

Hard Skills or Soft Talk:

Unintended consequences of a vocational training and an inspirational talk on childbearing and sexual behavior in vulnerable youth

Maria Jones, The World Bank

Victor Orozco, The World Bank and University of Oxford

Ericka Rascón, Department of Economics, Middlesex University

CEGA, UC Berkeley
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Outline

- Motivation
- Contribution
- Mechanisms
- Intervention
- Main Findings
- Conclusions

Motivation

- Vocational training programs aim at increasing employment opportunities in developing countries.
- Experimental evidence is inconclusive about the effects on labor market outcomes.
 - ▶ Card et al. (2011) and Ibarrran et al. (2014) find no effects on employment, but modest effects on earnings in the Dominican Republic.
 - ▶ Attanasio et al. (2011, 2015) find large effects on wages and employment in other LA countries.
- Vocational training evaluations have been mainly focused on labor outcomes with exception of Novella and Ripani (2015).
- No evidence of the use of behavioral add-ons to boost the effect of vocational training interventions.

Our contribution

- We examine the impact of a vocational training program (hard skills) with an aspirational pep-talk add-on (soft talk) in vulnerable population living in Malawi on:
 - ▶ Childbearing (6 and 12 months ago)
 - ▶ HIV testing (6 and 12 months ago)
 - ▶ Transactional sex (Ever been offered a gift or money in exchange for sex – supply and ever offered a gift or money in exchange for sex – demand)
- We also explore some mechanisms that could have influenced these outcomes through changes in psychological well-being.

Main Findings

- Hard skills are more influential on the three outcomes than soft skills.
- However, soft skill add-ons may boost the effect of vocational training programs on adolescent childbearing and HIV-testing.
- In overall, hard skills with inspirational talks are more influential on adolescents than on young adults.
- Although the current VCT did not have a large impact on females labor outcomes, it had large effects on female fertility and sexual outcomes.

Mechanisms: Hard Skills

- Hard skills increase human capital:
 - ▶ Opportunity cost of early childbearing increases.
 - ▶ Opportunity cost of being HIV positive increases.
 - ▶ If wages increase, purchasing power increases and demand for transactional sex increases (if normal good).
 - ▶ If wages increase, purchasing power increases and supply of transactional sex decreases (if source of income).

Mechanisms: Soft Skills

- Soft skills change well-being and perception about yourself:
 - ▶ If childbearing reflects 'nothing to lose' choices, soft skills may decrease early childbearing by improving self-perception.
 - ▶ People may value more their lives, thus, risky behavior may decrease.
 - ▶ If transactional sex is seen as a denigrating/immoral activity, soft skills may decrease supply and demand for it.
 - ▶ However, if transactional sex shows: (a) masculinity and/or (b) how loved you are by your partner. Soft skills may increase transactional sex (?).

Intervention

- In 2009 the Government of Malawi decided to pilot a new apprenticeship program.
- This program was targeted to vulnerable people between 14-24 years old.
- The aim of the program was to increase employability, promote productive self-employment and reduce vulnerability to risky sexual behavior.

Intervention (Cont.)

- District and local authorities identified Orphans, Vulnerable and Affected Youth (OVAY).
- A technical educational agency TEVETA implemented the intervention in all 28 districts in Malawi.
- Baseline and follow-up surveys only collected information in 24 districts.
- Our sample is nationally representative of OVAY in both urban and rural areas.
- Eligible youth: 1,900 (2/3 assigned to treatment).
- Baseline and follow-up survey has 1,122 and 1,018 individuals.
- This was a phase-in design, where for the first and second cohort of treatment 690 individuals were randomly assigned and for the third cohort (control) 328 were randomly assigned.

