Study Design for Closing the Child Labor and Forced Labor Evidence Gap: Impact Evaluations in Nepal (SCA-14-22)

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Submitted by
Notre Dame Initiative for Global Development (NDIGD)
940 Grace Hall
Notre Dame, IN 46556

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1 Introduction

With many children being forced into child labor from a very young age, it is necessary to determine not only the factors leading to child labor, but also the methods of intervention most successful at deterring it. Some of the factors leading to child labor include: poverty, lack of access to relevant educational opportunities, lack of awareness of the risks and the effects of child labor, the view that child labor is essential to a family's success, and insufficient institutional frameworks to protect children and enforce proper workforce regulations (Paruzzolo, 2009). Although there are various environmental influences on child and forced labor, little is understood regarding how these dynamics interact, and thus how to best combat the issue. Currently, there are very few rigorous studies evaluating different approaches to combat factors leading to child labor. It is obvious that in the absence of sound evidence derived from rigorous studies, it will be challenging for policy makers and program implementers alike to implement successful policies and programs aimed at combating child labor.

Every year, many policies and programs are formulated to eliminate child labor globally. However, the effectiveness of such programs is a matter of inquiry. It is especially true when there is an absence of studies that use rigorous methods in evaluating the effectiveness of different approaches, or that are able to attribute changes in outcomes to a particular intervention. In recent years, Randomized Controlled Trials (RCTs) are used to conduct rigorous evaluations. Evidence generated through RCTs can inform policy-makers with solid evidence that can be used to scale-up a program, leading to even better results (Karlan and Appel, 2012). The U.S. Department of Labor (USDOL)/Bureau of International Labor Affairs aims to generate new knowledge in the area of child and forced labor by funding research that uses a rigorous approach (an RCT) for the evaluation of a child labor program.

The USDOL-funded cooperative agreement (SCA) supports an RCT impact evaluation able to provide information on effective approaches to fight child labor. There are many unanswered questions surrounding the most cost-effective interventions to combat child or forced labor in developing countries

The Notre Dame Initiative for Global Development (NDIGD), in partnership with UNICEF Nepal and Nepalese municipalities, is implementing an RCT impact evaluation of a

program aimed at combating child labor in Nepal. We believe that the evidence generated through this study will have major policy implications for both UNICEF and other organizations that are active in eliminating child labor. Such policy implications may lead to changes in program design, and may also help scale-up program activities to reach other areas.

This study design report provides specific details on the evaluation approach to be implemented in Nepalese municipalities selected for this study. This report is comprised of: a definition of child labor in the context of this study; description of the UNICEF Nepal program; an impact evaluation design which includes the theory of change, identification strategy, sampling strategy, a description of the randomization and phased-in approach, qualitative data collection strategy, sample size, power calculations, and analysis plan; the implementation plan, which includes questionnaires, survey firm, and quality control; and additional considerations such as the recent earthquake, ethical considerations, and program monitoring approach. Appendices include full questionnaires and work plan.

2 Background

2.1 Child Labor in Nepal

Children constitute a large proportion of the workforce in Nepal, with engagement in both the formal and informal sectors (ILO/CBS Nepal, 2011). Based on the data obtained during the Nepal Labor Force Survey (NLFS 2008), there are about 7.7 million children in the age group 5-17 (i.e. 33% of the total population in Nepal). Out of these 7.7 million children, approximately 3.14 million children (i.e. 40.4% of children in age group 5-17) are economically active. Further, among these 3.14 million children, approximately 1.6 million children can be categorized as child labor (i.e. 20.8% of children in age group 5-17). Out of these 1.6 million children, 0.62 million children are involved in hazardous work (i.e. 8% of children in age group 5-17).

The prevalence of child labor in Nepal can be attributed to the expectation that children contribute to household activities from a very early age (IREWOC, 2010). Activities vary from simple household chores to activities that require more time and effort and may even put children's lives at risk. These activities may result in irregular school attendance or dropping out of school entirely. According to an IREWOC report (2010), children's involvement in the labor force may result in physical danger and mental issues, and meanwhile the children are missing the opportunity to go to school.

A recent survey conducted by UNICEF (2011) in eight Nepalese municipalities where UNICEF works (including Biratnagar, Bhartput, Ratnagar, Pokhara, Lekhnath, Ghorai, Tulsipur, and Nepalgunj), shows that there are 13,425 working children in total (7,833 boys and 5,592 girls). Domestic employment remained one of the dominant sectors with regard to child labor, as the study found that over 41% of children in the workforce were domestic workers. Hotel and restaurants followed as the second highest sector, constituting 11% of all child labor, and building and road construction was third, occupying 10% of the child labor force. The remaining sectors were transportation (6%), garage and auto workshop (4.4%), small cottage industries (2.8%), and agriculture (2.6%). Additional areas of child employment include brick kiln, retail shops, stone quarry, and street vending.

Child labor has been widespread in Nepal for many centuries. It is accepted socially, as it is believed to be a part of the normal process of socialization. While there has been a decrease in

child labor in the formal sector in recent years due to the government's recognition of child labor, there has been a rapid increase in the informal sector, as this type of labor is not covered by Nepalese labor laws (UNICEF Nepal, 2011). As an example, many children, girls in particular, are informally employed as domestic servants, where they are at an increased risk of sexual exploitation. Poverty is typically cited as a main cause for child labor, but it is not always the only factor. Children are often sent to work outside of their family or community when they are placed with relatives that cannot or will not take care of them after following the loss of their parents (due to health, migration, or a second marriage) (UNICEF Nepal, 2011).

2.2 Legal Framework Related to Child Labor

The government of Nepal has demonstrated its commitment to the elimination of child labor by ratifying two important ILO Conventions on Minimum Age No. 138 (in 2003) and on the Worst Forms of Child Labor No. 182 (in 2004). In addition, the establishment of the Children's Act (1992), the Child Labor Prohibition and Regulation Act (2000), and the Kamaiya Labor Prohibition Act (2002) provide ample legal grounds for eliminating child labor from Nepal (ILO, *nd*).

The minimum age for work in Nepal is 14. The government of Nepal has also identified the seven worst forms of child labor, and has designated them as immediate priorities. The worst forms include; *bonded labor, domestic child labor, rag picking, mining, carpet weaving, pottering, and child trafficking*. In recent years, new sectors have gained increasing importance, such as children working in the entertainment industry (especially girls), urban transportation, brick kilns, cross-border smuggling, and embroidery work.

