

Reducing Early Pregnancy in Low Income Countries: A Literature Review and New Evidence

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Early pregnancies in low income countries

- Early pregnancy rates are very high in low income countries:
 - **13** births per 1000 women in the ages 15-19 in high income countries vs **96** in low income countries (World Bank 2015)
- Early pregnancies are associated with negative effects on:
 - Women and child's health (higher risk of maternal mortality)
 - Education (Goldin and Katz JPE 2002)
 - Future employment and economic opportunities (Bailey QJE 2006; Miller EJ 2010)

Outline

1. Literature review
2. New evidence from Tanzania
3. Conclusion (women need jobs, not just condoms)

Literature review - Scope

- Interventions that affect pregnancies or sexual behavior,
- of young women (15-20 years old),
- in low (and a few middle) income countries,
- in this century.

Literature review – Structure

- Older, medical, reviews: Demand (patient level) vs. Supply (health service provider level)
- We apply an *econ* thinking and differentiate interventions that affect:
 - Mindsets (preferences and beliefs)
 - Opportunities (constraints)
- Example:
 - Mindset: Information about HIV prevalence by partner age (Dupas AEJa 2011)
 - Opportunity: Recruiting services to help young women in rural villages get jobs in the industry (Jensen QJE 2012)
- Limitation = not always so clearly distinct
 - (Education subsidy: signals the benefits of not getting pregnant & increases future job opportunities?)

Mindset interventions

- Typically:
 - Sexual and reproductive health information (combined with improved access)
- Main mechanisms:
 - Information «how to avoid STDs/pregnancy», «how to say no/negotiate»
 - Beliefs «probability to get HIV» «consequences of early pregnancies»
 - Access: lower cost of safe sex
- Implicit assumption:
 - Early pregnancy is not the best option, girls have clear, better, alternatives

Mindset interventions - Summary

Study	Intervention type	Improved knowledge and attitudes	Safer sexual behavior	Reduced pregnancy
(Eggleston et al. 2000)	SRH info. (Jamaica)	Some	Some	Not reported
(Kim et al. 2001)	SRH info.+health services (Zimbabwe)	Some	Some	Not reported
(R. J. Magnani et al. 2001)	SRH info. + health services (Brazil)	Yes	No	Not reported
(Agha 2002)	SRH info.+ condoms (Cameroon, Botswana, South Africa, Guinea)	Yes	Some	Not reported
(Okonofua et al. 2003)	SRH info.+health services (Nigeria)	Yes	Yes	Not reported
(C. Lou & et al 2008) - (Tu et al. 2008)	SRH info. (Shangai)	Not reported	Some	Not reported
(Agha & Van Rossem 2004)	SRH info. (Zambia)	Yes	No	Not reported
(Cabezón et al. 2005)	Abstinence (Chile)	Not reported	Not reported	Yes
(R. Magnani & et al 2005)	SRH info. (South Africa)	Some	Some	Not reported
(Cartagena et al. 2006)	SRH info. (Mongolia)	Yes	No	Not reported
(Walker et al. 2006)	SRH info. (Mexico)	Yes	No	Not reported
(Ross et al. 2007) - (Doyle et al. 2010)	SRH info. + health services (Tanzania)	Yes	No	No
(Daniel et al. 2008)	SRH info. (India)	Yes	Yes	Not reported
(Dupas 2011)	HIV Risk info.	Not reported	Yes	Yes

Mindsets interventions – Conclusion

- Impacts:
 - **Knowledge** generally improves
 - **Behavior** is hard to change (condom use and other contraceptives, number of partners, age at first intercourse, ...)
 - **Pregnancy**: often NOT REPORTED. Decreased in two studies (Cabezón 2005, Duflo 2011 – not the standard SRH campaign)
- Limitations:
 - Only three studies report effects on pregnancy
 - Small number of observations (few countries, contexts, ...)
 - High heterogeneity in contexts, interventions, study design, measurement
 - Measurement of unobservable behavior (condom use)