Intervention: Hard Skills (T1)

Hard Skills:

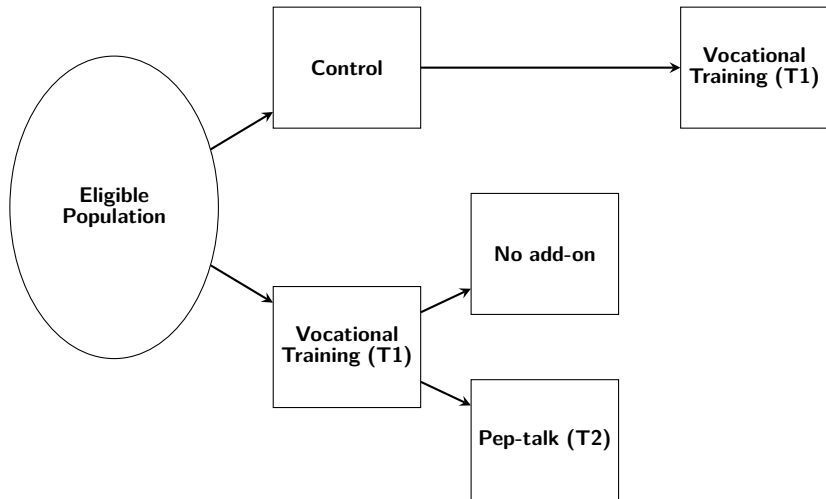
- To enable youth acquire the technical and business skills to either find paid employment or start their own business.
- Vocational training in a trade, mentorship with experience trainers, HIV/AIDS life skills and entrepreneurship courses, and a start-up kit of tools for the occupation of choice.
- Cost per beneficiary was US\$1,000 for an average of 3 months of training.

Intervention: Soft Skills (T2)

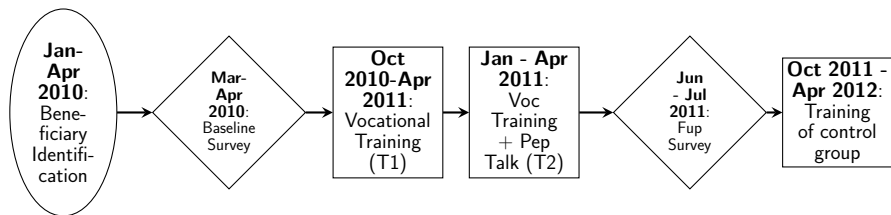
Soft Skills:

- Aspirational pep-talk that aimed at building confidence and self-esteem, sooth fears and reinforce motivation.
- Half of the first cohort of trainees participating in the training was randomly selected for this add-on.
- Cost per beneficiary was US\$15 for a pep-talk of 20 minutes.

Experimental design



Data Collection



Data Collection: Both treatments at the district level

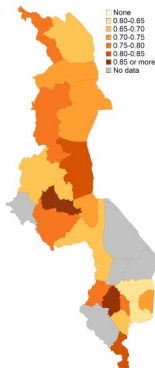


Figure: VCT (T1)

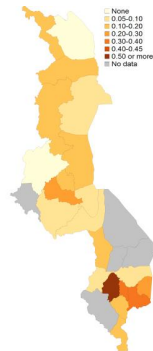
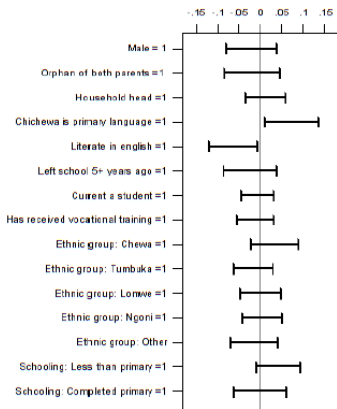


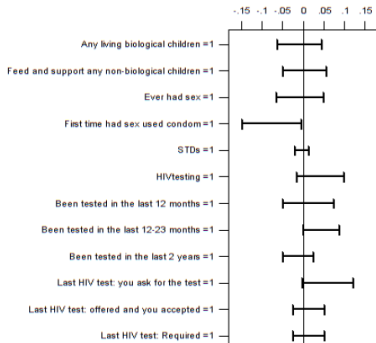
Figure: VCT (T1) + PepTalk (T2)