The Government participates in several programs to strengthen its national legislation and policies regarding child labor, as well as to improve its education system, and withdraw and prevent children from the worst forms of child labor. However, children in Nepal continue to engage in child labor in the agricultural sector, and the worst forms of child labor involving commercial sexual exploitation (DOL 2013).

2.3 Definitions of Child Labor

In forming a definition for child labor for this study, we reviewed the definition of child labor used by ILO and the Central Bureau of Statistics (CBS)/Nepal, UNICEF Nepal, and the Nepalese government's various acts, currently in draft form. Nepal's Child Labor Prohibition Act (2000) considers a child working below the age of 14, and a child working in a hazardous occupation under the age of 16, to be an unacceptable form of child labor. While these cut-offs are substandard to international law, under ILO Convention 138 (1973), a developing country may adopt 14 years as the minimum age for employment, and 16 as the minimum age for engaging in hazardous work.[1,2] As a consequence, for this study we define child labor as described below.

2.3.1 Definition: Child Labor

The **definition of child labor for this study** follows Nepal's Child Labor Prohibition Act (2000), and considers the practice of engaging children in productive activities comprised within the Systems of National Accounts (SNA) production boundary, and including all children from 5 to 15 years of age who, during a specified period, were engaged in one or more of the following categories of activities:

a. Children 5-11 years of age employed[3] for one or more hours during the reference week;
b. Children 12-13 years of age employed for 14 or more hours during the reference week; and
c. Children 14-15 years of age engaged, during the reference week, in more than 36 hours[4] in industries and occupations not designated as hazardous.

[1] See Article 2, paragraph 4 and Article 3, paragraph 3.

[2] The BCC campaign materials mention the minimum age for employment is 14 years which is in line with Nepal's Children's Rights and Welfare Act (1992)

[3] Children in employment are those engaged in any activity falling within the production boundary in the SNA for at least one hour during the reference period. The U.N System of National Accounts defines economic activity as all production that could be destined for the market, regardless of whether the decision is made to sell or retained for own use. Thus, economic activity occurs both inside and outside of the home, regardless of whether the good or service produced is sold in the market.

d. Children 5-15 working in designated hazardous industries and occupations.

In the survey, we ask the respondent to describe each household member's primary occupation in the last seven days and how many hours each member has spent in this activity. We verify this information by asking the same questions to all children in the household. We use these questions to categorize children as engaging in child labor.

2.3.2 Definition: Hazardous Labor

ILO/IPEC (2006) has identified Nepal's seven **worst forms of child labor**, these are: bonded labor, domestic child labor, rag picking, mining, carpet weaving, pottering and child trafficking. We will ask about these sectors specifically, with the exception of bonded labor and child trafficking. We will not collect data on categories A-C in ILO Convention 182 (slavery, sexual exploitation, and illicit activities). However, we are inquiring about hazardous work.

Hazardous child labor is work that is likely to harm the health, safety or morals of children. This study follows the definition of child labor as put forth in Schedule 1 of Nepal's Child Labor Prohibition and Regulation Act of 2000. These types of work were further broken down into categories relevant to Nepali businesses in the ILO/Nepal CBS Child labor Report 2007. Following those categorizations, our study defines hazardous child labor as engagement in the following occupations:

Service workers and shop market sales workers

Travel attendants and related workers

Housekeeping and restaurant services workers

Personal care and related workers

Craft and related trades workers

Miners, shot firers, stone cutters

Painters, building structure cleaners and related trades workers

[4] Nepal Labor Act 1992 and Labor Rules 1993.

Metal molders, welders, sheet-metal workers, structural metal preparer

Blacksmiths, tool makers and related trades workers

Precision workers in metal and related materials

Potters, glass-makers and related trades workers

Handicraft workers in wood, textile, leather and related materials

Printing and related trades workers

Food processing and related trades workers

Textile, garment and related trades workers

Pelt, leather and shoe making trades workers

Plant and machine operators and assemblers

Mining and mineral processing plant operators

Metal-processing plant operators

Glass ceramics and relative plant operators

Chemical products machine operators

Rubber and plastic products machine operators

Street vendors and related workers

Shoe cleaning and other street services elementary occupations

Domestic and related helper cleaners and launderers

Building caretakers, windows and related cleaners

Garbage collectors and related workers

Mining and construction laborers

Manufacturing laborers

Transport laborers and freight handlers

Nighttime labor (any work between 6pm and 6am) is also considered hazardous work. This study defines nighttime labor according to Nepal's Child Labor Prohibition and Regulation Act of 2000, which defines night time hours as between 6pm and 6am.

In the survey, we ask the respondent whether each household member participated in the above mentioned activity in the last seven days and the amount of hours spend in these activities. We verify this information by asking the same questions to all children in the household. We use this information to classify each child as engaging in hazardous labor.

2.3.3 Definition: Acceptable Work

A child engaged in acceptable work is one that is of legal working age, in accordance with national legislation and international standards. The work must be non-hazardous, non-exploitative, and does not prevent a child from receiving an education. We define a working child as follows:

a. Children 12-13 years of age employed in light work (less than 14 hours per week in non-hazardous occupations)
b. Children 14-15 years of age employed in 36 hours or less of work in non-hazardous industries and occupations

2.4 Objectives and components of UNICEF Nepal Program

UNICEF Nepal is supporting eight municipalities in five districts to implement programs aimed at combating child labor. The overall goal of UNICEF Nepal's intervention is to reduce the number of working children and reintegrate them into society. The program includes a wide range of activities: behavioral change communication; provision of services to children and their families; and institutional strengthening of the government at the national and sub-national level and capacity building of community structures. The activities are outlined below:

1. Behavioral change communication

a. Develop and disseminate communication materials (pamphlets, street plays, public announcements, in-person visits to households) on child labor.