Opportunities and economic incentives

- Interventions:
 - (un)conditional cash transfer, economic opportunities (entrepreneurship, wage employment)
- Main mechanisms:
 - Eligibility (ex: Honduras: household with pregnant woman or child < 3 years)
 - Condition:
 - Schooling: incentive not to get pregnant
 - Health check ups: SRH information
 - Transfer:
 - Improved economic opportunities
 - Opportunities: offers an alternative to motherhood

Opportunities intervention - Summary

Study	Intervention	Condition	Safer sexual behavior	Reduced pregnancy
(Stecklov et al. 2007)	CCT (Honduras, Nicaragua, Mexico)	School attendance/enrollment + health check-ups Honduras: eligibility=household with pregnant woman or child below three	Mexico: increased contraceptive use	In Honduras only: increased fertility
(Feldman et al. 2009)	CCT (Mexico)	School attendance/enrollment + health check-ups	Short-term effects	Not reported
(Baird et al. 2010)	CCT (Malawi)	School attendance	YES	YES
(Alam et al. 2011)	CCT (Pakistan)	School attendance	Not reported	YES
(Baird et al. 2011)	CCT vs UCT (Malawi)	School attendance		YES in UCT
(de Walque et al. 2012)	CCT (Tanzania)	Test negative to STD tests	YES	Not reported
(Jensen 2012)	Link to industry jobs (India)	-	Not reported	YES

Selected studies

- Dupas 2011 – Standard abstinence course Vs. HIV risk by partner age
 - risk info: 28 percent decrease in teen pregnancy
 - abstinence course: no impact on teen pregnancy
 - girls switched from older to same age partners
 - > information only can have strong impacts, young women have a choice
- Baird et al. 2011 – CCT vs UCT
 - «Ever pregnant» reduced by 44% more in UCT than in control
 - No effect from CCT (but CCT increased schooling)
 - UCT effect comes from out-of-school girls
 - *“25% of the young women who were sexually active at baseline reported that they started their sexual relationships because they "needed his assistance" or "wanted gifts/money””*
- Jensen 2012
 - Provided three years of recruiting services to help young women in randomly selected rural Indian villages get jobs in the business process outsourcing industry.
 - The probability to have a child reduces from 43% to 37.3%