Control vs Treatment

Control versus Treatment

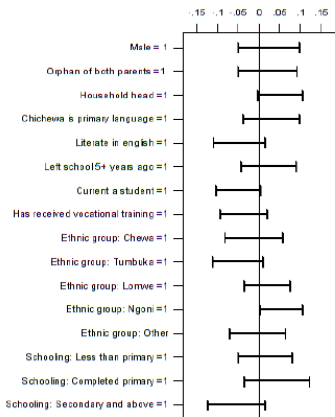


Control versus Treatment

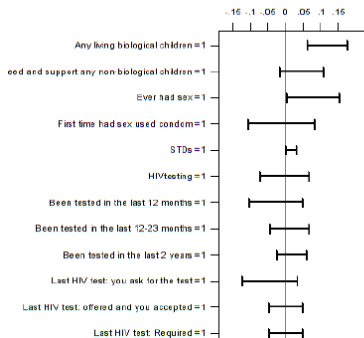


Control/Treatment vs Dropouts at Baseline

Control/Treatment vs Dropouts



Control/Treatment vs Dropouts



Around 30% of our sample dropout of the VCT. To increase the sample, 274 new participants were selected from the original

Empirical Specification: Hard Skills

- *Intention-to-treat* (ITT) estimates of Hard Skills treatment:

$$Y_{t+1,ij} = \alpha + \beta D_{ij}^{VCT} + X_{ij}\gamma + v_j + \epsilon_{ij} \quad (1)$$

- Where $Y_{t+1,ij}$ is childbearing, HIV testing or transactional sex for individual i from district j in the follow-up data in $t+1$.
- D_{ij}^{VCT} equal to '1' if the individual received invitation to attend VCT (T1)
- X_{ij} socio-demographic characteristics that may influence our outcomes, including occupational dummies.
- v_j district dummies.
- ϵ_{ij} unobservables at the individual level.

Empirical Specification: Hard and Soft Skills

- *Intention-to-treat* (ITT) estimates of both treatments:

$$Y_{t+1,ij} = \beta_0 + \beta_1 D_{ij}^{VCT} + \beta_2 D_{ij}^{VCT+PT} + X_{ij}\lambda + v_j + \eta_{ij} \quad (2)$$

- *Treatment-on-Treated* (TOT) estimates of both treatments using IV:

$$Y_{t+1,ij} = \phi_0 + \phi_1 P_{ij}^{VCT} + \phi_2 D_{ij}^{VCT+PT} + X_{ij}\gamma + v_j + \omega_{ij} \quad (3)$$

$$P_{ij} = \delta_0 + \delta_1 D_{ij}^{VCT} + X_{ij}\phi + v_j + \zeta_{ij} \quad (4)$$

Hard Skills: Main findings

Childbearing – 6 and 12 months ago

Table: ITT estimates: Hard Skills by Gender

Linear Probability Models				
Variables	WOMEN		MEN	
	6 mths (1)	12 mths (2)	6 mths (3)	12 mths (4)
Rec. Inv. to VCT (T1)	-0.042** [0.016]	-0.070*** [0.018]	-0.010 [0.011]	-0.015 [0.011]
Constant	0.575** [0.219]	-0.340 [0.300]	-0.144 [0.223]	-0.247 [0.323]
Observations	353	353	641	641
R-squared	0.191	0.170	0.088	0.128
Mean of control group (fw-up)	0.09	0.18	0.05	0.08

Note: All regressions control for age, age squared, orphan of both parents, head of household, Chichewa as primary language, literate in English, left school 5 or more years ago, occupation and district dummies. Robust standard errors in brackets. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

HIV testing – 6 and 12 months ago

Table: ITT estimates: Hard Skills by Gender

Linear Probability Models				
	WOMEN		MEN	
	6 mths (1)	12 months (2)	6 mths (3)	12 months (4)
Rec. Inv. to VCT (T1)	0.114*** [0.030]	0.085*** [0.025]	0.092*** [0.022]	0.074*** [0.024]
Constant	-2.218*** [0.619]	-2.206*** [0.498]	-2.652*** [0.710]	-2.841*** [0.783]
Observations	336	336	622	622
R-squared	0.135	0.198	0.111	0.142
Mean of control group (fw-up)	0.37	0.61	0.33	0.51

Note: All regressions control for age, age squared, orphan of both parents, head of household, Chichewa as primary language, literate in English, left school 5 or more years ago, occupation and district dummies. Robust standard errors in brackets. *** p<0.01, ** p<0.05, * p<0.1.