2. Services for working children, including children involved in the worst forms of child labor.
    a. Information management system on child labor and child protection, including the development of operating software for data entry, analysis and report generation on child labor, and the provision of training on the management information system.
    b. Services to working children and families at risk of engaging on child labor. This component will:
        - Provide psychological counselling to children at difficult circumstances,
        - develop case management plans (educational, health, psycho-social status, working conditions),
        - prepare profile of working children, particularly worst forms of child labor, using standard forms and guidelines of UNICEF,
        - rescue children at risk and provide emergency support,
        - provide legal support for working children in the municipality,
        - provide economic and rehabilitation service to family and vocational training for eligible working children,
        - provide Non-Formal Education and Urban Out of School Programs (NEF/UOSPs) for working children,
        - provide education support for working children below the age of 10 after removal from hazardous work.
3. Institutional strengthening of the government at the national and sub-national level and capacity building of community structures. This component will:
    a. Provide training to rescue team on various aspects of the rescue and rehabilitation process.
    b. Support the development of a child protection strategy and policy.
    c. Provide training workshops to develop community rehabilitation and reintegration process and procedures for child laborer.

d. Provide support to procure necessary equipment to strengthen the information/communication component.
e. Organize interaction meetings with parents/guardians, employers and community on the process of effective and sustainable reintegration and rehabilitation services.
f. Coordinate sharing meetings and workshops of stakeholders and child protection agencies to share progress and way forwards.
g. Support staff costs for specialized NGOs and other service providers.
h. Hold meetings of municipal CFLG committees and MCPCs (bi-monthly).
i. Conduct ward level training workshops on child labor, child protection and community based child labor monitoring system on incidences of child labor.
j. Provide training orientation on community based reintegration process to ward level CFLG members, MCPCs/VCPCs
k. Conduct training workshops on referral system on child protection for CBOs/key stakeholders
l. Strengthen mapping, referral mechanism and processes at ward level and municipal level.
m. Conduct joint monitoring visits of key stakeholders to program areas.
n. Monitor the progress of re-integrated children and provide necessary support for sustainable re-integration.

UNICEF Nepal provides financial resources to the municipalities to implement the program activities, and the municipalities have the authority to select, mobilize, and supervise local implementing partners (clubs, NGOs, trade unions, civil society, etc.). Municipalities select implementing partners in consultation with UNICEF in accordance with their existing norms and standards. The implementing partners are then responsible for implementing the program at the ward level.

2.5 Literature review on BCC

Communication campaigns is extensively used in health to increase public awareness, change peoples' attitudes and behavior on issues such as water-borne diseases, HIV, vaccinations, use of health products, etc. Research suggests that health campaigns are effective instru-

ments to inform and persuade people to learn about health issues. Synder, 2001 conducts a meta-analysis of mediated health campaigns in the United States and finds that health campaigns can lead to significant 4-15% change in behavior. Noar et al. 2009 conduct a 10 year review of 34 HIV/AIDS communication campaigns in 23 countries and discover that 80% of the media campaigns trigger positive effects in behavior change like using condoms, getting tested, etc.

The success of behavior change communication in influencing behaviors depends on techniques used to change. Briscoe and Aboud, 2012 reviews 24 interventions and programs implemented to change four health behaviors related to child health in developing countries: the use of bed nets, hand washing, face washing and complementary feeding. They categorize the techniques employed as: information, performance, problem solving, social support, materials, and media. They find that most successful interventions use a combination of techniques to engage participants at the behavioral, social, sensory, and cognitive levels.

NGOs use awareness-raising campaigns to raise awareness about child labor and benefits of education. These campaigns include information provision, communication, education and training. It aims to increase people's knowledge and mobilize changes in perceptions and behavior. However, there is lack of rigorous evaluation to study the effectiveness of awareness-raising campaigns in the context of child labor in terms of changing behaviors. This impact evaluation aims to fill this gap.

3 Impact Evaluation Design

3.1 Objective of the Impact Evaluation

The study uses a rigorous approach in evaluating UNICEF Nepal's interventions targeted at combating child labor issues. The purpose of any impact evaluation is to determine whether a program has an impact on outcomes, and to quantify how large that impact is. We estimate program effectiveness by comparing outcomes of individuals in wards which received an intervention against a statistically comparable group of individuals in wards which did not receive it.

Our impact evaluation will focus on measuring the impact of the Behavioral Change Campaign (BCC) component of the UNICEF Nepal program on reducing child labor and changing perceptions regarding child labor. This information campaign will inform people that employing children under the age of 14 is against the law, that working is harmful for children, and that attending school offers better opportunities. It will include the following activities[5]:

- *Distribution of Paper materials (pamphlets, brochures, and posters):*
  Pamphlets and brochures are distributed to all households in the ward at least twice a year, and more often depending on the project time period and resources. Distribution is performed with the help of municipality program staff, social mobilizers, volunteers, Tole (community) Level Organization members, child club members, and school children. Distribution may or may not involve discussion and explanation. These materials are also distributed to businesses in highly populated or urban areas. Businesses targeted include: hotel, restaurant, factories, public transportation, and mechanical workshops. Posters are displayed in public, high-traffic areas.
- *Radio, loudspeaker campaigns and street plays:*
  Radio broadcasts are aired once or twice a week on different themes of child rights. Loudspeaker campaigns are conducted once or twice a year. Street dramas are conducted at least once a year, but frequency of these campaigns may increase depending

[5] It is possible that some respondents will experience difference components of the intervention, and at more or less frequency. The variability and the frequency of exposure does not prevent people or neighbors from learning about child labor. This spillover effect inside the ward prevents a proper measurement of the effect of each activity independently. Therefore, we will not consider variability of exposure in our analysis.

on project time length and resources. UNICEF mobilizes children's clubs for street plays. Street drama and loudspeaker campaigns target densely populated areas such as market centers, bus parks, Ward office premises, and schools.

- *Home Visits by municipality staff:*
  All households are visited by municipality staff, social mobilizers, other stakeholders, CFLG volunteers, or local CBO members. Materials are distributed during these visits, and explanations are provided on child labor and support services available. In densely or highly populated areas, municipality staff target vulnerable households or households that are known to employ children with the help of Ward Nagarik munch, mothers group, child club, and Citizen awareness Munch to reach out the vulnerable households including child labor employers.

3.2 Theory of Change

The theory of change of this intervention specifies that receiving information related to child labor will lead to changing attitudes and perceptions of adults towards child labor, and reduce the prevalence of child labor. It is anticipated that this intervention will work through 2 mechanisms—the individual and the community.

