

Tara Akshar Program: Field Analysis, Impact and Future Potential

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Abstract-Tara Akshar (TA) is a program based on information, communication and technology to promote functional literacy among women under National Literacy Mission. In our research study, we wish to evaluate the impacts of Tara Akshar program among women in Uttar Pradesh. We intend to use the random assignment of women to receive the program to evaluate its effects on literacy and numeracy. In addition, we use novel measures of bargaining power, confidence and cognitive and non-cognitive skills to identify the mechanisms through which female literacy affect household decision-making and children education and health outcomes. Some of our key findings include the dominance of males and in-laws in most households, minimal say about females in joint families, unanimous strong preferences towards male child, negatively stereotyped male-female interaction and the prevalence of purdah system. The impact of Tara Akshar program in enhancing literacy among female is much more relevant as one of the obvious trends is that females who are relatively more educated have a better socioeconomic status leading to a relatively decent standard of living. Their level of happiness seemed to be highly correlated with aspirations for education of their children, their health and a consistent source of income. The author conclude that with proper execution and implementation of Tara Akshar programme to all the villages in the country, its effective impact will not only lead to better education of female which will lead them to take better socio-economic decisions, but also impact the literacy and education outcomes of their next generation which can have a long term positive impact on our country.

Keywords-Tara Akshar, Cognitive psychology, Self fulfilling prophecy; Self-efficacy

I. INTRODUCTION

Tara Akshar (TA) is an initiative of Development Alternatives (DA) Group and is one of three instructional methods considered by the Indian government under its National Literacy Mission. TA uses competitive learning techniques and is implemented by computer-aided instructors in a communicative, group-based manner. It runs for two hours a day for 35 days. The method builds on perception from cognitive psychology and is based out of memory tricks: to teach the alphabets in the shape of letters that turn into cartoons which looks like the object that begins with that letter.

The TARA Akshar+ program has been running in 8 states in the country for over a decade. Implementation of this initiative has led to over 2 lakh women being functionally literate. The program recently has been extended further to 49 days. The target population of TA is female members (adult) in Hindi-speaking states of SC and ST (<http://www.taraakshar.org/>). Since its initiation in 2006, TA has enabled approx. 60,000 women literate in the states of Jharkhand, Bihar, Madhya Pradesh, Haryana, Uttar Pradesh, Uttarakhand, Rajasthan and Delhi. By enhancing literacy, TA aims to increase educational outcomes and child health, livelihoods, local governance, and gender equality. During the next five years, the aim of TA program is to expand to non-Hindi speaking states and include all illiterate adult women. Such evaluation will give them the necessary insight to proceed in this direction.

II. LITERATURE REVIEW

Impact outcome of literacy program for adults can be split into two parts: first part evaluates the direct effects, i.e. the acquisition of numeracy or literacy, and the other evaluates the indirect effects, for e.g. child health outcomes or intra-household sharing. The set that evaluates direct impact of adult literacy programs, i.e. the acquisition of numeracy or literacy, mainly consist of studies which suffer from various challenges listed below: flawed design of experimental program (such as lack of a group for comparison); being quite small, and poor assessment tools (Ortega and Rodríguez, 2008; Carron, 1990). Another literature by Banerji, Berry, and Shotland (2017) provide a rigorous evaluation of literacy classes on language and math scores in the states of Bihar and Rajasthan in India.

The studies which evaluate indirect effects of a literacy program of adults incorporates judgement of large scale adult literacy program on consumption of households (Blunch & Pörtner, 2011); the evaluation of maternal involvement in the literacy program of adults on the child mortality in rural area of Ghana (Blunch, 2013); and the evaluation of the positive effects of maternal literacy on the student's maths score in India (Banerji et al., 2017). These studies show that adult literacy programs may have a positive effect on literacy rate of participants. Adult literacy program has also been evaluated (by comparing illiterate and literate adults) in terms of their impact on outcomes such as individual earn-

ings (Basu, Narayan, & Ravallion, 2001), children's height-for-age (Gibson, 2001) and inter household sharing (Maddox, 2007). However, the result of such comparisons is not necessarily assignable to particular adult literacy programs.