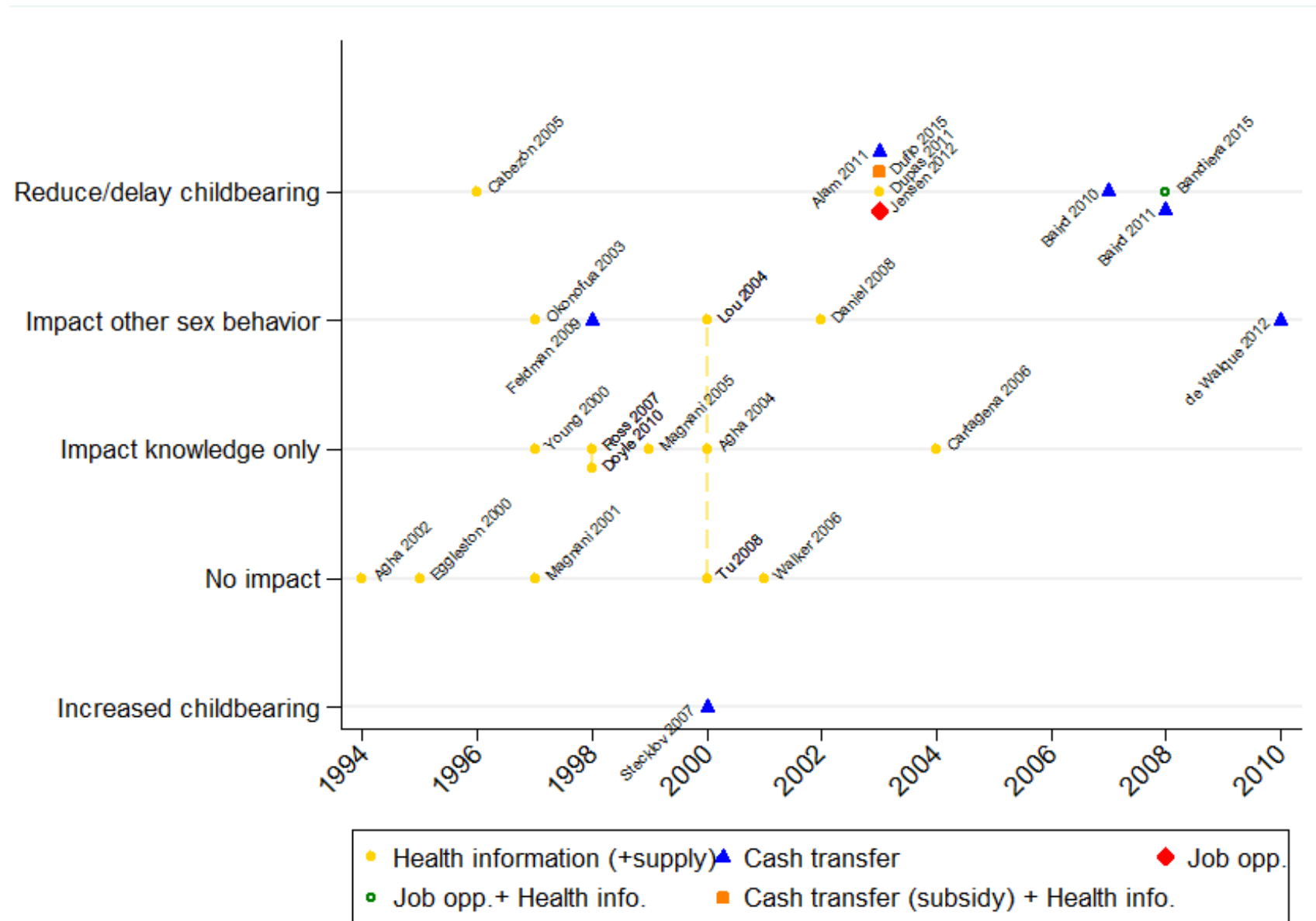
Combining *Mindset* and *Opportunities* interventions

- Duflo et al. 2015 - education subsidies vs abstinence curriculum vs both combined (Kenya)
 - Education subsidy: reduced the girls' teen pregnancy rate from 16 percent to 13 percent.
 - Abstinence education alone: no impact
 - Both combined: fertility fell less than when the education subsidy was provided alone
 - *“Giving girls additional motivation to delay their first pregnancy (the opportunity to go to school if they want to do so) is an extremely powerful (and inexpensive) way to reduce early fertility.”*
 - *“the abstinence-until-marriage message increase early marriage and counteract the effects of increased access to schooling on fertility”*

Combining *Mindset* and *Opportunities* interventions

- Bandiera et al. 2015 – BRAC clubs: vocational training + SRH info. + safe meeting space (Uganda)
 - Raised income generating activities by 72% and expenditure on private consumption by 38%.
 - Teen pregnancy falls by 26%, and early entry into marriage/cohabitation falls by 58%.
 - The share of girls reporting sex against their will drops from 14% to almost half that level.

The studies reviewed by date of intervention, type of intervention and impact.



Girl Power project – Tanzania

- We have learnt that girls have *agency*: their future is not fully determined by external factors.
- But, motherhood may be the best alternative.
- Interventions that affect both *mindsets* and *opportunities* look very promising.
- How do SRH information and business-training affect two key mechanisms determining early pregnancy:
 - the extent to which the girls are in control of their bodies and lives
 - the extent to which they see economic opportunities in the future

Girl Power - Design

- Four arms:
 - SRH info.
 - Entrepreneurship training
 - Both combined
 - Pure control
- Cluster randomized control trial:
 - 20 schools per arm, around 3500 girls in total, in four regions
 - Age 16-18
- 2013: Baseline, treatment and survey I with essays
- 2014: survey II
- 2016-2017: survey III

Girl Power – Brief sample description

- The average household consists of six members.
- 20 percent of which are headed by a woman.
- Half of the heads of households are farmers, other are either self-employed or public servants.
- At baseline the majority reported to be sexually active
- 80% agreed with the statement “*Girls in my age sometimes receive money or gifts for having sex with older men*”.
- 60% declare that the girls of their age are often sexually harassed.
- Most of them also know other girls who dropped out of school because they were pregnant.
- Their SRH knowledge is limited.

