

Hard Skills or Soft Talk: Unintended consequences of a vocational training and an inspirational talk on childbearing and sexual behavior in vulnerable youth

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Abstract

This paper analyzes to what extent vocational training and inspirational talks affect childbearing decisions, HIV testing and transactional sex in young people. Using baseline and follow-up data of a randomized control trial in Malawi, the authors find that the vocational training program decreased the likelihood of childbearing in females and increased the likelihood of being HIV tested in males. In particular, when comparing the effects of vocational training and the inspirational talk treatments, we observe that early childbearing is mainly affected by vocational training, but not by inspirational talks. Regarding HIV testing, both treatments have a positive effect on the probability of being tested. However, the effect of inspirational talks is more salient than the effect of vocational training without the inspirational add-on in young males. In addition, we observe a modest decline in transactional sex in females when receiving the vocational training (without inspirational talk). These results shed light on how low-cost interventions, such as inspirational talks, may affect long term decisions and on the gender differences in the effects of vocational training interventions that involve hard and soft skill components.

JEL : J13, J16, I12, D8

Keywords: Early childbearing, HIV/AIDS, risky behavior, randomized control trial, vocational training programs, transactional sex.

¹ The data used for this analysis was collected as part of a broader research project that studies the effects of vocational training on labor outcomes and drop-out behavior. This project was led by the World Bank's Development Impact Evaluation unit and the primary research paper can be found at <https://openknowledge.worldbank.org/bitstream/handle/10986/15905/WPS6545.pdf?sequence=1>.

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I. Introduction

Governments and development partners are scaling up vocational training programs as a means to give youth access to better self- or salaried employment. The World Bank and its client governments invested nearly \$1 billion a year between 2002 and 2012 (Twose, 2015). The evidence base for the effectiveness of these programs has mainly been limited to developed countries and non-experimental designs, with the general findings that interventions have moderate effects on labor outcomes (Heckman et al. 1999; Kluve 2010). Rigorous evaluations in developing countries are emerging. Attanasio et al. (2011), Attanasio et al. (2015) and Alzúa et al. (2015) find that vocational training programs for youth has fairly large effects on wages and employment in Colombia and Argentina. Conversely, Card et al. (2011) and Ibararan et al. (2014) find no effects of vocational training in the Dominican Republic on employment; yet do find modest effects on earnings. Results are not very encouraging for programs targeting entrepreneurship and self-employment in low income countries, where Cho et al (2013) and Hamory et al (2015) find limited evidence that vocational programs increased employment and earnings in Malawi and Kenya respectively. Reviewing a series of experimental evaluations of vocational training programs in low-income settings, Blattman and Ralston (2015) conclude that these programs have at best modest impacts on labor outcomes and given their high costs, are not cost-effective. Moreover, given the many additional challenges that women face in the labor market, the economic benefits for women may be even lower³. This is not surprising considering that over 80 percent of the workforce is engaged in self-employment (Gindling and Newhouse 2014).

Many vocational training programs targeting vulnerable youth have the additional objective of reducing risky sexual behaviors. Early marriage and childbearing limits human capital accumulation and women's future labor force participation and economic opportunities (Field and Ambrus 2008), which may increase girls risk of engaging in transactional sex (Dupas 2011). By providing technical skills, vocational training programs aim to increase employment and incomes of vulnerable women, reducing the

³ Cho et al (2013) found that women participation in a vocational training program in Malawi was affected by family obligations, their participation was more expensive, and as a result, women benefited less compared to their male counterparts in terms of skill development and short-term labor outcomes.

need for engaging in transactional sex. On top of the economic channel, a new generation of training programs such as those of the World Bank's Adolescent Girls Initiative, is adding 'soft skills' components that aim to educate and build self-confidence of youth to delay sexual debut, childbearing and reduce risky sexual behaviors. Soft skills are personality traits, goals, motivations, and preferences that are valued in the labor market, in school, and in many other domains. While cognitive ability plays the central role in the economics of education literature for producing successful lifetime outcomes (e.g., Hanushek and Woessmann, 2008), recent research reveals that soft-skills can predict and produce success academics, labor and in life in general (Heckman et al 2006, Heckman and Kautz 2012)⁴. In the case of vocational training, improving soft skills can improve self-confidence or positive emotions, which may directly reduce risky sexual behaviors, and indirectly, through increasing the likelihood of getting employed. In Uganda, Bandiera et al (2012) provide experimental evidence of a program targeted to adolescent women that combined vocational training and information on sex, reproduction and marriage. The study finds that the combined intervention increased consumption, reduced teenage pregnancies, and increased aspired ages at marriage and childbearing.

Changing sexual behaviors of vulnerable youth requires changing their attitudes toward a healthier lifestyle. Economic stability is only one component. The World Bank EPAG study (2015) provides evidence of a six-month comprehensive vocational training program that included life skills and microcredit for Liberian female teenagers. In contrast to Bandiera et al (2012), while the intervention increased employment, income and improved non-cognitive skills of self-regulation and self-efficacy; it did not reduce young women's sexual behaviors nor their desired or actual fertility. This confirms the complex relation that exists between economic stability and risky sex, where several studies show that there is an inverse relationship between wealth and HIV prevalence rates in many SSA countries (UNAIDS 2013), including Malawi where our study took place. Changing attitudes of vulnerable teenagers is a challenge given the many social constraints they face (Mccoy, Kangwende and Padian 2010). For example, while the

⁴ An experimental evaluation of an early childhood program for African American children (Heckman et al 2012) found that while the intervention did not improve IQ, it substantially improved externalizing behaviors and academic motivation. These in turn reduced criminal activities and improved a number of labor market and health outcomes in the long term.

introduction of welfare, abortion, and family planning policies in the US were effective in reducing pregnancies among white teenagers, these policies did not reduce pregnancies for black teenagers (Lundberg and Plotnick 1995). More research is needed how best to change youth's attitudes about their life outlook. A more optimistic view of the future should increase the opportunity cost of "irresponsible behaviors" in the present; so youth may take greater precautions regarding risky sexual behavior.

Despite the increased use of soft skills components in vocational training, there is limited empirical research of its effectiveness on youth's life outlook and wellbeing. The experimental evidence in Sub Sahara African countries (e.g. Bandiera et al 2012, Cho et al 2013) studies the *combined* effect of both hard skills (vocational training) and soft skills components (e.g. life skills, information about the benefits of delaying marriage and childbearing), which prevents experimentally disentangling the impacts of each component (and therefore mechanism through which program effects work through) on life outlook, wellbeing, labor and reproductive health outcomes. Groh et al (2012) is the first study to experimentally study a soft skills component in a developing country (Jordan)⁵, as part of a program aimed at assisting female community college graduates find employment. The soft skills component, which lasted for 45 hours and was business-oriented, taught graduates teamwork skills, how to interact with customers and how to act professionally at work and in job interviews. Although the soft skills program had small effects on employment outside the capital, it led to improvements in life outlook and a reduction in depression.