On the individual level, the BCC materials will deliver messages related to dangers of child labor, benefits of sending children to school, legal age of children to work and also provide counselling centers, training centers and social support centers. It is anticipated that this intervention will spread awareness among households about child labor. As individuals become aware, their perceptions about child labor might change. This in turn would change their actions, and as a result, individuals would employ less children, and send their own children to work less often. Apart from changing individual perceptions about child labor, BCC activities can also change social norms related to child labor. As individual perceptions and norms change, they will gradually adopt positive behavior against child labor i.e. not engaging children in child labor. If enough members of a community change their perceptions and behaviors regarding child labor, this may cause a pressure for other households to do the same. Community-wide messaging campaigns such as the loudspeaker, street plays, posters and radio campaigns may increase the

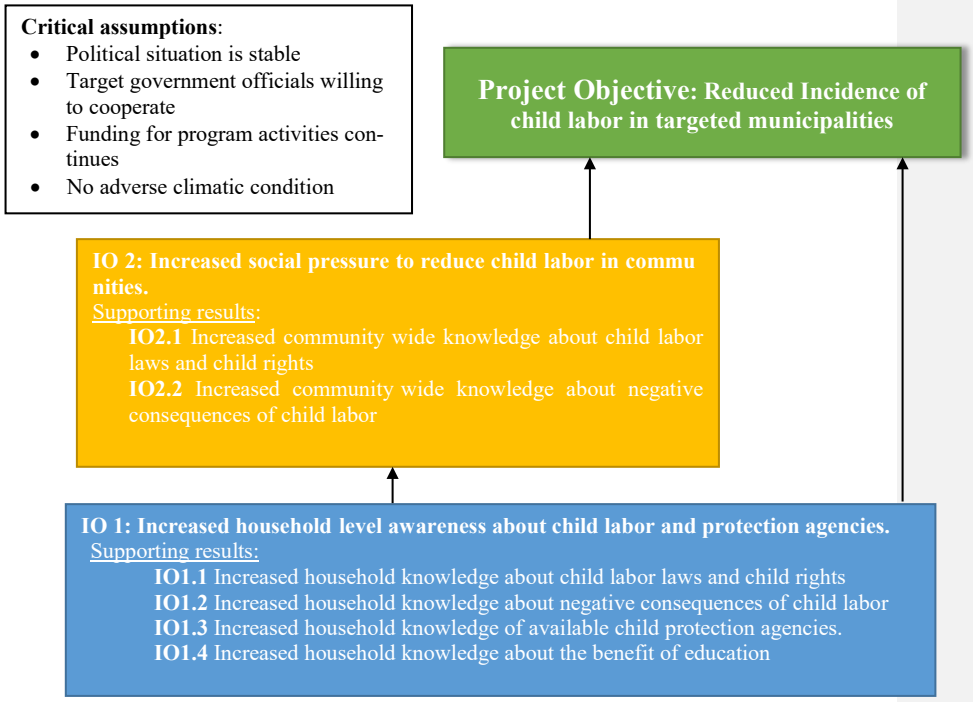
stigma around child labor. This would cause more households to reduce behaviors related to child labor in response to this pressure.

Our theory of change is focused on the outcomes of incidence of child labor as well as perceptions on the issue of child labor. It is uncertain whether reduction in child labor will increase school attendance as the messaging in the intervention is not targeted only towards schooling. We will measure school enrollment but do not consider this a primary or secondary outcome.

3.2.1 Results Framework of UNICEF Nepal Program in municipalities

Activities aimed at social mobilization and communication for behavioral change help build a population that supports the fight against child labor. It is anticipated that this intervention will spread awareness among people who are both engaged and not engaged in child labor activities. As a result, individuals will adopt positive behaviors with regard to changing perceptions about child labor and not engaging children in child labor activities.

Figure 1. Results framework of UNICEF Nepal Impact Evaluation



3.2.2 Research Question

In this study, our research question can be described by the following three hypotheses:

- *Hypothesis 1:* UNICEF Nepal's behavioral change communication program reduces child labor.
- *Hypothesis 2:* UNICEF Nepal's behavioral change communication program changes people's knowledge, perceptions, and attitudes towards child labor.
- *Hypothesis* 3: The length of exposure to the UNICEF BCC has a differential impact on the prevalence of child labor.

This intervention primarily focuses on providing information related to child labor and increasing awareness regarding the dangers and legal framework. This program also provides services for people to change behavior such as support centers, training centers, counselling. The main outcome variable is whether or not a child is engaged in child labor, allowing us to capture the incidence of child labor. We will also measure household level changes in perceptions and attitudes towards child labor, a mechanism through which child labor can be reduced. As mentioned in Section 3.2, while schooling is mentioned in the BCC materials, increasing school enrollment is not the prime focus of this intervention. Therefore, we are not considering schooling a primary or secondary outcome.

We will also explore whether the impacts of the intervention vary based on the gender of child laborer. Furthermore, we will evaluate the dosage effect of the intervention by implementing a phased-in approach. This design will allow us to study whether a longer period of exposure to the intervention leads to a larger reduction in child labor, or if the impact dissipates over time.

3.3 Phased-in Approach and Identification Strategy

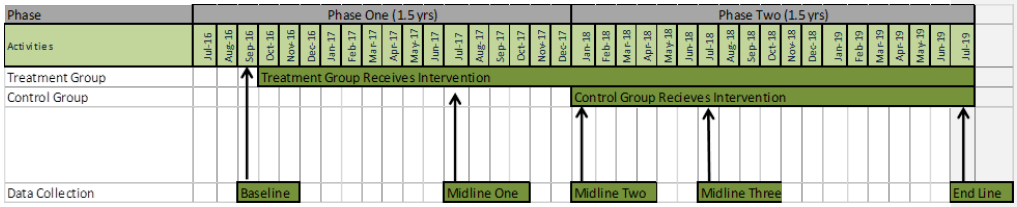
Impact evaluations aim to answer the following counterfactual question: "What would have happened to program participants if they had not participated in the program?" This requires identifying a control group that is statistically identical to the treatment group receiving the intervention. Control group participants act as a "stand-in" for individuals in the treatment group. The "gold standard" of impact evaluations is a randomized controlled trial (RCT), in which each unit is randomly assigned to receive the treatment or to serve as the counterfactual for those receiving the treatment. RCTs are considered the most rigorous evaluation method, as randomization eliminates potential selection bias.

This study aims to evaluate UNICEF Nepal's BCC activities in six municipalities. Each municipality is divided into wards. Since individuals in a ward cannot be excluded from being exposed to the BCC component activities, randomization will occur at the ward level. Notre Dame Researchers will randomly assign wards to either receive the BCC intervention or not.