Girl Power – The essays

- A few weeks after the treatment, we asked all the girls to write a short essay about where they envisioned themselves in five to ten years' time in terms of education, livelihood, marriage and the challenges they expect to face.
- Innovative approach that provides a promising tool to understand how such interventions shape the behavior of young girls
- Two analysis:
 - In-depth: complete reading and categorization of 192 essays
 - Large-scale: index based on word counts in 3069 essays

Quote from the control group

My first priority in life is to educate myself and once I do, I will use my education to prevent cruel practices that other girls are being subjected to such as child marriage, circumcision and arranged marriages. (...) Since I started Form one, it was very difficult for my parents to pay my fees or buy school uniform. I have many problems that bother me, for instance I am completing Form four and to date my parents have not paid the school fees. Sometimes when I go back home, I often cry. Therefore I would like to say that I have many aspirations in life. However, I feel that I will not be successful due to the difficulties I am encountering. (...) I do not have much more to say but I do have one worry. I would like you to give me advice. Once I finish school, what should I do in order for me to avoid the pressures of unwanted pregnancy and the expectation of early marriage?

Quote from SRH group

I have received training on fertility and health and been taught how to say no when a man asks you to have sex with him. You should have a firm stand in saying no and not fear him and start to bite or dig your feet into the ground. You have to stare at him in the face and be serious. All the girls should receive education on how to say no.

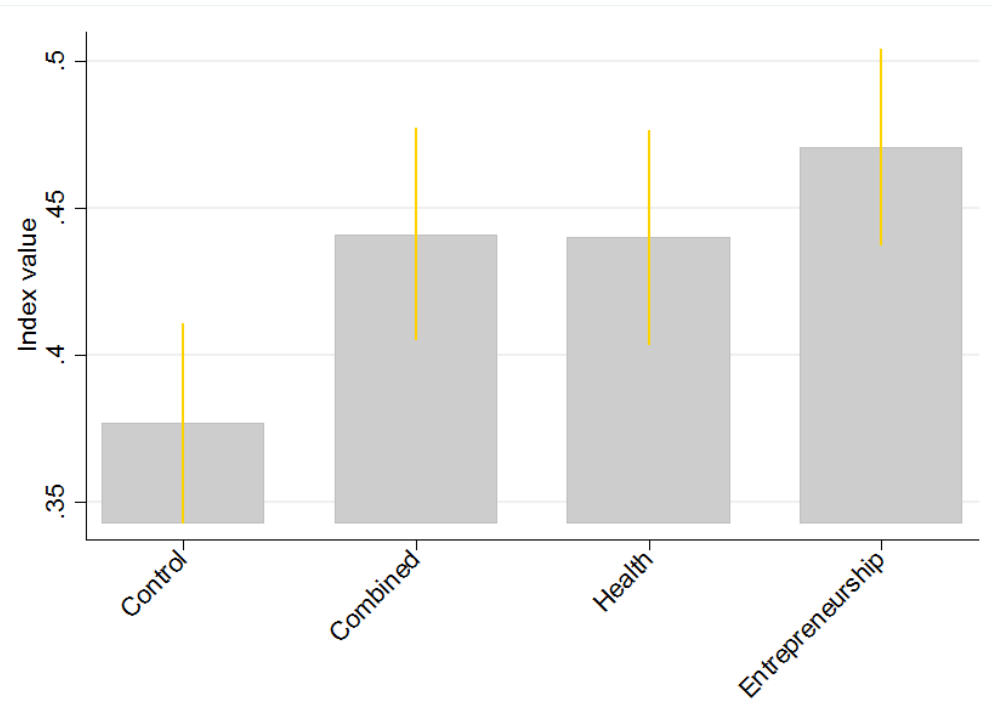
Quote from the entrepreneurship group

I am a 17 year-old girl who studies at ----- secondary school. In August, I received training on entrepreneurship, which has enabled me to understand the opportunities available to me as a girl. (...) After the training, I became more informed on how to start my own business, which will make me work hard for my future. In the next 5 years, I will have a huge business, which I know will bring in income. After completing my education, my life will be based in Morogoro. I do not expect to have children during this time until when I am employed or running my own business that will bring in income and independence from anyone else.