We report the results of a randomized control trial that evaluates the impact of a vocational training program and of an aspirational pep-talk on life outlook and childbearing and sexual health behaviors of vulnerable youth in Malawi. Using control and treatment data, this study analyses the effect of both treatments by using Intent-to-treat (ITT) and Treatment-on-Treated (ToT) estimates. The study is part of a broader impact evaluation that studies the combined effects of both interventions on youths'

⁵ Blattman, Jamison, and Sheridan (2015) provide evidence for a different target group, criminally-engaged Liberian men. The intervention, which lasted eight weeks and taught self-control skills and a noncriminal self-image, reduced criminal activity.

wellbeing and short-term labor outcomes. Details for the evaluation design, interventions, and various data collection instruments can be found in Cho et al (2013).

This paper makes two important contributions to the development economic literature about the effects of hard and soft skills on life outlook and sexual health outcomes. First, the study is one of the first to measure the impacts of a vocational training program on childbearing and reproductive health outcomes for both male and female trainees. Experimental studies in Sub Sahara Africa either focused on labor outcomes (e.g. Hamory et al 2015) or programs targeted primarily to women (e.g. Bandiera et al 2015), which limit the analysis of gender differences in vulnerable youth. We find differential gender effects in early childbearing, HIV testing and transactional sex, as well as in soft skills such as confidence and entrepreneur empowerment.

Second, this is the first evaluation to experimentally study the additional impact of an aspirational pep-talk intervention in the context of vocational programs for vulnerable youths. Having both vocational training programs and inspirational talks as treatments allow us examine whether direct increases in human capital (hard skills acquired in the vocational training) affect in a larger scale long term decisions (i.e. risky sexual behavior and childbearing) of young people than a low-cost add-on (soft skills acquired in the aspirational pep talk), and whether these effects vary for males and females. To the best of our knowledge, this is the first study that experimentally studies the effects of a soft-skills add-on in a vocational training program within a low-income country context. We find that the pep talks increased HIV testing and entrepreneurship aspirations in males and confidence and self-perception in females.

The structure of the paper is as follows: Section II briefly describes the context of young people living in Malawi and discusses some of the causes of early childbearing. Section III describes the experimental design and data. Section IV presents the main findings derived from the econometric specifications. And the last section concludes and discusses policy implications.

II. Background

Twenty five million or 71 percent of people living with HIV/AIDS today live in Sub-Saharan Africa. While the number of new infections has steadily decreased in the region

in the last decade, every year 1.5 million new infections occur. New infections are concentrated among youth. Transactional sex can be particularly damaging for young women and overall society in high HIV/AIDS prevalence rates. Young women having sexual relationships with men considerably older are at a greater risk of contracting HIV as these men are more likely to have been exposed to the disease; and negotiating condom use and safer sex is more difficult when the age and income differences are large. Socio-economically disadvantaged women are more likely to engage in transactional sex than those with stable incomes. While estimating the number of women that engage in transactional sex is very difficult, several studies report this practice is not uncommon among vulnerable adolescents (Luke and Kurtz 2002, Luke 2003).

Adolescent childbearing rates remain high in Sub Sahara Africa, with poverty and low aspirations as major contributors. Sub Sahara Africa has been lagging relative to other developing regions in terms of how quickly it is converging to the low fertility, late marriage and high career participation norms that characterize women's lives in developed nations. Adolescent childbearing rates have remained greatly unchanged since the 1990s, and nearly half of African countries remain over 100 births per 1,000 adolescent girls in nearly half of the countries (UNFPA 2012). Poverty and low education levels are factors, with studies finding that providing small amounts of cash reduced transactional sex and new infections of sexually transmitted infections among school-age girls in Malawi (Baird 2012) and through higher education gains, lower childbearing rates in the long term (Baird 2015). Robinson and Yeh (2011) found that an income shock or a sick family member increased the likelihood that female sex workers in western Kenya engaged in unprotected sex, which was better paid than protected sex.

On the other hand, teenager' pessimism of their own futures may also increase their risky behaviors. Patel et al. (2007) find that mental health issues are widespread in youth across the world and according to Baird, de Hoop, and Özler (2013), over a third of school-aged girls suffer from psychological distress in Malawi. A pessimistic or "nothing to lose" attitude is likely increase youths' perception of low opportunity costs of the consequences of unprotected sex, although the opposite is true. Many studies

show that teenage childbearing is associated with higher child and maternal morbidity and mortality, and has adverse effects on the mother's educational attainment and poverty levels for her and her child.

The HIV and sexual health indicators of Malawi's vulnerable youth are among the worst in the world. Malawi has the tenth highest HIV prevalence in the world, with 10.2 percent of adults infected today (Global Health Observatory 2015). New infections are concentrated among youth, especially young women. According to the 2011 Malawi Demographic and Health Survey (MDHS), the last survey with population-level prevalence estimates, HIV prevalence rates for 15-24 year old women are more than twice than their male counterparts (5 and 2 percent respectively).⁶ Teenage pregnancies in Malawi are high, particularly for uneducated and poor youth. The percentage of teenagers who have started childbearing decreases with increased levels of education. Forty-five percent of teenagers with no education have already begun childbearing as compared with only 4 percent of those with more than secondary education. Teenagers in the lowest wealth quintile are more than twice as likely to have started childbearing as those in the highest wealth quintile (31 and 16 percent, respectively).

Vulnerable youth lack the market skills to participate in the labor market in Malawi, which offers very few non-agricultural paid jobs. According to the 2013 Malawi Labour Force Survey (MLFS, 2013), two thirds of employed persons work in the agriculture sector and vulnerable workers, those classified as account workers and contributing family members, represent 60 percent of the country's employment. Wages in the agriculture sector are not stable across the year, and many workers are not paid⁷. Although rural areas have more employment opportunities than urban areas due to mainly subsistence agriculture, accessibility to education is more limited. This prevents vulnerable youth from acquiring the skills demanded in the better-paid non-agricultural sector. The percentage of own account workers and contributing family workers

⁶ HIV prevalence practically double for young women every two years of age, increasing from 3 percent among women age 15-17 to 6 percent for women age 18-22, to 8 percent for women age 23-24. Prevalence rates for young men grow at a slower pace, reaching 5 percent by the age 23-24.

⁷ Over half of women (58 percent) employed in agricultural work are not paid and one in five women (21 percent) employed in nonagricultural work are not paid. The conditions are not very different for men, where the proportion for unpaid work is 50 percent and 18 percent respectively.

decreases from 64 percent among those with no education to 14 percent among those with tertiary education. There are also huge disparities in monthly gross earnings across different education levels. The median monthly gross income of those with tertiary education is nearly twelve times higher than for those with no education.

Teaching hard and soft skills is a recent approach to address youth's lack of market skills. Governments and development partners are scaling vocational training programs to address the skills shortage of youth (Twose, 2015). Most of these programs aim to increase the hard skills of young people, their experience in a work environment and the business skills to start a business if they decide to do so. These "hard" skills increase the human capital of participants and as a result may increase their employability and income. Vocational training programs may also increase "soft skills" such as discipline, how to deal with authority, as well as motivation and self-confidence. Vocational training programs are increasingly adding "soft skills" components or subprograms to develop such skills. While rigorous evaluations of vocational training programs are finding modest effects on labor outcomes, few of them are finding effects on non-labor outcomes. On the other hand, there are few studies in developed and developing countries studying the effects of soft skills in vocational training programs on labor and non-labor outcomes. The study aims to address these important knowledge gaps.