Transactional Sex

Table: ITT estimates: Hard Skills by Gender

Linear Probability Models

	WOMEN		MEN	
	Been Offered (1)	Offered (2)	Been Offered (3)	Offered (4)
Rec. Inv. to VCT (T1)	-0.055*** [0.017]	0.004 [0.006]	0.011 [0.009]	0.002 [0.012]
Constant	0.107 [0.398]	0.382** [0.163]	-0.092 [0.158]	0.904 [0.860]
Observations	353	353	641	641
R-squared	0.184	0.220	0.068	0.085
Mean of control group (fw-up)	0.13	0.01	0.03	0.08

Note: All regressions control for age, age squared, orphan of both parents, head of household, Chichewa as primary language, literate in English, left school 5 or more years ago, occupation and district dummies. Robust standard errors in brackets. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Hard and Soft Skills: Main findings

Childbearing – 6 and 12 months ago

Table: ITT estimates: Hard and Soft Skills by Gender

Linear Probability Models				
Variables	WOMEN		MEN	
	6 mths (1)	12 mths (2)	6 mths (3)	12 mths (4)
Rec. Inv. to VCT (T1)	-0.034* [0.018]	-0.056*** [0.020]	-0.013 [0.010]	-0.020* [0.011]
Rec. Inv. to VCT (T1) + PT (T2)	-0.044 [0.035]	-0.083 [0.051]	0.018 [0.033]	0.032 [0.039]
Constant	0.559** [0.217]	-0.370 [0.296]	-0.132 [0.231]	-0.226 [0.329]
Observations	353	353	641	641
R-squared	0.193	0.174	0.089	0.129
Mean of control group (fw-up)	0.09	0.18	0.05	0.08

Note: All regressions control for age, age squared, orphan of both parents, head of household, Chichewa as primary language, literate in English, left school 5 or more years ago, occupation and district dummies. Robust standard errors in brackets. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

HIV testing – 6 and 12 months ago

Table: ITT estimates: Hard and Soft Skills by Gender

Linear Probability Models				
	WOMEN		MEN	
	6 mths (1)	12 months (2)	6 mths (3)	12 months (4)
Rec. Inv. to VCT (T1)	0.121*** [0.032]	0.070*** [0.021]	0.080*** [0.026]	0.065*** [0.025]
Rec. Inv. to VCT (T1) + PT (T2)	-0.038 [0.099]	0.088 [0.061]	0.077 [0.063]	0.054 [0.065]
Constant	-2.234*** [0.627]	-2.170*** [0.493]	-2.599*** [0.719]	-2.803*** [0.789]
Observations	336	336	622	622
R-squared	0.136	0.200	0.113	0.143
Mean of control group (fw-up)	0.37	0.61	0.33	0.51

Note: All regressions control for age, age squared, orphan of both parents, head of household, Chichewa as primary language, literate in English, left school 5 or more years ago, occupation and district dummies. Robust standard errors in brackets. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Transactional Sex

Table: ITT estimates: Hard and Soft Skills by Gender

	WOMEN		MEN	
	Been Offered (1)	Offered (2)	Been Offered (3)	Offered (4)
Rec. Inv. to VCT (T1)	-0.055*** [0.016]	0.007 [0.007]	0.009 [0.008]	0.007 [0.013]
Rec. Inv. to VCT (T1) + PT (T2)	-0.002 [0.034]	-0.018* [0.010]	0.016 [0.029]	-0.032 [0.041]
Constant	0.106 [0.405]	0.375** [0.162]	-0.081 [0.152]	0.882 [0.860]
Observations	353	353	641	641
R-squared	0.184	0.222	0.069	0.087
Mean of control group (fw-up)	0.13	0.01	0.03	0.08

Note: All regressions control for age, age squared, orphan of both parents, head of household, Chichewa as primary language, literate in English, left school 5 or more years ago, occupation and district dummies. Robust standard errors in brackets. *** p<0.01, ** p<0.05, * p<0.1.