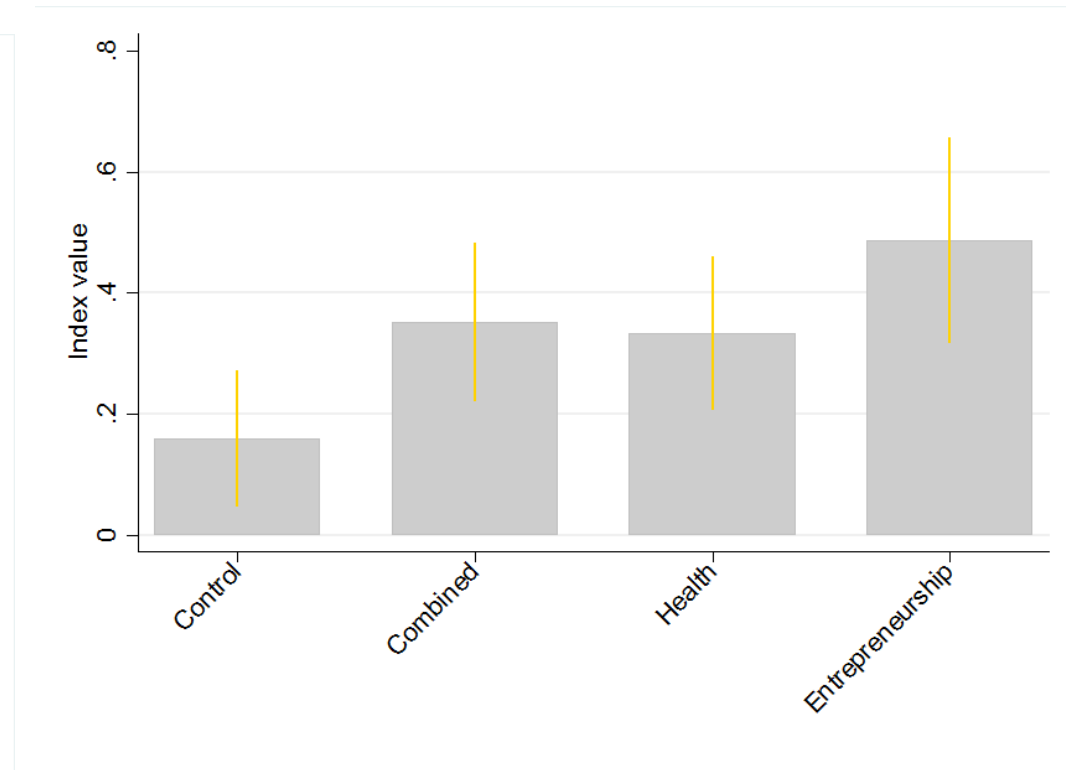
Girl Power - Locus of control

"I am confident", "I am capable", ...

Full sample (n=3069)