III. The Interventions

In 2009, the Government of Malawi decided to pilot a new apprenticeship program aimed at vulnerable youth (mainly orphans and school dropouts) to address employability issues, promote productive self-employment and reduce vulnerability to risky sexual behavior. The Technical Education and Vocational Education and Training Authority (TEVETA) implemented the program across all 28 districts of Malawi. The geographic scope allows us to evaluate the program based on a nationally representative sample of vulnerable youth, in both urban and rural settings. Details for the evaluation design, interventions, and various data collection instruments can be found in Cho et al (2013).

The selection process was successful in choosing participants who were economically vulnerable. The baseline survey reveals that more than a third were orphans of both

parents, over 60 percent lived in a dwelling that had a grass roof (a proxy measure for poverty), and over 80 percent reported living in a household where adults skip a meal “often” or “sometimes” due to lack of money. The participants were about 21 years old on average and around two-thirds were male. Only 10 percent of the participants were still attending school. The baseline data also revealed clear gender differences before the training program began. Women lived in households with fewer adults and more dependent children, had lower completion rates of secondary education, had lower personal income, and spent more time on domestic chores and agriculture as opposed to paid labor or business activities⁸.

Most study participants had been sexually active prior to the program, often engaging in risky sex. The baseline survey reveals that 72 percent of respondents had sex before, and 16 percent were married or living with a partner prior to the interventions. Nine in ten respondents reported that the first sexual partner was someone they had a relationship with (e.g., spouse, fiancé or boy/girlfriend). Four in ten were sexually active during the 12 months preceding the interview, and the average number of partners was 1.1, when excluding sex workers. Among the sexually active, 31 percent had at least one partner who was older or younger by at least five years, 30 percent had sex within six months. Six in ten reported not using condoms in their last sexual encounter, even though 89 percent reported having access to condoms. Seven in ten respondents have tested for HIV before, and among those, two thirds tested within the last year. Interestingly, the reasons for using condoms are slightly different for men and women. While the majority of men stated using condoms as a way of preventing unwanted pregnancies (64 percent versus 47 percent of women), the majority of women use condoms to prevent sexually transmitted infections (66 percent versus 36 percent of men).

The TEVETA vocational training program aimed to break the vicious circle between low employability and risky sexual behaviors and fertility by providing:

- (i) ‘Hard’ skills to enable youth acquire the technical and business skills to either find paid employment or start their own businesses. The program was

⁸ When compared to a nationally representative sample of Malawian youth aged 15-24 from the Malawi Third Integrated Household Survey (National Statistical Office 2011), youth in our sample were more likely to live in a house with a grass roof, more than three times as likely to be an orphan, and less likely to still be in school.

comprehensive, consisting of vocational training in a trade, mentorship with experienced trainers, HIV/AIDS life skills and entrepreneurship courses, and a start-up kit of tools for the occupation of choice ⁹. The follow-up survey shows that trainees attended training for approximately three months (as designed), during which about a half of trainees and more than 80 percent of trainers attended every training session. Nearly 70 percent trainees report that practice tools were always available, and most of the trainees felt encouraged by the trainers.

- (ii) ‘Soft’ skills, in the form of a 20-minute aspirational pep talk, were experimentally added by the research team. Half of the first cohort of students to attend the vocational training was randomly selected for this second intervention. The objective of the talk was to provide participants with a positive view of their achievements and the likelihood of future success in their field of training. The consultants¹⁰ followed a script for the pep talk, which is included as Annex I. The scripted discussion focused on building confidence and self-esteem, soothing fears or concerns, and reinforcing motivation and enthusiasm. The theory of change is that improving a participant’s outlook about their future will increase her prospects about her own future, thus increasing the cost (and decreasing the likelihood of participating in) risky activities. The trainers training emphasized that the pep talks should be as similar as possible across respondents, and that they should only be motivational, not conveying any information (e.g. wages) or skills specific to the occupation.

From a research perspective, the simplicity of the aspirational pep talk allows us the exactly measure the effect that a particular type of soft skill (i.e. motivation and aspirations) has as a mediator for changing in childbearing and sexual health. Many

⁹ TEVETA identified a pool of potential trainers in each district based on their expertise and business performance in the neighborhood. Trainers were compensated by TEVETA and also benefited from the free labor that the apprenticeship program provided. In the 23 districts where our baseline survey took place, there were 164 trainers that offered 17 different trades. TEVETA created a set of training modules customized for each of the principal trades. During the apprenticeship, each trainer trained between 1 and 17 trainees at their workshops. Because many of the trainees lived in rural areas and workshops were mainly in urban areas, trainees were provided by TEVETA a small stipend to cover meals and accommodations.

¹⁰ The inspirational talks were implemented by local consultants with experience working with at-risk youth, who were hired and supervised by the research team. The inspirational talks were conducted one-on-one, with only the student and the consultant present.

studies of the growing literature of ‘soft skills’ do not distinguish the exact type of skill. The aspirational pep talk is purely motivational and affects mainly the ‘extraversion’ personality factor, in terms of building self-confidence and enthusiasm toward the world¹¹. The aspirational nature of our interventions makes it more in line with motivational interventions such as film documentaries of successful entrepreneurs that led Ethiopian farmers to invest more in their children schooling (Bernard et al 2014).

The ‘soft skills’ component also has several differences with respect to the intervention studied by Groh et al (2012), which as noted is the first study to experimentally study a soft skill program in the context of labor market initiatives targeting to youth. In addition to being conducted in a low-income country (Jordan is a middle-income country), our studied intervention targeted a more vulnerable group, the intervention intensity was much less intensive (20 minutes versus 45 hours) and the goals and content were very different (promoting better life prospects versus teaching business soft skills). Its brevity allows us to measure a minimum threshold for these types of interventions and it does not have an impact through an information channel, such as the final returns of education or training (Jensen 2010; and Avitabile and de Hoyos 2015).

IV. Research questions and outcomes

This study has the following primary and secondary research questions:

Primary Questions:

- 1- What is the impact of the vocational training (‘hard skills’ intervention) on childbearing and reproductive health outcomes?
- 2- What is the additional impact of aspirational pep talks (‘soft skills’ intervention) when added to the vocational training on the same outcomes?

Secondary Questions:

- 3- What is the differential effect of the two interventions on childbearing and reproductive health outcomes on male and female trainees?

¹¹ According to Heckman and Kautz (2012), soft skills are also called in the literature personality traits, non-cognitive skills, non-cognitive abilities, character, and socio-emotional skills. While the term “traits” suggests a sense of permanence and possibly also of heritability, the terms “skills” suggest that they can be learned. However, the extent to which these personal attributes can change lies on a spectrum. There are five big domains of soft skills: Conscientiousness, Openness to Experience, Extraversion, Agreeableness and Neuroticism/Emotional Stability.

- 4- Through which mechanisms do both interventions work in affecting childbearing and reproductive health outcomes, such as confidence, further skill development, or drop-out rates?

Data and Outcomes

Data for this study was collected with through a baseline survey (1,122 individuals) and a follow up survey (1,177 individuals, of which only 755 of whom were present in the baseline). This evaluation studies interventions effects after four months of completion of the vocational training (in average). Sexual health outcomes for the last sexual partner (or sexual encounter) include: engaging in transactional sex, condom use, HIV testing and childbearing of the study participant or of their partner. To study the mechanisms through which the interventions could have affected the primary outcomes, we analyzed the following three outcome-types: (i) Drop-out rates during the second half of the apprenticeship program and prior to the follow-up ; (ii) Soft skills outcomes such as self-efficacy and confidence in the future; and (iii) Further investment in education or technical skills. In addition, we surveyed all trainers regarding their experience as trainers and their perception of each of the trainees' skills, diligence, effort, attendance and so on.