The major literature on education indicates a strong positive correlation between education and various socioeconomic desirable outcomes. The positive relation between child outcomes and maternal education has been well recorded (as shown by, Thomas, 1990, Senauer and Garcia, 1991, Hopkins et al., 1994). Higher education levels for girls and women are also positively correlated with lower fertility level; better hygiene, health and education outcomes; improved saving practices; and increased gender equity (Thomas, 1990, Senauer and Garcia, 1991, Hopkins et al., 1994).

III. OBJECTIVES OF OUR STUDY

1. To evaluate the impacts of Tara Akshar among sample women in Uttar Pradesh.
2. To identify the mechanisms through which female literacy affect households decision-making and children educational and health outcomes through measures of bargaining power, confidence and cognitive and non-cognitive skills.
3. To identify whether female literacy impact stereotyped male-female interaction, or dominance of males or the prevalence of purdah system in the village and how they spend their time throughout the day whether in income generating activities, leisure/gossiping, cooking etc.
4. Whether Tara Akshar program should be extended and implemented to all the states in India to increase women welfare and society welfare which will lead to long term favourable growth for the country.

IV. DATA AND METHODOLOGY

For reference, questionnaire has been reproduced below. Our sample is a mix of joint and nuclear, rich and poor families with little evidence of migration. We did sample of 8 households in the village to assess their economic conditions, standard of living, education and health status.

The methodology used in the study is make a sample survey of Acheja Village in Dadri, Uttar Pradesh and analyse it, draw conclusions and depending upon the results whether the program can be extended to other states throughout the country for the welfare of women and society as a whole.

Unmetalled brick Roads led the path to the Acheja village in Dadri, Uttar Pradesh, where the existence of hamlets is not a pattern. Despite this the presence of houses of members of the same community in a street can be noticed. Keeping the main purpose of the study in view, our survey questionnaire throws light on female confidence, social networks and gender relations within the village. We had a detailed questionnaire for survey to analyse the impact of TA+ program on literacy among women. However, major part of our analysis on the socio-economic status of women and their education was majorly based on the set of questions mentioned

below. The goal of asking these questions has also been mentioned after every section.

V. ANALYSIS AND RESULTS

Within the village, there are no income generating opportunities for females, so those trying to support their family by doing petty business like stitching, hardly fetch Rs. 100-200 a day. It is almost impossible for them to move out in search of work opportunities. An illiterate woman says that she wants to work from home, but denies going out and working. In spite of this, females themselves appear unwilling to study further irrespective of their current education level.

Coming to the village administration, it is plagued by a corrupt Panchayat and an inefficient PDS, where the Pradhan is neither approachable nor supportive towards the lower end families of the village. In addition, hardly a few have voter ID cards and thus don't get a chance to vote. We were lucky enough to survey the family of a PDS distributor in the village. He himself disclosed the pressure exerted from the upper end and the resultant bias in favour of wealthier and influential families.

From our (sample of 8 households) survey analysis, 70 % of our sample households had a pucca toilet facility, and access to town electricity. Almost 85% of them have access to tap water. However, what is surprising to our findings is that in almost 70% of the households, children were sent to private schools and were taken to private hospitals whenever needed. This might reflect the dearth of accessible public schools and health centres with efficient functioning.

Nearly 85% of our sample surveyed families were sending children to a Hindi medium school. Nevertheless, their aspiration for a better future of their children is independent of their own education level. For example: one of the illiterate respondent aspires for her children to achieve heights without expectations to support the family financially. With the exception of one family all believe in educating their children for a successful professional life. Only one household, a female is not at all convinced of the future benefits of education due to her stressful life and tense family atmosphere.

The socioeconomic environment of the village can be best explained as the one with—

- In our sample survey, 75% of the households are Dalits. It seems that on an average non-dalits have relatively better access to major basic amenities, economic and social opportunities.
- Wealth in the form of equipments and agricultural land is not very common (with the exception of one of the wealthier families). Main source of income for almost all of them is via non-farm activities.
- Women are marginalized owing to largely prevalent male dominance coupled with dominance by in-laws.
- Joint families tend to have a better financial position as compared to nuclear counterparts. Savings are negligible, especially in nuclear families because of financial reasons. But, non possession of a bank account is independent of

income and type of family. Only the PDS distributor has a bank account.

