel seeking help from HR

*Trade\_Union\_Help* If you have a complaint or concern about work, how comfortable would you feel seeking help from The trade union

*Committee\_Help* If you have a complaint or concern about work, how comfortable would you feel seeking help from A worker-manager committee

*ComplaintBox\_Help* If you have a complaint or concern about work, how comfortable would you feel seeking help from Suggestion/Complaint box

**Work Stress** (a= 0.6676) 5-point common scale

*Dizzy* In the last three months, how often have you felt dizzy or fainted at work?

*Ache* In the last three months, how often are you bothered by headache; backache or suffered from muscle stiffness?

*Injured* In the last three months, how often have you been injured because of your work?

*Worry* I often worry about finishing everything I have to do.

*Fatigue* I feel fatigued when I get up in the morning and have to face another day on the job.

*Frustrated* I feel frustrated by my job.

**Work Abuse** (a= 0.7634) 5-point agree scale

*Supervisor\_Yell* A supervisor yells at a worker to work faster or for making a mistake.

*Thirsty* You are thirsty at work

*Hungry* You are hungry at work

*Obstacle\_Promotion* You faced an unfair obstacle getting promoted

*Unfair* You were unfairly assigned to a particular job

*Hot\_Cold* Your factory is uncomfortably hot or cold

**Verbal Abuse Norm** 5-point agree scale

*Acceptable\_Yell* In this factory, it's seen as acceptable for supervisors or managers to yell at workers who make mistakes or need to work faster.

**Promotion Nondiscrimination** 5-point agree scale

*Promotion\_Performance* Promotions in my work unit are based on performance.

**Health Support** Binary

*Maternity\_Leave* Does your factory provide paid maternity leave?

*Maternity\_Accommodation* Are pregnant women offered accommodation such as a sitting, being away from strong chemical smells, shorter work hours.

*Vaccination\_Help* My Factory helps me to get vaccinations for my children.

**Demographic Controls**

*Age*

*Factory\_Experience*

*i.Position*

*i.Education*

*Female*

*i.Married*

*Work\_Experience*

*changed\_jobs*

**Factory Characteristics**

*Factories\_Nearby* Are there other factories nearby where you could get another job?

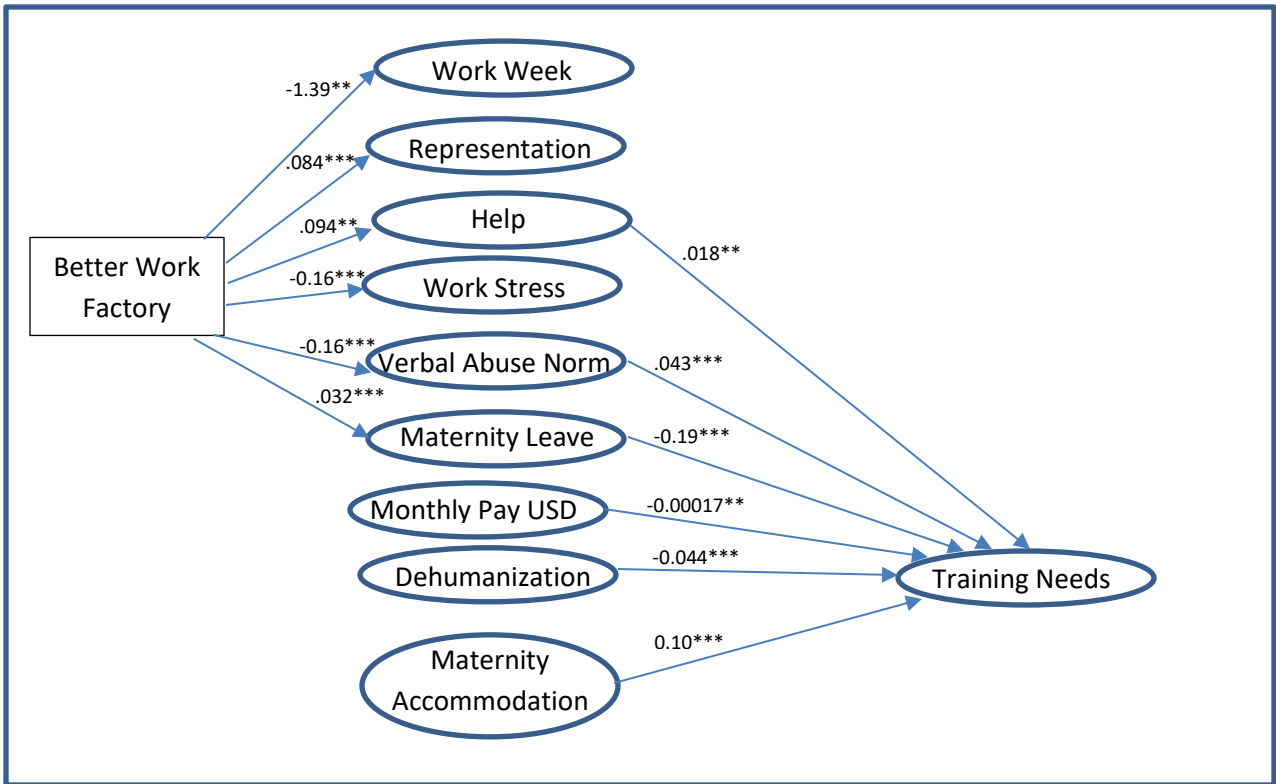
*Vietnam*

*bw\_factory*

**Time Control**

*endline*

Figure 3.1 Training Needs SEM



*Table 3.1 Reduced Form Treatment Effect on Training Need*

VARIABLES	(15) Training_Need
bw_factory	-0.0377*** (0.00991)
Constant	0.493*** (0.0934)
Observations	6,069
Number of uniqueID	3,578

Random Effects Panel Estimator  
Demographic, Country, Time Controls  
Standard errors in parentheses  
\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

*Table 3.2 Training Theoretical Model*

VARIABLES	(1) Training_Need
Training	0.0240*** (0.00813)
ResilienceR	-0.00314 (0.00501)
Change_Behavior	-0.00817 (0.00534)
Manage_Challenges	0.00283 (0.00676)
IntelligenceR	0.00814* (0.00434)
Develop_Ability	0.00776 (0.00595)
Bounce_Back	-0.00474 (0.00656)
ControlR	0.00278 (0.00464)
bw_factory	-0.0428*** (0.0103)
Constant	0.335*** (0.108)
Observations	5,595
Number of uniqueID	3,392

Random Effects Panel Estimator  
Demographic, Country, Time Controls  
Standard errors in parentheses  
\*\*\* p<0.01, \*\* p<0.05, \* p<0.1