In Tables 1A-1D we present a comparison of baseline variables for all 755 treatment and control individuals. These tables show that there are no significant differences between control and treatment in socio-demographic, assets, labor experience and attitudes. Regarding childbearing, sexual experience, STDs and HIV testing, we observe a small but significant difference in *first time had sex and used condom*. We believe this is not a major concern given that the rest of sexually-related variables are not significantly different between treatment and control.

V. Evaluation Design

The evaluation of the vocational training followed a phase-in design, where participants were randomly assigned to two cohorts: the treatment started the program immediately after the baseline survey and the control started the program four months later on

average, prior to the collection of the follow-up survey¹². Due to administrative errors, our follow-up found that over a fifth of the individuals assigned to the treatment group did not receive the invitation. For our main analysis, we report intent-to-treat (ITT) and treated-on-treated (ToT) estimates without considering the individuals that were not invited to the treatment, but received treatment.

To measure the impacts of the aspirational pep talks, youth in half of the treatment were randomly assigned to receive these add-ons while the other half did not. The pep talks took place in the middle of the overall apprenticeship program, approximately one month and a half after the first cohort started. Because the length of each trade varied between one and five months, we restrict our analysis to program impacts for trades that lasted at least one month. Due to high attrition rates, our analysis is restricted to the follow-up survey similar to Cho et al (2013).¹³

The baseline survey was collected in March-April 2010, the treatment group began activities in July-August, pep talks were carried out in September 2010, and the follow-up surveys were collected in May-September 2011. Figure 1 describes the evaluation design.

VI. Results

This section discusses ITT and ToT estimates of early childbearing, HIV testing and transactional sex. Our main outcomes are based on the follow-up data collected in May-September 2011. Childbearing outcomes are based on measures of having biological children in the last 6 months and in the last 12 months. HIV testing outcomes have been constructed using four self-reported measures: ever being tested, tested in the last month, tested in the last 6 months and tested in the last year. And transactional sex

¹² A substantial implementation delay of the first cohort group limited the time of our study effects, from 18 months to 4 months.

¹³ TEVETA worked with local authorities to create a list of youth eligible for the TVST program. Eligible beneficiaries included orphaned, vulnerable and AIDS-affected youth between the ages of 14 – 30, not currently enrolled in school. The list was not verified before the baseline survey, and at baseline, 8.5% were found to be ineligible (typically either due to age or current enrollment in school), and 14.8% were not possible to identify (duplicate listings and placeholder names). TEVETA then worked with local authorities to identify eligible replacements. The randomization for the pep talk uses a different sample than the cohort randomization. The initial randomization was done from the full sample of intended participants. The pep-talk randomization applied only to the subset of the treatment group who actually participated, and were in attendance at a training center at the time of the pep talks (this left out a few of the earliest participants in the central region, where there was an earlier wave than in other regions).

outcomes are based on measures of being offered gifts or money for sex and of having offered gifts or money for sex.

Tables 2A and 2B show ITT and ToT estimates, respectively. Our effects are expressed in marginal effects of clustered probit models.¹⁴ Baseline probabilities are reported in the bottom of each table. Both tables show results for females and males in the same probit model. In table 2A, we observe that the intervention of vocational training without the inspiration talk add-on reduces the probability of having a child in the last 6 and 12 months. The effect of the intervention on childbearing is larger and significant for the measure of 12 months in females. The likelihood of becoming a mother in the last 12 months decreases in approximately 4 percentage points; relative to the baseline probability the total effect is translated into a decrease of 52 percent in early childbearing if being benefited by the vocational training program.

After considering only those individuals who were actually treated, Table 2B shows that the vocational training with the inspirational talk had an effect of about 2 percentage points on the probability of becoming a mother using the conditional measure on the last 6 months.

These results shed light on the relevance of human capital investment (hard skills) on delaying childbearing decisions among female population and the potential advantages of inspirational talks (soft skills) to reinforce its effects.

Tables 3A and 3B present ITT and ToT estimates of HIV testing models. The first outcome corresponds to ever being tested. Our ITT estimates show that vocational training increases the probability of being HIV tested. When we measure the impact of the vocational training on HIV testing conditional on the last month, on the last 6 months and on the last 12 months, we observe that the effect of both interventions are significant (mainly for 6 and 12 months) and that the intervention with the inspirational component is more salient than the one without it. Moreover, we find evidence about the significant effect of inspirational talks for males, but not for females.

¹⁴ Because discrete choice models are sensitive to the sample of study, we do not recommend the reader to make comparisons of marginal effects across models with different dependent variables.

The effect of the vocational training on HIV testing (6 months) in males is about 6 percentage points and of the inspirational add-on is 14 percentage points. Both effects correspond to an increase of 15 and 36 percent of HIV tested young people if being treated by a vocational training and an inspirational talk, respectively. This result reinforces the finding that inspirational talk add-ons may be an extremely cost-effective intervention to encourage preventive health and to increase awareness about sexually transmitted disease in vulnerable populations.

Finally, Tables 4A and 4B show ITT and ToT estimates of transactional sex models. Both tables reveal that only vocational training (without the inspirational talk) has a modest effect on transactional sex. And this effect is mainly found for the outcome of ever being offered a gift or money in exchange for sex in females. This effect corresponds to a decrease of 8 percent of transactional sex if receiving the intervention of vocational training.

VII. Mechanisms

In this section, we briefly analyse the mechanisms through which our outcomes may have been affected during both interventions. As mentioned before, the increase of human capital investment (hard skills through vocational training) should decrease childbearing. In particular, it is not surprising to see that the effect of vocational training is mainly observed in females, but not in males. During and after the intervention, females increased their technical skills and as a result, their opportunities in the labor market. Thus, the opportunity cost of having a child increases and females may decide to deter the decision of having a child.

The effect of vocational training may also have an effect on HIV testing through the increase in opportunity cost. Males and females may feel with more value-added in their communities and therefore, may tend to take care more of themselves. Similarly, if transactional sex is used as a mean for obtaining financial resources instead of a mean for demonstrating love and caring, increasing human capital investment may decrease transactional sex.

Inspirational talks may have also influenced the way that young people perceive themselves relative to others, as well as their confidence on personal and professional

matters. In Table 5 we analyze a set of indicators of happiness, empowerment, confidence and aspirations. We observe that inspirational talks had a significant effect on some of these measures. For instance, those receiving the inspiration add-on are more likely to have higher entrepreneurship aspirations (column 7 and 9) and to report that they feel happy and satisfied with life (column 13). The vocational training (without the pep talk) had also impact on positive feelings about their lives in the past year (column 15) and feelings about being able to earn money outside farming (column 19).

When exploring gender differences, we observe that females receiving the pep talk are less likely to report inability to perform as well as others (column 4) than males and more likely to report that they feel confident about their ability to handle personal problems in comparison to males. However, the inspirational talk did not change the confidence of obtaining financial resources in females.