An RCT design can present an ethical concern, as it requires withholding of activities to potential beneficiaries. Particularly in the case of child labor, it would be unethical to withhold this program from potential beneficiaries, if it is found to be effective in reducing child labor. We address this concern by adopting a phased-in approach, which provides the benefit of learning that would be gained from a full RCT, while still allowing beneficiaries to ultimately receive all aspects of UNICEF's program.

During Phase One, BCC component activities will be implemented only in treatment wards. In this phase the second group of wards functions as a control group. In Phase Two, after 1.5 years, UNICEF will begin implementation of the BCC component activities in control wards, while continuing implementation in intervention wards. In Phase Two, all the wards receive the program, but the treatment group will be exposed to the program for a longer time than the control group. Phase Two allows us to test the hypothesis that the length of exposure to the programs has a differential impact on the prevalence of child labor. We will analyze whether the difference in exposure to treatment affects prevalence of child labor. As the length of exposure is determined by the random assignment process, our study of the effect of exposure also follows an RCT design. This phase will allow us to measure the impact of additional year of exposure. This timeline of the study is outlined below: (for a more detailed work plan see Appendix 3

Figure 2. Data collection timeline



3.3.1 Spillover Effects and Other UNICEF Activities

Because we are randomizing at the ward level, there is no potential for spillover within households. The only potential spillover is between clusters, defined as wards. It seems that majority of the treatment wards are adjacent to the control wards. Therefore, we will not be able to test for spillover effects using quantitative data. Instead we will include questions of spillover in the qualitative data.

During all phases, both treatment and control wards will receive other activities from UNICEF, including provisions of services to working children and families and capacity building support to the local authority. See below for a break-down of the programs that will be implemented in the treatment and control wards in Phase One. Note that in Phase Two, all wards will receive all programs.

Table 1: Programs Received by Treatment and Control Wards in Phase One

	Activities	Treatment Wards	Control Wards
Output 1.	**Information management and coordination**		
Activity 1.1	IMS software Development	Yes	Yes
Activity 1.2	Support for Info Mgmt.	Yes	Yes
Output 2	**Capacity Building**		
Activity 2.1	(Refresher) Training on Child protection- it will be a 2-day training to 30 persons who participated in a child protection/child labor training last year. They represent social mobilizers, teachers, hotel owners, TLOs, child clubs, MCPC members	Yes	-Yes
Activity 2.2	Ward level CC network- training for child club members on child protection/child labor & community mobilization, child protection/labor in local level planning	Yes	- Yes
Activity 2.3	TLO training for child club members on child protection/child labor & community mobilization, child protection/labor in local level planning	Yes	- Yes
Activity 2.4	WCF/CAC-training for child club members on child protection/child labor & community mobilization, child protection/labor in local level planning	Yes	-Yes
Activity 2.5	SMC/PTA-training for child club members on child protection/child labor & community mobilization	Yes	- Yes
Activity 2.6	Orientation on legal aspect of child labor to child labor hosts, entrepreneurs, parents of child laborers	Yes	- Yes

	Training to Rescue Team	Yes	- Yes
Activity 2.7	CCI, Saptari-training for child club members on child protection/child labor & community mobilization	Yes	Yes
Output 3	**BCC**		
Activity 3.1	ToT (Training of trainers) on BCC- 30 persons in the training who later can be mobilized as resource persons for similar training/orientation at mass level	Yes	No
Activity 3.2	Development & execution of BCC Plan: a range of BCC behaviors will be identified, a number of key strategies will be developed : use of mass media, drama, Interpersonal skills, impact study, etc.	Yes	No
Activity 3.3	ICE Materials (flex/leaflet/pamphlet etc.) : developed and used	Yes	No
	Support local media/journalists against child labor	Yes	No
Activity 3.4	Mobilization of Community based protection/Mechanism- awareness raising (door -to-door campaign) against child labor, early detection, info keeping and referral when necessary	Yes	No
Activity 3.5	CRC Days Celebration(Nov20/ June 12/Sep 14)	Yes	No
Output 4	**Services**		
Activity 4.1	UOSP	Yes	Yes
Activity 4.2	Psychosocial Counselling per case	Yes	Yes
Activity 4.3	Legal Education Legal AID	Yes	Yes
Activity 4.4	Profile Development & Case Mgmt. Plan and referral support	Yes	Yes
	Child laborers' rescue & family reintegration	Yes	Yes
Activity 4.5	Family Tracking,	Yes	Yes
Activity 4.6	Family need assessment	Yes	Yes
Activity 4.7	Vocational Training	Yes	Yes
	Formal school/education support	Yes	
	Family Income Support (IGA)	Yes	Yes
	Institutional support/logistics support (camera/computer/printer/scanner, etc.)	Yes	Yes
Activity 4.8	Emergency support /Transit Home	Yes	Yes
Output 5	**Coordination and Partnership**		
Activity 5.1	CCI	Yes	Yes
Activity 5.2	DCWB	Yes	Yes
Activity 5.3	WCO	Yes	Yes

Activity 5.4	DDC	Yes	Yes
Output 6	**Monitoring and Evaluation**		
Activity 6.1	Monthly meeting/MCPC/CFLG Half-yearly	Yes	Yes
Activity 6.2	Annual Review	Yes	Yes
Activity 6.3	Joint Monitoring (DCWB/DDC/MCPC/UNICEF/DEO/WCO)	Yes	Yes
Activity 6.4	Municipality Monitoring (once month Account/SDO/EO)	Yes	Yes

3.4 Study Population and Randomization

UNICEF Nepal has been implementing program activities in eight municipalities since 2013. The program has been implemented uniformly in every ward of each municipality.

Recently, the Nepalese government decided to rezone municipalities by annexing surrounding village development committees (VDCs) into the municipalities. For example, ten VDCs with the population of about 70,000 have been added to the Nepalgunj municipality. These new VDCs have not been exposed to any programs and are now becoming wards of the municipalities that work with Unicef.

The following four previously existing municipalities, now with annexed VDCs, are a part of the study.