- There is no difference between marriage and Gauna age in almost all the cases. Some females (mostly illiterate) do not even correctly remember their current age and the age at which they were married.

Some important findings given below add structure to our study.

Key Findings

- The distribution of wealth varies across the village. Nonetheless, two broad heads can be carved out. In relatively poor families, a huge proportion of the wealth comes from dowry. The case is different with relatively rich families. Their dowry worth is quite high as compared to the poorer household, but it is not the major constituent of their wealth. Females are hesitant to disclose the dowry worth in front of family members, but are very comfortable in disclosing a rough decomposition of dowry wealth in their absence.

- The dominant role of mother-in-law is evident when it comes to large joint families where young females have minimal say. But in nuclear families most of the family decisions are taken keeping their view in mind.

- Females are hardly spotted on the road. The survey suggests that almost all females spend a major part of the day doing household chores. They don't step out of their household even to buy grocery. One of our respondents said that she never moves out of the home without the permission of her husband. As females are hesitant in going out, hardly anyone of them is seen on the streets. As a result, others presume the surroundings to be unsafe because of which they do not venture out of their houses. *This is how it manifests as a self fulfilling prophecy.*

- Purdah system prevails with women covering their head even at home. Females cover their faces while interacting with the local representatives of the village, let alone the pradhan or a male shopkeeper. Most females hesitate while speaking to male doctors, shopkeepers or the pradhan. However stereotyped it is, the male female interaction is still not socially acceptable. It can be understood by the fact that a rude woman with a covered head is preferred over a soft spoken female without a veil. This reveals their extreme typecasted notion about restrictions imposed on females.

- Their first reaction to a question of preference for a female child could not gauge their views properly. A vignette type questionnaire with many possible hypothetical situations did a better job. [A question asking about their gender preferences for children conditional on having (a) Two male children, then a female child (b) Two female children, then a male child (c) One male and one female and then child.]

- One of the very obvious and important insights was regarding female preferences for a male child. Preference for the male child seems to be independent of their education level. Females unanimously desired at least one male child and many were willing to take chances until a male was

born. One of our respondents reveal to have a family history of not liking girls. They believe that a male child brings happiness and fortune. There was only one exception: a female undergoing infertility treatment expressed preference for a girl child.

- Realizing the pivotal role of education in shaping a child's personality and ideas, all females in the village had high aspirations regarding the minimum education level of their children. Illiteracy did not seem to be correlated with their understanding of the importance of a decent education level of their child. But the lack of adequate financial resources, the requirement as a helping hand, marriage, social stigmas, and societal pressures appear as roadblocks in their children's education (especially a girl).

- The importance of education is reverberated in many ways. Females of nuclear family paid more attention towards their children's education than those living in joint families. For the latter, the responsibility could be shared, to some extent, by other young members of the family (say, sister or brother in law).

- A general problem with all the females is their interaction within the village. It is very restricted due to stereotypical notions, insecurities, rigid social norms and the supposedly unsafe atmosphere. Education did play a role (however, not very noteworthy) in influencing their comfort level with an unknown male (be it shopkeeper, pradhan, teacher). The apprehension was visibly high at the mention of a male doctor. However, all of them acknowledged the necessity and helplessness one encountered while interacting with a male doctor, since the need is inevitable.

- Their strengths turn out to be their weakness as well. However, they had no issues with cultural restrictions like purdah system. This shows how they accept all social mandates, and never bother to question it.

Our own understanding of the survey provides no traces of discrimination basis caste and religion. It is not possible to comment on this topic due to our interaction being limited to very few households. But gender discrimination comes out quite evidently. This group based phenomenon might be justified on the lines of the past discrimination (rigid status of females).