Our results highlight that childbearing, HIV testing and transactional sex have changed as a result of the hard and soft components of the interventions. In particular, we have found that female outcomes are more responsive to hard skill interventions whereas male outcomes are responsive to both hard and soft skill interventions.

VIII. CONCLUSION

Our results show that vocational training programs can have important impacts on non-labor outcomes. While the intervention had moderate effects on labor outcomes, the announcement of becoming a recipient of this intervention reduced childbearing by 50 percent. Such dramatic reductions are likely to have important development impacts in the long term for vulnerable youth. The vocational training intervention also increased HIV testing in males and decreased transactional sex in females. Despite the brevity of the aspirational talks, we observe they had an effect on HIV testing in males after four-six months of their implementation. More interestingly, the pep talks had dramatic impacts on psychological wellbeing and soft skills. The intervention increased entrepreneurship aspirations and feelings of professional empowerment in males, whereas increase the confidence and self-perception in females.

One policy appeal of scaling up effective 'soft skills' components is their low cost. Ours lasted for 20 minutes and their variable cost per beneficiary was under US\$15. In contrast, the vocational training lasted an average of three months and the cost per beneficiary was over US\$1,000. This is consistent with what Blattman and Ralston (2015) find about the high cost of vocational training programs in many developing countries (often ranging between \$1,000 and \$2,000). Given the high cost and the limited impacts on labor outcomes, they argue that vocational training programs are rarely cost-effective and other development interventions may be better suited for addressing the issues of vulnerable youth. We provide evidence that motivation and changing aspirations, a type of soft skill, is one such intervention.

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APPENDIX

Tables

Table 1A. Socio-Demographic Characteristics

Differences between Control and Treatment at baseline

Variable	Mean		Difference	St. Error	P-Value
	Control	Treatment			
Age	20.79	20.52	0.27	0.19	0.15
Gender (male=1)	0.70	0.67	0.03	0.04	0.43
Orphan of both parents =1	0.47	0.43	0.04	0.04	0.36
Household head =1	0.15	0.14	0.01	0.03	0.75
Chichewa is primary language =1	0.66	0.70	-0.04	0.04	0.23
Literate in english =1	0.77	0.72	0.04	0.03	0.20
Left school 5+ years ago =1	0.32	0.31	0.00	0.04	0.91
Current a student =1	0.13	0.13	0.00	0.03	0.98
Household size	5.60	5.56	0.04	0.19	0.82
Has received vocational training =1	0.14	0.13	0.01	0.03	0.67
Ethnic group: Chewa =1	0.26	0.30	-0.04	0.03	0.22
Ethnic group: Tumbuka =1	0.16	0.16	0.00	0.03	0.89
Ethnic group: Lomwe =1	0.17	0.17	0.00	0.03	0.91
Ethnic group: Ngoni =1	0.17	0.17	0.00	0.03	0.87
Ethnic group: Other	0.25	0.21	0.05	0.03	0.18
Schooling: Less than primary =1	0.22	0.27	-0.06	0.03	0.09
Schooling: Completed primary =1	0.52	0.51	0.01	0.04	0.73
Schooling: Secondary and above =1	0.26	0.22	0.04	0.03	0.21

Table 1B. Assets

Differences between Control and Treatment at baseline

Variable	Mean		Difference	St. Error	P-Value
	Control	Treatment			
Oxen =1	0.00	0.02	-0.01	0.01	0.07
Cattle (exc Oxen) =1	0.04	0.06	-0.02	0.02	0.19
Goats =1	0.24	0.24	0.00	0.03	0.95
Pigs =1	0.09	0.11	-0.02	0.02	0.45
Poultry =1	0.58	0.53	0.04	0.04	0.26
Hoes =1	0.89	0.91	-0.02	0.02	0.50
Pangas =1	0.57	0.58	0.00	0.04	0.90
Ploughs =1	0.02	0.02	0.00	0.01	0.88
Granary =1	0.26	0.24	0.02	0.03	0.58
Bicycle =1	0.29	0.26	0.03	0.04	0.47
Mobile Phones =1	0.40	0.47	-0.06	0.04	0.12
Wall Clock =1	0.20	0.20	0.00	0.03	0.99
Mattress =1	0.23	0.23	0.00	0.03	0.88
Jerry Cans =1	0.20	0.20	0.01	0.03	0.85
Radios =1	0.43	0.45	-0.02	0.04	0.60
Television =1	0.05	0.07	-0.02	0.02	0.21
Video or DVD Player =1	0.03	0.05	-0.02	0.01	0.17
Farmer: Any of biological parents =1	0.54	0.56	-0.02	0.04	0.68
Salaried employee: Any of biological parents =1	0.29	0.28	0.02	0.04	0.66
No schooling: Any of biological parents =1	0.13	0.12	0.00	0.03	0.86
Married =1	0.16	0.13	0.03	0.03	0.34
Single = 1	0.79	0.81	-0.02	0.03	0.44
Divorced =1	0.03	0.03	-0.01	0.01	0.58
Ever married =1	0.11	0.10	0.02	0.02	0.50
Wall: unburnt brick =1	0.39	0.38	0.01	0.04	0.87
Wall: compacted earth = 1	0.13	0.13	0.00	0.03	0.98
Wall: burnt bricks =1	0.46	0.45	0.01	0.04	0.80
Toilet: covered pit latrine-private =1	0.41	0.38	0.03	0.04	0.42
Toilet: covered pit latrine-shared =1	0.35	0.34	0.02	0.04	0.69
Toilet: uncovered pit latrine =1	0.20	0.25	-0.05	0.03	0.16

Table 1C. Childbearing, sexual experience, STDs and HIV testing

Differences between Control and Treatment at baseline

Variable	Mean		Difference	St. Error	P-Value
	Control	Treatment			
Any living biological children =1	0.19	0.19	0.00	0.03	0.94
Feed and support any non-biological children =1	0.23	0.21	0.03	0.03	0.39
Total number of children under 15 looked after by tl	0.81	0.71	0.10	0.12	0.41
Ever had sex =1	0.67	0.66	0.00	0.04	0.93
Age at sexual debut*	17.11	16.96	0.14	0.27	0.59
First time had sex used condom =1	0.70	0.57	0.13	0.05	0.00
Age of first sexual partner*	16.57	17.19	-0.62	0.31	0.05
STDs =1	0.01	0.02	0.00	0.01	0.63
HIVtesting =1	0.69	0.71	-0.02	0.04	0.50

*Note: Using two-sample Kolmogorov-Smirnov test for equality of distributions, total number of children (p-value: 0.979), age at sexual debut (p-value: 0.913) and age of first sexual partner (p-value: 0.236) are not significantly different between control and treatment.