1.	Bharatpur Municipality, Chitwan District
2.	Nepalgunj Municipality, Banke District
3.	Pokhara Municipality, Kaski District
4.	Tulsipur Municipality, Dang District

Further, UNICEF Nepal is expanding program activities into new municipalities as well. UNICEF Nepal decided to work with the following two municipalities and now they will be a part of study:

	Municipality with no prior program

n	
.	Birgunj Municipality, Parsa District
.	Rajbiraj Municipality, Saptari District

The following table details the total number of new wards, per municipality, included in the study:

n	Municipalities included in the impact evaluation	Wards with no prior Unicef program
.	Bharatpur Municipality	15
.	Birgunj Municipality	30
.	Nepalgunj Municipality	11
.	Pokhara Municipality	11
.	Rajbiraj Municipality	10
.	Tulsipur Municipality	9
	Total	86

Throughout these six municipalities, there are a total of 86 new wards that have not been exposed to this program. We will randomly assign wards within each municipality to treatment and control groups. We will separate the wards by municipality. As requested by our partners in Nepal, in the municipalities that have an odd number of wards, we will assign more wards to treatment and less to control. In total, 45 wards will receive treatment and 41 will serve as a control in Phase One. See details below.

Table 2: Assignment of wards by municipality: Nepal

Sn	Municipalities	Wards with no prior UNICEF Program	Treatment	Control
Municipalities Annexing New Areas				
1.	Bharatpur Municipality	15	8	7
2.	Nepalgunj Municipality	11	6	5
3.	Pokhara Municipality	11	6	5

4.	Tulsipur Municipality	9	5	4
Municipalities with No Prior Program				
5.	Birgunj Municipality	30	15	15
6.	Rajbiraj Municipality	10	5	5
	Total Wards	86	45	41

3.5 Qualitative Data

In this study, quantitative data will demonstrate causal impact on the long-term outcomes of interest to this study. However, qualitative and monitoring data can help to explain the results of the quantitative analysis. Therefore, our approach to evaluate the impact of the intervention in the municipalities will integrate quantitative and qualitative methods. In this way, we aim to understand not only the direction and size of the impact, but also the context, underlying mechanisms, processes, and channels through which the impact was generated. In addition, we hope to learn about potential spillover effects through qualitative methods. We will conduct focus group discussions (FGDs) and key informant interviews (KIIs) to gain qualitative understanding what was the context in each municipality and how the program made changes in the lives of child laborers including capacity building of local authority. We plan to conduct a total of 18 FGDs, 3 in each municipalities to understand the context and sectors of employment and 25 KIIs in each wave of data collection. Because we hope to learn about spillover effects, we will perform FGD's and KII's in both treatment and control wards in each municipality. During the baseline we will conduct FGDs and KIIs before the survey so that we understand the context in each municipality. The FGDs will be conducted with community members and KIIs with government workers who are knowledgeable about child labor.

The key questions for FGDs and KIIs are included in Appendix 1.

3.6 Sample Size

A power analysis was used to determine the sample size required to detect effects of the BCC component of the UNICEF Nepal program. The major outcome indicator used to determine the sample size was child labor. In addition, power analysis on perception was also calculated. There are many components that we took into account for the power calculation. In summary, we aim to collect a total of 40 households per ward at baseline, for a total of 3,440 households in a longitudinal study from 2016 and 2019.

3.6.1 Schedule of data collections

Initially we proposed to have three data collections: baseline, midline and endline. However, with the phase-in design explained in section 3.3, the midline would have to be done right before the program was extended to all the wards; this would be at 1.5 years after baseline. The major problem with this is that we will be collecting data at a different time of the year than both base- and end-line. There might be a potential for seasonal effects that may be difficult to identify with this approach. Collecting data during the same seasons as baseline, before or after Phase Two might under- or over- estimate the effect of the program. Furthermore, this timeline will not allow us the opportunity to measure impact at the end of the 1.5 year mark when Phase Two will begin.

Because of these concerns, we opted for a design that would allow us to control for potential seasonal effects during the life of the project, while maintaining the original sample size and cost of the project.

In Figure 2, we present the five data collection points that we are proposing. This represents a split design that measures child labor at constant time distance for two paths:

1. The first path, measures child labor every year, at baseline and every 12 months after that. (July 2016, 2017, 2018, and 2019)
2. The second path measures child labor every 1.5 years. (July 2016, Jan 2018 and July 2019)

3.6.2 The base- and end-line will have the total sample of households, while each of the midlines in each path will have half of the sample. As this study is longitudinal, households will be divided into two groups after baseline, each household will be assigned randomly to be followed every 12 or 18 months. Estimation of parameters for power calculations

Power calculations require several values to determine the optimal sample size. In agreement with UNICEF we have an intervention that is randomized at the ward-level (86 wards in total), which makes a clustered RCT. The design is unbalanced (45 wards in treatment and 41 wards in control) with unequal sample sizes at each data collection. Also, we have six municipalities where each will have a treatment and control group, what makes this design a blocked or

stratified design. In addition, the analysis will use an ANCOVA regression design (see next section) which requires a measure of autocorrelation. Finally, we need to consider the potential attrition or losing sampled households each time we conduct a data collection. All these characteristics do not allow us to use typical (closed-form) formulas to estimate power. Thus, we calculated power by running simulations for the main outcome (child labor) and measures of perception on child labor taking into account all the characteristics of the design. We followed the simulation method outlined by Arnold et al (2011).

In order to calculate the power, we need values for the control group, and measures of variation for the wards, municipalities and over time. For all of these values we used past surveys: the Nepal Living Standard Surveys, the study on child labor in Peru, and the study of an evaluation on schooling in Nepal (Edmonds, 2014). These values are shown in the discussion of power for each indicator.