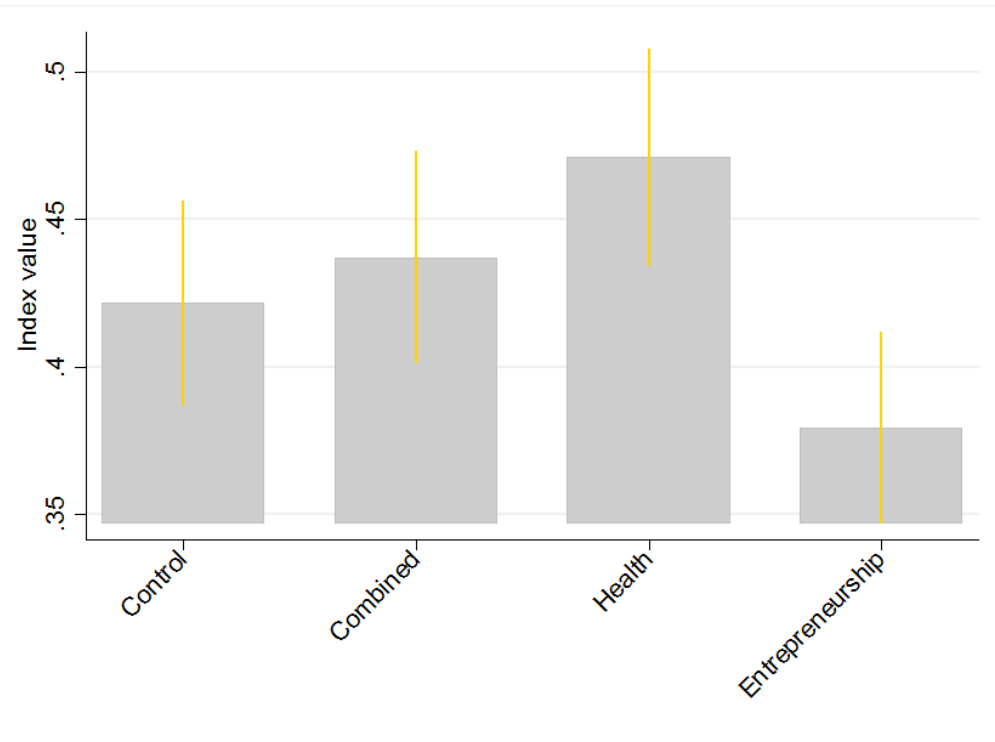
In-depth sample (n=192)



Girl Power - Sex

“Sex”, “Love”, “Maternity”, ...

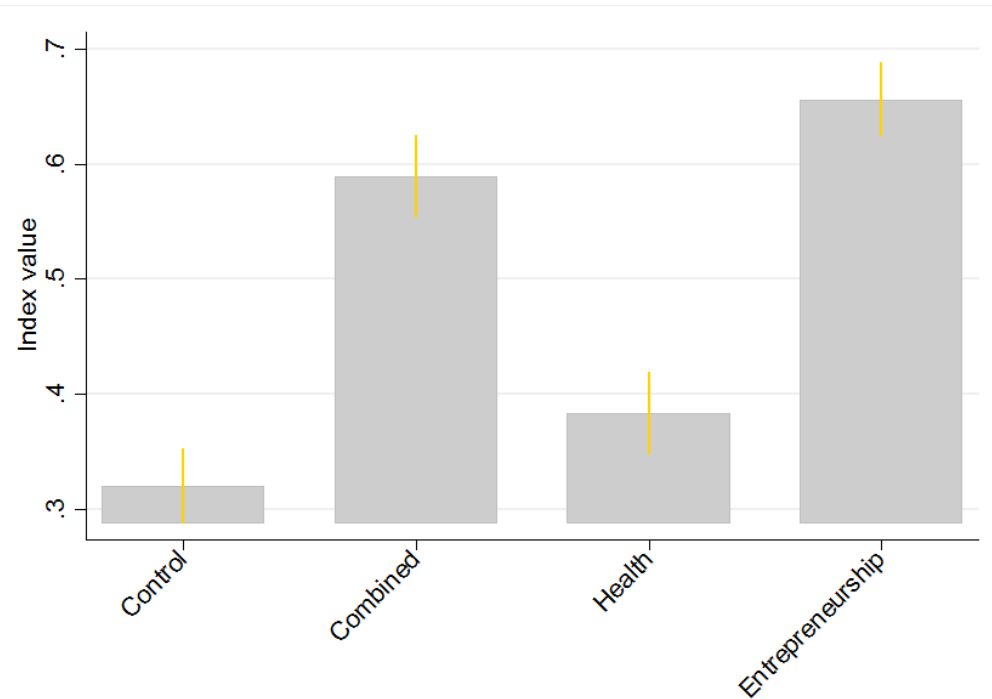
Full sample (n=3069)