Table 1D. Literacy, school attendance, distance to schools, labor experience, attitudes

Differences between Control and Treatment at baseline

Variable	Mean		Difference	St. Error	P-Value
	Control	Treatment			
Able to read a whole sentence in Chichewa =1	0.91	0.93	-0.02	0.02	0.31
Read the newspaper: Almost every day =1	0.04	0.05	-0.01	0.02	0.61
Read the newspaper: At least once a week =1	0.21	0.20	0.01	0.03	0.71
Read the newspaper: Less than once a week =1	0.25	0.23	0.02	0.03	0.53
Currently attending school =1	0.13	0.13	-0.01	0.03	0.85
Kms to the nearest primary school	2.07	2.57	-0.50	0.60	0.41
Ever attended vocational training or technical school =1	0.14	0.13	0.01	0.03	0.67
Beliefs: Greatest benefit of training is technical skills =1	0.62	0.61	0.01	0.04	0.81
Beliefs: Greatest benefit of training is new friend/peers who can help your business =1	0.02	0.02	0.00	0.01	0.69
Beliefs: Greatest benefit of training is budgeting/accounting skills =1	0.02	0.03	-0.01	0.01	0.52
Beliefs: Biggest hurdle in participating in a training is paying for it =1	0.91	0.90	0.01	0.02	0.71
Beliefs: Biggest hurdle in participating in a training is finding time =1	0.00	0.00	0.00	0.01	0.94
Beliefs: Biggest hurdle in participating in a training is caring for dependents =1	0.03	0.03	-0.01	0.01	0.68
Ever started a business =1	0.33	0.32	0.01	0.04	0.78
Any work experience =1	0.36	0.36	0.00	0.04	0.98
Ever borrowed money =1	0.32	0.33	-0.01	0.04	0.76
Able to obtain a loan of 10,000 MK within the next month =1	0.17	0.16	0.01	0.03	0.72
Able to obtain a loan of 50,000 MK within the next month =1	0.04	0.03	0.02	0.01	0.24
Have someone who appreciated or spoke well about the respondent =1	0.11	0.10	0.01	0.02	0.66
Have someone who helped the respondent to learn =1	0.58	0.58	0.00	0.04	0.92
Have someone who assisted the respondent to make plans for the future =1	0.36	0.38	-0.02	0.04	0.53
Have someone who provided to the respondent personal advice =1	0.19	0.21	-0.02	0.03	0.60
Have someone who gave professional advice =1	0.57	0.55	0.01	0.04	0.74
Have someone who lent or gave you money =1	0.59	0.59	0.00	0.04	0.94
Have someone who loaned or gave in-kind help =1	0.47	0.41	0.06	0.04	0.14
Have someone who cheered the respondent up when feeling sad =1	0.19	0.24	-0.05	0.03	0.12
Total number of people the respondent had asked for advice =1	0.39	0.41	-0.02	0.06	0.79
Ever had taken any type of alcohol =1	0.14	0.18	-0.04	0.03	0.16

Table 2A. ITT Estimates: Childbearing in the last 6 and 12 months
Probit Marginal Effects

Variables	(1) birth_6mths	(2) birth_6mths	(3) birth_1year	(4) birth_1year
Vocational Training	-0.018*** [0.006]	-0.012 [0.010]	-0.033*** [0.011]	-0.009 [0.013]
Vocational Training with Peptalk	-0.005 [0.014]	0.005 [0.023]	-0.004 [0.018]	0.014 [0.031]
Female	0.029** [0.012]	0.043*** [0.014]	0.077*** [0.019]	0.126*** [0.012]
Vocational Training*Female		-0.011 [0.012]		-0.039*** [0.014]
Vocational Training with Peptalk*Female		-0.019 [0.015]		-0.031 [0.026]
Observations	1,163	1,163	1,163	1,163

Robust standard errors in brackets. Standard errors are clustered at the master craftsperson level.

*** p<0.01, ** p<0.05, * p<0.1

Note 2A: Baseline probabilities. Childbearing in the last 6 months is 5.2 percent and childbearing in the last 12 months is 9.2 percent.

Table 2B. ToT Estimates: Childbearing in the last 6 and 12 months
Probit Marginal Effects

Variables	(1) birth_6mths	(2) birth_6mths	(3) birth_1year	(4) birth_1year
Vocational Training	-0.015* [0.008]	-0.003 [0.009]	-0.033* [0.017]	-0.001 [0.015]
Vocational Training with Peptalk	0.001 [0.011]	0.004 [0.015]	0.005 [0.017]	0.013 [0.025]
Female	0.014 [0.011]	0.033*** [0.011]	0.060*** [0.018]	0.118*** [0.015]
Vocational Training*Female		-0.020** [0.008]		-0.050*** [0.014]
Vocational Training with Peptalk*Female		-0.005 [0.016]		-0.013 [0.029]
Observations	922	922	922	922

Robust standard errors in brackets. Standard errors are clustered at the master craftsperson level.

*** p<0.01, ** p<0.05, * p<0.1

Note 2B: Baseline probabilities. Childbearing in the last 6 months is 4.9 percent and childbearing in the last 12 months is 9.1 percent.

Table 3A. ITT Estimates: HIV Testing
Probit Marginal Effects

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	everHIVtest	everHIVtest	HIV_test1mth	HIV_test1mth	HIV_test6mths	HIV_test6mths	HIV_test1year	HIV_test1year
Vocational Training	0.040*** [0.014]	0.050** [0.020]	0.009 [0.013]	0.006 [0.011]	0.067*** [0.016]	0.057*** [0.022]	0.062*** [0.017]	0.053** [0.022]
Vocational Training with Peptalk	0.047 [0.032]	0.080** [0.037]	0.022 [0.027]	0.080** [0.037]	0.062 [0.044]	0.142*** [0.051]	0.078** [0.038]	0.110** [0.051]
Female	0.106*** [0.020]	0.139*** [0.013]	0.020 [0.024]	0.033*** [0.008]	0.088** [0.040]	0.094** [0.041]	0.165*** [0.023]	0.159*** [0.013]
Vocational Training*Female		-0.034 [0.031]		0.007 [0.023]		0.030 [0.035]		0.026 [0.031]
Vocational Training with Peptalk*Female		-0.121 [0.101]		-0.089*** [0.021]		-0.176*** [0.058]		-0.091 [0.083]
Observations	1,159	1,159	1,110	1,110	1,160	1,160	1,160	1,160

Robust standard errors in brackets. Standard errors are clustered at the master craftsperson level.

*** p<0.01, ** p<0.05, * p<0.1

Note 3A: Baseline probabilities. Ever HIV tested is 80.6 percent, HIV tested in the last month 13 percent, HIV tested in the last 6 months 39 percent, and HIV tested in the last year 58 percent.

Table 3B. ToT Estimates: HIV Testing
Probit Marginal Effects

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	everHIVtest	everHIVtest	HIV_test1mth	HIV_test1mth	HIV_test6mths	HIV_test6mths	HIV_test1year	HIV_test1year
Vocational Training	0.028 [0.019]	0.035 [0.024]	-0.014 [0.013]	-0.008 [0.017]	0.054** [0.022]	0.060** [0.028]	0.055** [0.022]	0.047 [0.029]
Vocational Training with Peptalk	0.054 [0.035]	0.091** [0.040]	0.044 [0.030]	0.093** [0.043]	0.086* [0.047]	0.148*** [0.055]	0.090** [0.042]	0.124** [0.057]
Female	0.105*** [0.027]	0.135*** [0.016]	0.006 [0.025]	0.035*** [0.010]	0.054 [0.044]	0.091** [0.043]	0.147*** [0.028]	0.147*** [0.016]
Vocational Training*Female		-0.024 [0.039]		-0.014 [0.027]		-0.014 [0.047]		0.025 [0.044]
Vocational Training with Peptalk*Fer		-0.137 [0.106]		-0.077*** [0.023]		-0.141** [0.068]		-0.095 [0.091]
Observations	912	912	862	862	918	918	918	918

Robust standard errors in brackets. Standard errors are clustered at the master craftsperson level.