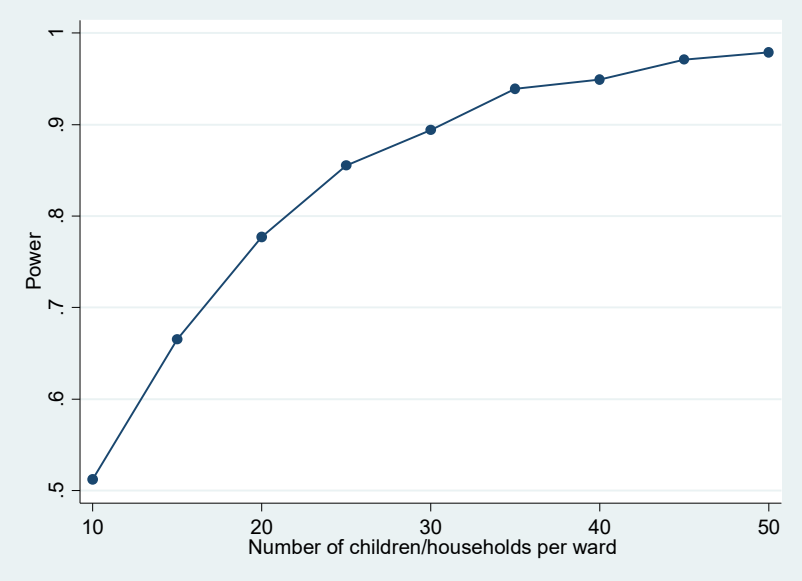
We made four assumptions for the following power calculations: the first is a level of attrition of about 20 percent in total. This means that we will have only 80 percent of the sample for endline. We also assumed a conservative change in outcome indicators of 5 percent for the treatment group. We seek to achieve at least 80 percent power at 5 percent significant level. The third assumption was a value of 0.4 for the autocorrelation with the baseline value of the outcome variables. The value comes from analyzing Edmonds dataset where this value varies between 0.2 and 0.44. In this case a high value of autocorrelation (0.4) seems more reasonable given the tendency for child labor to stick over time. The fourth assumption was that for simplicity we assumed one eligible child per household. This is not true in every country but there is no loss in this assumption as the final data set will have more children than households so power can only be higher.

3.6.3 Power calculation for child labor

We estimated the power obtained at different numbers of children per household, assuming that child labor will remain at around 20 percent for control communities, and that by the end of the study the child labor rate for the treatment wards will be 15 percent. We obtained standard deviations for wards and municipalities from the NLSS which are 0.75 and 0.61 by estimating a mixed logit model. The value for time variation was set at 0.1, as the calculated values were

close to zero; by assuming a higher number we assume a more conservative measurement. Figure 3 shows the results. A thousand simulations were performed for each data point, for children between 10 and 50 at 5 intervals. As shown, power reaches 80 percent around 20 households per ward. As we are going to split the sample by half in the midlines and to conduct analysis by gender; we would double the sample to 40 households per ward, for a total of 3,440 households. In that way we have enough power in the midline to measure changes in child labor and overall (all the panel data) to measure changes by gender and adjusting for possible seasonal variations on child labor.

Figure 3 Statistical Power to detect a 5% change in child labor in four years by number of households per ward.



3.6.4 Power calculation for perception measures on child labor

Perceptions on child labor have not been measured in Nepal to our knowledge. Hence, we used the Child Labor Survey for Peru where three of our perception questions are asked. These questions are how much parents agree with:

- Children working

– The work that children do is hurtful to them

– Children's work should be eliminated

We used the following values from the Peruvian data for our power calculations:

Indicator	Percent agree	Standard deviation at cluster	Standard deviation at municipality
Children working	24	0.93	0.62
Child labor is harmful	70	0.75	0.19
Child labor should be eliminated	75	1.19	0.4

Simulations were also conducted for these values assuming a change of 5 percent by the end of the project, attrition level of 20% at the end of the period, autocorrelation of 0.4 and the characteristics of the design.

Figure 4. Statistical Power to detect a 5% change on perceptions in 4 years by number of households per ward

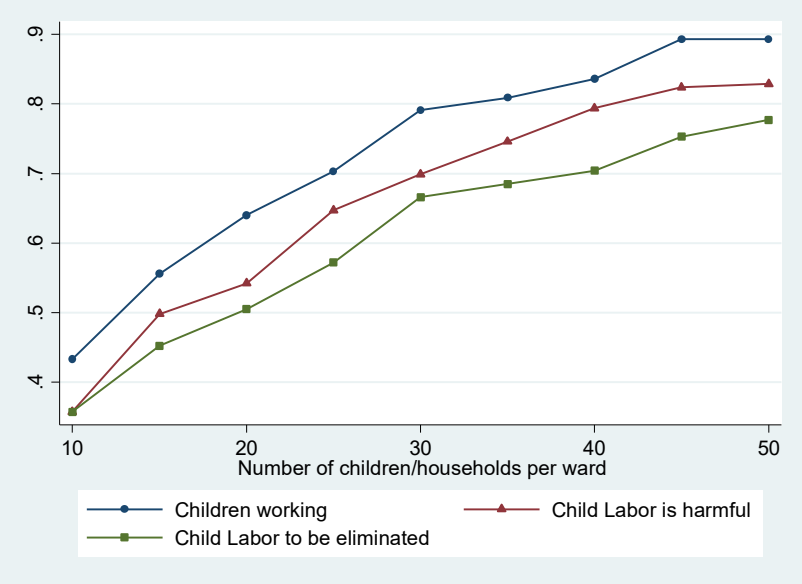


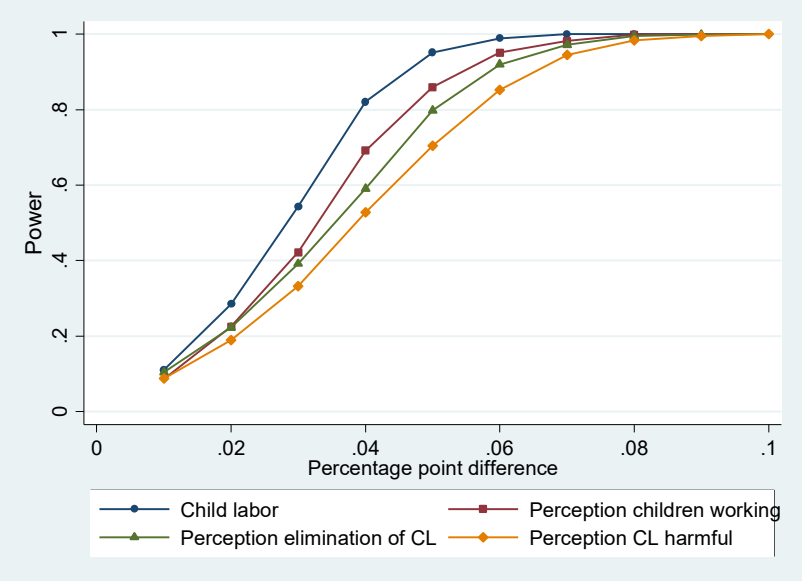
Figure 4 shows the results of the simulations for each indicator. As shown, at 20 households per ward, the statistical power would be between 50 and 65%, but at 40 households per

ward, the power is between 70 and 84%. Therefore, 40 households per ward at baseline should be sufficient to measure these changes.