VI. CONCLUSIONS AND SUGGESTIONS

Since 37 % of the illiterate adults are in India (as per UNESCO, 2014), the evidence from India is important in terms of our comprehension of the broader impact of adult female literacy. Our paper contributes to this small literature by analysing the impact of an adult literacy program named as Tara Akshar+ (TA+) over various ranges of outcomes. Given that the level of happiness seems to be highly correlated with aspirations for education of their children, their health and a consistent source of income while the lack of adequate financial resources, requirement as a helping hand, marriage, social stigmas, and societal pressures appeared as

roadblocks in their children education (especially a girl); there is a strong need to promote education.

We find an improvement in female's health and hygiene; an increased participation in their children's education with the implementation of TA+. There was a higher probability that women would be consulted rather than dictated, in making various household decisions. Females have enhanced their general knowledge of educational and health matters, increased self-efficacy and increased their confidence in public dealing outside their families. TA+ program encouraged women to step out of the home to assemble at a common place to attend classes and communicate for a long time with people outside their family. Further literacy also reduces the income disparity, economic inequality; enhances a country's human capital. It provides better employment opportunities and provides a greater level of socio-economic status. Higher literacy rate also reduces population growth rate. Given that our country has quite young population, higher literacy will actually play an important role in turning our young population into prospective human capital.

Result of Tara Akshar program on all the 8 states (Bihar, Madhya Pradesh, Uttar Pradesh, Haryana, Jharkhand, Rajasthan, Uttarakhand, Delhi and NCR) in terms of success rate of its implementation is over 90% (<http://www.taraakshar.org/Result.aspx>). However, its believed that with proper execution and implementation of Tara Akshar programme to all the villages in the country, its effective impact will not only lead to better education of female which will lead them to take better socio-economic decisions, but also impact the literacy and education outcomes of their next generation which can have a long term positive impact on our country. Its therefore also desirable to have this program widely extend to other states of the country overtime. Since we were limited by the data constraints, it is open to analyse the spillover effects of the TA+ program within families, within villages and within hamlets in future research.

REFERENCES

- [1]. Alderman, Harold, and Derek D. Headey. (2017). "How important is parental education for child nutrition?." *World development* 94.
- [2]. Aoki, Aya. (2005). "Assessing learning achievements and development impact: Ghana's national functional literacy program." *Australian Journal of Adult Learning* 45, no. 1.
- [3]. Aslam, Monazza, and Geeta Gandhi Kingdon. (2012). "Parental education and child health? understanding the pathways of impact in Pakistan." *World Development* 40, no. 10.
- [4]. Basu, K., Narayan, A., & Ravallion, M. (2001). *Is knowledge shared within households? Theory and evidence for Bangladesh*. Working Paper 82, Institute for Social and Economic Change, Bangalore. Retrieved from <https://ideas.repec.org/p/sch/wpaper/82.html>
- [5]. Banerji, Rukmini, James Berry, and Marc Shotland (2017). "The Impact of Maternal Literacy and Participation Programs: Evidence from a Randomized Evaluation in India." *American Economic Journal: Applied Economics* 9, no. 4.
- [6]. Blunch, Niels-Hugo, and Claus C. Pörtner. (2011). "Literacy, skills, and welfare: Effects of participation in adult literacy programs." *Economic Development and Cultural Change* 60, no. 1.
- [7]. Blunch, Niels-Hugo. (2017) "Adult literacy programs in developing countries." *IZA World of Labor*.
- [8]. Braaten, Ragnhild Haugli, and Peter Martinsson. (2015) "Experimental measures of household decision power. Technical Report." 02/2015 CREE.
- [9]. Carron, G. (1990). "The functioning and effects of the Kenya Literacy Program." *African studies review*, 97-120.
- [10]. Deshpande, Ashwini, Alain Desrochers, Christopher Ksoll, and Abu S. Shonchoy. (2017) "The impact of a computer-based adult literacy program on literacy and numeracy: Evidence from India." *World Development* 96,.
- [11]. De Palma, Andre, Nathalie Picard, and Anthony Ziegelmeyer. (2011) "Individual and couple decision behavior under risk: evidence on the dynamics of power balance." *Theory and decision* 70, no. 1.
- [12]. Foster, Andrew D., and Mark R. Rosenzweig. (1996) "Technical change and human-capital returns and investments: evidence from the green revolution." *The American economic review*.
- [13]. Gibson, J. (2001) *Literacy and intrahousehold externalities*. SSRN Scholarly Paper ID 252806. Rochester, NY: Social Science Research Network.
- [14]. Glewwe, Paul, and Michael Kremer (2006). "Schools, teachers, and education outcomes in developing countries." *Handbook of the Economics of Education* 2.
- [15]. Glewwe, Paul. (1999) "Why does mother's schooling raise child health in developing countries? Evidence from Morocco." *Journal of human resources*.
- [16]. Hopkins, J., Levin, C., & Haddad, L. (1994) *Women's income and household expenditure patterns: Gender or flow? Evidence from Niger*. *American Journal of Agricultural Economics* 76(5), 1219-1225.
- [17]. Maddox, B. (2007) *Worlds apart? Ethnographic reflections on "effective literacy" and intrahousehold externalities*. *World Development* 35(3), 532-41.
- [18]. Ortega, D. & Rodríguez, F. (2008) *Freed from illiteracy? A closer look at Venezuela's Misión Robinson literacy campaign*. *Economic Development and Cultural Change* 57(1), 1-30.
- [19]. Paxson, Christina, and Norbert Schady. (2007) "Cognitive development among young children in Ecuador the roles of wealth, health, and parenting." *Journal of Human resources* 42, no. 1.
- [20]. Sandiford, Peter, J. Cassel, M. Montenegro, and G. Sanchez. (1995) "The impact of women's literacy on child health and its interaction with access to health services." *Population studies* 49, no. 1.
- [21]. Senauer, B., & Garcia, M. (1991) *Determinants of the nutrition and health status of preschool children: An analysis with longitudinal data*. *Economic Development and Cultural Change* 39(2), 371-389.
- [22]. Schultz, T. Paul. (1988) "Education investments and returns." *Handbook of development economics* 1.
- [23]. Thomas, D. (1990) *Intra-household resource allocation: An inferential approach*. *Journal of Human Resources* 25(4), 635-64.
- [24]. <http://www.taraakshar.org/Result.aspx>
- [25]. Vashishtha. (1999) "Women's schooling, home teaching, and economic growth." *Journal of political Economy* 107, no. 4.