*** p<0.01, ** p<0.05, * p<0.1

Note 3B: Baseline probabilities. Ever HIV tested is 80.2 percent, HIV tested in the last month 12.3 percent, HIV tested in the last 6 months 38.4 percent, and HIV tested in the last year 57.6 percent.

Table 4A. ITT Estimates: Transactional Sex
Probit Marginal Effects

Variables	(1)	(2)	(3)	(4)
	trans_beenoffered	trans_beenoffered	trans_offered	trans_offered
Vocational Training	0.009 [0.008]	0.029*** [0.010]	0.001 [0.005]	0.001 [0.006]
Vocational Training with Peptalk	-0.011 [0.020]	0.006 [0.030]	-0.009 [0.014]	-0.007 [0.017]
Female	0.071*** [0.013]	0.117*** [0.010]	-0.060*** [0.007]	-0.060*** [0.006]
Vocational Training*Female		-0.035*** [0.012]		0.000 [0.014]
Vocational Training with Peptalk*Female		-0.029 [0.023]		- -
Observations	1,071	1,071	1,164	1,107

Robust standard errors in brackets. Standard errors are clustered at the master craftsperson level.

*** p<0.01, ** p<0.05, * p<0.1

Note 4A: Baseline probabilities. Ever been offered a gift or money in exchange for sex is 7.4 percent and ever offered a gift or money in exchange for sex is 5.1 percent.

Table 4B. ToT Estimates: Transactional Sex
Probit Marginal Effects

Variables	(1)	(2)	(3)	(4)
	trans_beenoffered	trans_beenoffered	trans_offered	trans_offered
Vocational Training	0.019 [0.013]	0.037** [0.017]	0.003 [0.006]	0.002 [0.007]
Vocational Training with Peptalk	-0.017 [0.023]	- -	-0.007 [0.013]	-0.005 [0.017]
Female	0.085*** [0.020]	0.126*** [0.015]	-0.050*** [0.008]	-0.053*** [0.008]
Vocational Training*Female		-0.032* [0.018]		0.004 [0.017]
Vocational Training with Peptalk*Fer		-0.035 [0.025]		
Observations	794	794	891	835

Robust standard errors in brackets. Standard errors are clustered at the master craftsperson level.

*** p<0.01, ** p<0.05, * p<0.1

Note 4B: Baseline probabilities. Ever been offered a gift or money in exchange for sex is 7.9 percent and ever offered a gift or money in exchange for sex is 5.2 percent.

Table 5: Mechanisms – Happiness, Optimism and Aspirations
Probit Marginal Effects

Variables	Feel able to improve through hard work		Feel not able to perform as well as others		Do you have perseverance		Aspirations: Perceives to be Entrepreneur more than an employee*	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Vocational Training	-0.036 [0.022]	-0.034 [0.028]	-0.021 [0.019]	0.013 [0.024]	-0.007 [0.015]	0.004 [0.021]	0.037 [0.024]	0.048** [0.021]
Vocational Training with Peptalk	0.025 [0.039]	0.068 [0.050]	0.112** [0.050]	0.099 [0.067]	0.008 [0.041]	0.015 [0.053]	0.078*** [0.028]	0.083*** [0.027]
Female	-0.026 [0.023]	-0.006 [0.012]	-0.042 [0.030]	0.022 [0.024]	-0.035* [0.021]	-0.011 [0.009]	-0.042** [0.021]	-0.023 [0.016]
Vocational Training*Female		-0.007 [0.030]		-0.094** [0.037]		-0.029 [0.029]		-0.024 [0.022]
Vocational Training with Peptalk*Female		-0.117 [0.094]		0.038 [0.085]		-0.018 [0.080]		-0.022 [0.059]
Observations	1,158	1,158	1,198	1,198	1,197	1,197	1,162	1,162

*Note: Columns 1 to 3 refer to "strongly agree" whereas the rest of columns to "strongly agree" and "agree".
 Robust standard errors in brackets. Standard errors are clustered at the master craftsperson level.

*** p<0.01, ** p<0.05, * p<0.1

Variables	Prefers to use 10,000MK to start business*		Able to obtain a 10,000MK loan*		Happy and satisfied with life*		Life has improved during last year*	
	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
Vocational Training	-0.001 [0.007]	0.009 [0.008]	0.020 [0.016]	0.072*** [0.017]	0.082*** [0.020]	0.077*** [0.022]	0.144*** [0.044]	0.165*** [0.052]
Vocational Training with Peptalk	0.025** [0.011]	0.027** [0.013]	0.015 [0.040]	0.008 [0.048]	0.057** [0.024]	0.083*** [0.025]	0.057 [0.060]	0.097 [0.069]
Female	0.010 [0.007]	0.030*** [0.005]	-0.016 [0.035]	0.096*** [0.022]	0.009 [0.018]	0.013 [0.013]	-0.018 [0.033]	0.033*** [0.013]
Vocational Training*Female		-0.033** [0.013]		-0.130*** [0.019]		0.009 [0.025]		-0.055 [0.034]
Vocational Training with Peptalk*Female		-0.005 [0.034]		0.027 [0.077]		-0.109 [0.087]		-0.112 [0.100]
Observations	1,115	1,115	1,195	1,195	1,142	1,142	1,196	1,196

*Note: Columns 1 to 3 refer to "strongly agree" whereas the rest of columns to "strongly agree" and "agree".

Robust standard errors in brackets. Standard errors are clustered at the master craftsperson level.

*** p<0.01, ** p<0.05, * p<0.1

Variables	Food insecurity (often skips meals or worry about shortages)*		Able to earn money outside farming*		Has to share earn income with others*		Felt stressed or nervous last month*		Felt confident to solve problems last month*	
	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)
Vocational Training	-0.023 [0.024]	-0.052** [0.022]	0.142*** [0.041]	0.142*** [0.034]	-0.021 [0.020]	-0.018 [0.027]	0.030 [0.019]	0.050** [0.022]	0.024 [0.026]	0.014 [0.029]
Vocational Training with Peptalk	-0.010 [0.048]	-0.032 [0.057]	0.063 [0.054]	0.098* [0.055]	0.075* [0.039]	0.071 [0.050]	0.079* [0.044]	0.095 [0.062]	-0.017 [0.043]	-0.074 [0.057]
Female	-0.026 [0.024]	-0.090*** [0.025]	-0.045** [0.022]	-0.033*** [0.009]	0.004 [0.025]	0.010 [0.014]	-0.020 [0.023]	0.028 [0.020]	-0.076*** [0.028]	-0.120*** [0.014]
Vocational Training*Female		0.078 [0.051]		-0.000 [0.039]		-0.010 [0.033]		-0.058* [0.033]		0.033 [0.031]
Vocational Training with Peptalk*Female		0.055 [0.089]		-0.103 [0.096]		0.011 [0.093]		-0.042 [0.105]		0.153* [0.091]
Observations	1,199	1,199	1,197	1,197	1,196	1,196	1,180	1,180	1,199	1,199

*Note: Columns 1 to 3 refer to "strongly agree" whereas the rest of columns to "strongly agree" and "agree".