Hard and Soft Skills: Main findings for adolescents (under 20)

Childbearing – 6 and 12 months ago

Table: ITT estimates: Hard and Soft Skills for Adolescents

Linear Probability Models		
Variables	6 mths (1)	12 mths (2)
Rec. Inv. to VCT (T1)	0.007 [0.014]	0.035 [0.034]
Rec. Inv. to VCT (T1) + PT (T2)	-0.095* [0.049]	-0.146*** [0.051]
Constant	-0.860 [0.564]	-0.944 [0.875]
Observations	211	211
R-squared	0.245	0.212
Mean of control group (fw-up)	0.03	0.05

Note: All regressions control for age, age squared, orphan of both parents, head of household, Chichewa as primary language, literate in English, left school 5 or more years ago, occupation and district dummies. Robust standard errors in brackets. *** p<0.01, **

HIV testing – 6 and 12 months ago

Table: ITT estimates: Hard and Soft Skills for Adolescents

Linear Probability Models		
	6 mths (1)	12 months (2)
Rec. Inv. to VCT (T1)	0.111** [0.055]	0.077 [0.046]
Rec. Inv. to VCT (T1) + PT (T2)	-0.169 [0.131]	0.264** [0.111]
Constant	-0.367 [1.933]	-3.428* [1.908]
Observations	206	206
R-squared	0.320	0.370
Mean of control group (fw-up)	0.29	0.38

Note: All regressions control for age, age squared, orphan of both parents, head of household, Chichewa as primary language, literate in English, left school 5 or more years ago, occupation and district dummies. Robust standard errors in brackets. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Transactional Sex

Table: ITT estimates: Hard and Soft Skills for Adolescents

Linear Probability Models		
	Been Offered (1)	Offered (2)
Rec. Inv. to VCT (T1)	-0.062*** [0.022]	0.024 [0.023]
Rec. Inv. to VCT (T1) + PT (T2)	0.035 [0.050]	-0.041 [0.039]
Constant	-0.168 [0.904]	0.894 [1.398]
Observations	211	211
R-squared	0.237	0.206
Mean of control group (fw-up)	0.12	0.07

Note: All regressions control for age, age squared, orphan of both parents, head of household, Chichewa as primary language, literate in English, left school 5 or more years ago, occupation and district dummies. Robust standard errors in brackets. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Childbearing, HIV-testing and Trans. Sex

Table: IV-TOT estimates: Hard and Soft Skills for Adolescents

	Linear Probability Models			
	Child 12 Months (1)	HIVtest (2)	TS B Offered (3)	TS Offered Ever (4)
Attending VCT (T1)	0.063 [0.062]	0.141** [0.071]	-0.112** [0.047]	0.043 [0.035]
Rec. Inv. to VCT (T1) + PT (T2)	-0.177** [0.077]	0.190* [0.106]	0.091* [0.053]	-0.062 [0.046]
Constant	-0.999 [0.827]	-3.605** [1.685]	-0.072 [0.798]	0.857 [1.200]
Observations	211	206	211	211
R-squared	0.179	0.377	0.194	0.211
Mean of control group (fw-up)	0.05	0.38	0.12	0.07

Note: All regressions control for age, age squared, orphan of both parents, head of household, Chichewa as primary language, literate in English, left school 5 or more years ago, occupation and district dummies. Robust standard errors in brackets. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Conclusions

- Hard skills are more influential on the three outcomes than soft skills.
- However, soft skill add-ons may boost the effect of vocational training programs on childbearing and HIV-testing for adolescents.
- Hard skills with inspirational talks are more influential on adolescents than hard skills without behavioral components.
- **Hard Skills:**
 - ▶ Decreased the probability of being a mother in the last 6 and 12 months by 50% and 40% respectively in comparison to the control group.
 - ▶ Increased HIV testing in the last 6 and 12 months by $\approx 30\%$ and 15% for both women and men (40% for adolescents – 6 mths).
 - ▶ Decreased females' supply of transactional sex (ever been offered money/gifts in exchange for sex) by 40% (50% for adolescents).

Conclusions (Cont.)

- Soft Skills:
 - ▶ Treated adolescents were three times less likely to become a parent than adolescents in the control group.
 - ▶ Increased HIV testing in the last 12 months in adolescent population by 70% – this effect is larger than the one of hard skills.

Thank you !!!