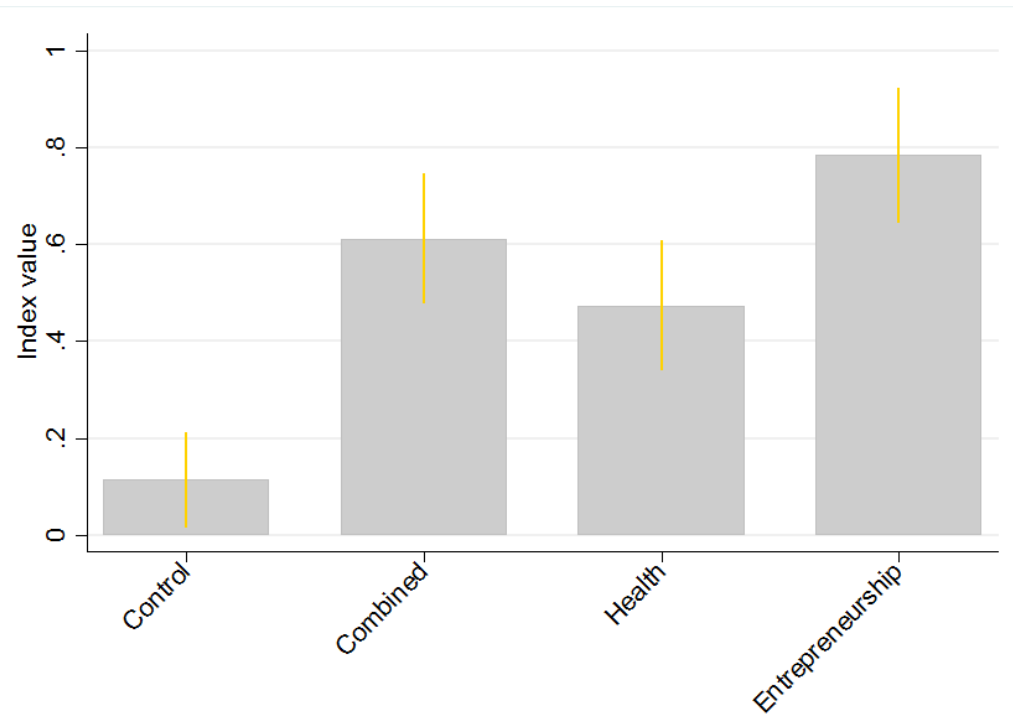
Girl Power – Entrepreneurship general

“I will start a business”, ...

Full sample (n=3069)



In-depth sample (n=192)