Robust standard errors in brackets. Standard errors are clustered at the master craftsperson level.

*** p<0.01, ** p<0.05, * p<0.1

Figure 1. Evaluation Design

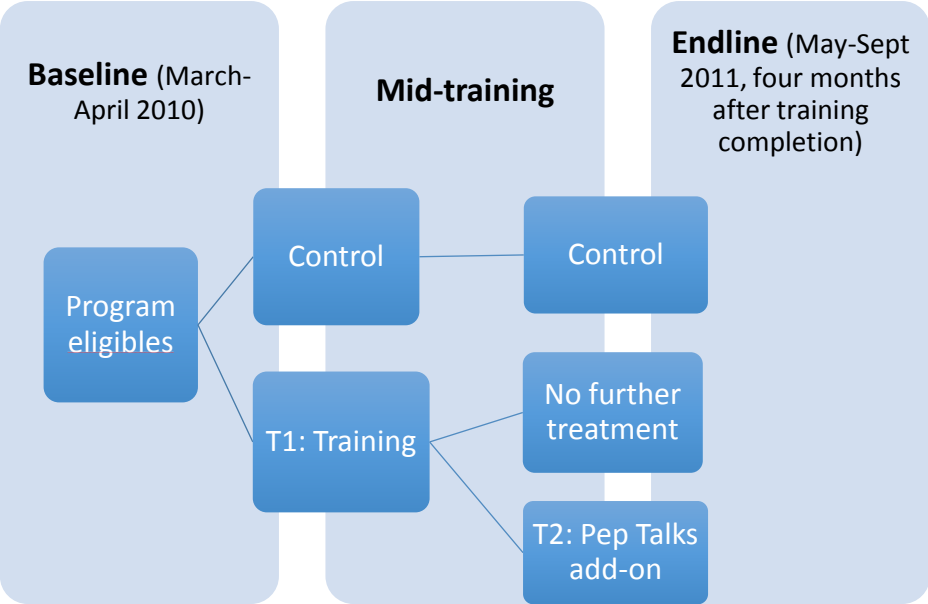


Figure 2. Treatment: Vocational Training and Inspirational Talk
Proportion of selected eligible population at the district level

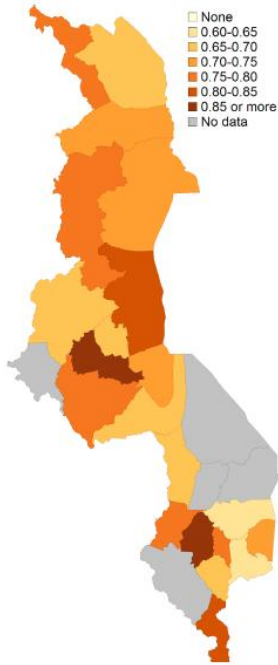
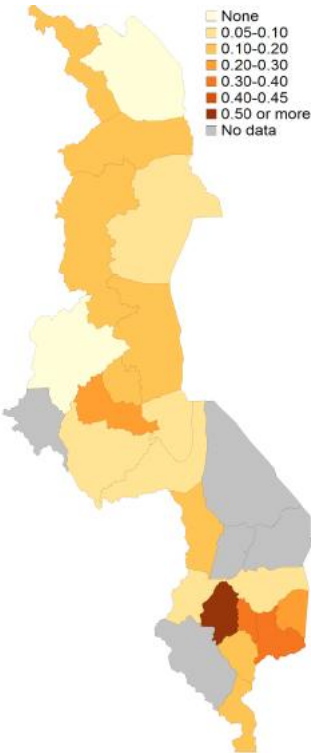


Figure 3. Treatment: Inspirational Talk
Proportion of selected eligible population at the district level



ANNEX 1

Script for Inspirational Talk:

Introduction:

Thank you for coming to meet with me today. I wanted to speak briefly with you about your progress in your apprenticeship.

How has it been going for you so far?

Be positive and supportive in response but do not get excessively diverted by a full discussion.

Earlier today I met with your supervisor and heard more about your program. It seems like you are really learning a lot.

Empowerment/inspiration:

This portion should be completed along with the work sheet on page 4 and signed by both the respondent and the interviewer and ultimately taken by the interviewer.

We're trying to get a sense of how apprentices' chose their careers and their futures. Why do you think you'd make a good [OCCUPATION]? Which of your traits do you think will help you become a great [OCCUPATION]? How do those traits make you a better [OCC]?

If you continue to do well as a [OCC] how do you think that will help you in your life in the next year? [make a certain purchase, take a trip, help out a family member etc.]

How about in five years? [start their own business, make a larger purchase, afford a wedding etc.]

Future Earnings:

How much do you think that an average [OCCUPATION] can make over the course of a week?

And how much do you think a really good [OCCUPATION] can make over the course of a week?

How do you think you would use that income? I'm sure that having that additional money will prove a big help for you in your life.

Employability:

As a young [OCCUPATION] in your town, do you think it will be easy to find a lot of work? What will you do if you aren't able to find work immediately? Finding work is never easy. But if you are willing to start small and work hard, I'm sure that you will be able to improve as a [OCCUPATION] over time, and little by little your business will grow so you should just remember to be patient and to stay optimistic.

Conclusion:

Well, it sounds like with the skills you are learning here, you have really set the foundation for becoming a successful [OCCUPATION]. And I am sure that as you get more experience you will continue to get better and better. Given how much progress you have already made during this apprenticeship, as the years go on and you continue learning and improving, I am sure that you will be able to be more and more successful. Maybe soon you will be able to [MENTION ONE OF THEIR 1-YEAR ASPIRATIONS] or even [MENTION A 5-YEAR ASPIRATION]! Becoming a successful [OCC] will really be a big help to you achieving your aspirations.

In a few years when you are a well experienced [OCCUPATION] in [TOWN/CITY] I am sure that you will be doing very well with a lot of success! I wish you the best of luck. This will doubtlessly be a really exciting year for you.

Thanks so much for your time. Congratulations and keep up the good work!

Apprentice Skills Traits and Future Aspirations Form

I. What are three of the apprentice’s key traits that make them well suited for their occupation?

TRAIT	IMPACT ON CAPABILITY
1.	
2.	
3.	

II. What three things will your new skills and a job help you to do or achieve over the next year?

1 Year Aspirations
1.
2.
3.

III.If you continue to be successful in your job, how do you imagine your life in five years?

5 Year Aspirations
1.
2.
3.

Signatures:

Apprentice Name

Interviewer Name

Table A.1 Number of Observations of Control and Treatment by District

District	Control	Treatment	Total
Blantyre	0	37	37
Chiradzulu	9	35	44
Chitipa	10	31	41
Dedza	14	32	46
Dowa	7	49	56
Karoga	16	33	49
Kasungu	18	35	53
Likoma	13	22	35
Lilongwe	41	133	174
Mulanje	17	29	46
Mwanza	14	32	46
Mzimba	25	77	102
Mzuzu	10	35	45
Neno	6	32	38
Nkhata Bay	11	28	39
Nkhotakota	7	32	39
Nsanje	9	37	46
Ntcheu	19	37	56
Ntchisi	17	33	50
Phalombe	14	36	50
Rumphi	11	26	37
Salima	12	33	45
Thyolo	14	27	41
Zomba	14	22	36
Total	328	923	1,251