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Questionnaire surveyed:

Women's Questionnaire related to Education and Health

- How many days was child absent from school in the last week?
- Yesterday, how many hours did child spend on the various activities like school, homework, tuition work (and if yesterday was not a school day, recall the previous school day)
- What is the minimum level of education you would like ur child to achieve?
- Who among the Household members help this child with child education?
- In the last month, how many days was child ill?
- Did the child receive any medical treatment? Where did the child receive medical treatment?
- Who would generally brings the children to the medical centres/doctors/hospitals?

(The goal was to find out the impact of TA+ program on education and health related decisions and know-how for themselves, their children)

Women's Questionnaire related to Gender

- Asking permission for Leaving the house related to Going to a local shop/market (kirana), Visiting a primary health care centre, Visiting natal family, Going for mela/personnal shopping/cinema (entertainment)
- Whether assets held— Do you personally own a mobile phone which you carry at all times?, Do you have a bank account in your name?, In the last two weeks, have you taken a shared auto to anywhere?, Do you practice ghungat / purdah/ pallu? Goal

(Our objective was to understand the impact of TA+ program through improved literacy on various gender related issues)

Women's Questionnaire related to Confidence and Self Efficacy

- How confident would you feel dealing with the following individuals?

Male shopkeeper in the village, Middleman/contractor in the village; Angawadi worker; Female shopkeeper in the village, Child's school teacher, Bank employee, Male hospital doctor/nurse, Female hospital doctor/nurse.

(Main purpose of this question was to understand the outcome of increased literacy in removing social stigma and enhancing their confidence level in terms of interaction with others in the village.)

Women's Questionnaire related to time use

- How much time did they spent on the following activities last week/ last month / last 6 months? On cooking, Fetching water, Collecting wood/fuel, Income generating activities, Do homework with children, Leisure/Gossiping, Talk to teacher or headmaster, Talk to health care worker/doctor or nurse.

(We were interested in finding specific activities that might be affected by increased literacy and seeing whether more/less time is spent on them.)