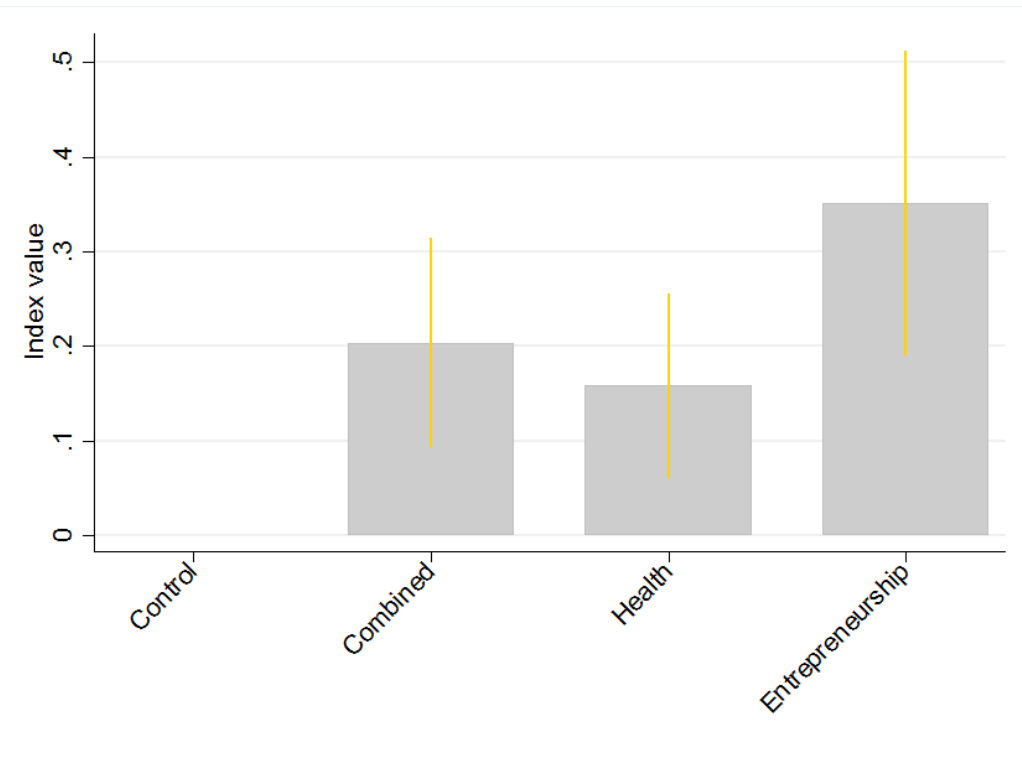
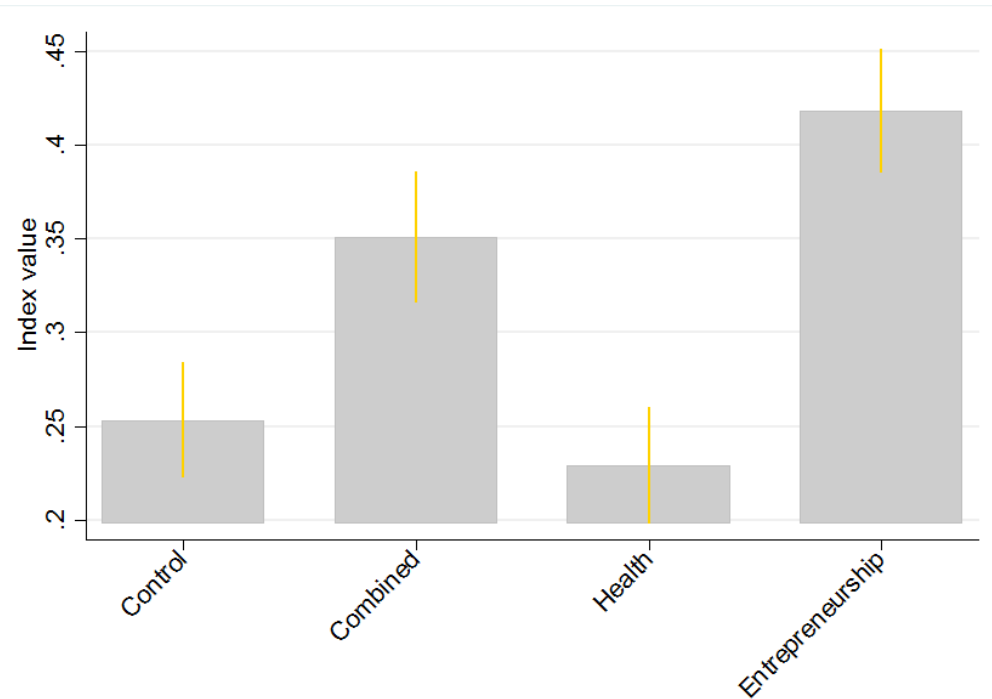


Girl Power – Entrepreneurship specific

“I will start a business selling vegetables”, ...

Full sample (n=3069)

In-depth sample (n=192)



Girl Power - Conclusion

- SRH treatment:
 - higher *locus of control*
 - more likely to discuss *sex issues*.
- Entrepreneurship treatment:
 - mention clear *economic plans and opportunities*.
 - higher *locus of control*, but to a lesser extent mention *sex issues*.
- If delaying pregnancies requires changes in both mindsets (preferences and beliefs over sexual activity, pregnancy and their consequences) and opportunities (economic alternatives to early marriage and motherhood), then entrepreneurship training, alone or in combination with health training, will be the most effective.

Literature review – findings from out of scope reviews

- Cost effectiveness