3.6.5 Minimum Detectable Effect

The minimum detectable effect (MDE) analysis provides differences that can be detectable at different levels of power. In this case, we varied the percentage point difference that can be achieved by the end of the program and calculated the power to detect such difference. In this case we assumed 40 households per ward, with a split sample for the midlines. Figure 5 shows the power for the four previous outcomes: child labor and perceptions. At 80 percent power, we can measure a difference as small as 4 percentage points in child labor. In the case of perception, at 80 percent power, depending on the outcome, we can measure a percentage change of about 5 to 6 percentage points.

Figure 5. Statistical power by percentage point difference in outcomes



3.6.6 Sample framework

The sample framework is built from the household list that is available at each ward. We use Nepal Living Standard Survey to calculate the sample size for each municipality with the probability of finding a house with 5-17 years child. Our target number of households from each ward of municipalities is 40 and to get this number we have to over sample. Following table shows the total number of households sampled for the survey from each municipality:

Municipality	Total sampled households
Rajbiraj	54
Birgunj	51
Bharatpur	68
Pokhara	61
Tuslipur	54
Nepalgunj	52

The survey teams visit all the sampled households and use screening questions to find the eligible households (households with 5-17 years old child) for the survey. The households interviewed at baseline will be followed over the next four data collections. Half of them will be interviewed at a 12-month interval and the other at an 18-month interval.

3.6.7 Attrition

Attrition can present an issue as the respondents to the baseline survey may move to other places, the households may be vacated, or the respondents may simply become uninterested in participating in the survey. Our power calculations include an attrition rate of 20 percent by the end of the study. To ensure that we find the same households/respondents and thus minimize the possibility of attrition, we will keep record of household contact information (location, phone, etc.) and also record the GPS coordinates of the households. We will attempt to mitigate attrition by informing respondents of the longitudinal nature of the study when acquiring consent. Enumerators will explain to respondents that someone will return to follow-up approximately every year for the duration of the five-year project. Enumerators will also explain that the respondent

can end participation in the study at any time. In this way, the respondent agrees to a return visit up front (although consent will be obtained at each data collection).

Efforts will be made to reduce attrition in the field. During a survey, if at the first attempt surveyors do not find the respondent, then they will visit the household the following day. However, if surveyors do not find the respondent after two visits, we will not collect data from this household in that particular round of survey. If a household is not found in one round of data collection, enumerators will still include that household in the next round of data collection, in case they can be found again. However, to be conservative, our power calculations do not take that into consideration.

Households that drop out of the sample will not be replaced. Analysis of attrition bias will be conducted in every follow-up to determine if the attrition affects the measurement of outcomes. If it does, more effort will be put in place to find the missing households, and avoid attrition bias.

3.7 Analysis Plan

3.7.1 Primary Outcome

The primary outcome of this research is child labor. Each child between 5 and 17 years old will be classified as working if their labor falls into the definition outlined in section 2.3. We will use a reference period of 7 days for working hours of work in formal and informal occupations, and hours spent performing either light or domestic work. Age will be considered to adjust to the different thresholds established in the definition of child labor. As this is a longitudinal study, children in the household will be included when their age is 5 and older, and excluded when their age is 16 and over at each round of data collection.[6] Children that are not permanent residents of the household will be excluded from the sample. Finally, this analysis will include gender both as a covariate and as separate analysis for boys and girls. The statistical model to calculate will be based on an ANCOVA regression defined by McKenzie (2012) as:

[6] Despite the fact that some children may age in or out of the definition of child labor, data will be collected on all children in this age range, in order to acquire summary statistics on child labor at each point of data collection.

$$Y_{idmt} = \sum_{t=1}^{r} \delta_t + \gamma \, \text{Treat}_{dmt} + \theta \, Y_{dm0} + r_{dmt} + u_{mt} + e_{idmt}$$

Where Y_{idmt} is whether individual i in ward d in municipality m measured at time t is working. The δ_t are time dummies which capture the mean for the control group in each time period, and Treat_{dmt} takes value one if the ward has been assigned to receive treatment by time t, and zero otherwise. The δ_t variables will also consider the seasonality of the different rounds of data collection. The treatment effect is given by γ. We assume that r_{dmt}, u_{mt}, and e_{idmt} are normally distributed with mean zero and variance according to the cluster level. In this equation we treated municipals as random effects; we will test whether the use of fixed effects (dummies for municipalities) or independent equations for each municipality produces a better model.

3.7.1.1 Analysis on Exposure

To analyze the effect of the exposure of the program, we will estimate the following model:

$$Y_{idmt} = \alpha + \beta_0 \; exposure_{idmt} + \beta_1 \, exposure_{idt}^2 + r_{dmt} + u_{mt} + e_{idmt}$$

This equation will test whether the effect of exposure has a quadratic form, but other forms such as linear, or exponential form will be tested.

3.7.1.2 Analysis on Gender

As explained before, gender will be examined as a covariate and separate effects for boys and girls in the child labor equation. To estimate the heterogeneous impact of gender on child labor as a covariate we will estimate the following equation:

$$Y_{idmt} = \sum_{t=1}^{r} \delta_t + \gamma \, \text{Treat}_{dmt} + \beta \text{Girl}_{idm} \, \theta \, Y_{dm0} + r_{dmt} + u_{mt} + e_{idmt}$$

where β measures the impact of being a girl on working. We will estimate the first equation for girls only and for boys only to determine if the intervention resulted in different effects by gender.

3.7.2 Secondary outcomes

The secondary outcomes of this research are related to perceptions. Each parent will be asked how much she or he agrees or disagrees with a particular statement. The answers will be reclassified to become 1 if they agree either somewhat or strongly, and 0 if they disagree at any level. There is no neutral option. Answers like don't know or refused will be excluded from the estimation. The statistical model to calculate will be based on an ANCOVA regression defined by McKenzie (2012) as:

$$O_{idmt} = \sum_{t=1}^{r} \delta_t + \gamma \, \text{Treat}_{dmt} + \theta \, O_{dm0} + r_{dmt} + u_{mt} + e_{idmt}$$

where 0_{idmt} represents whether the parent agree with the statement at time t from ward d in municipality m.

3.7.2.1 Social Norms

The theory of change of this project specifies that BCC campaigns can change individual behaviors through the pathways of changed social norms. To understand if the observed change indeed occurs through this pathway, we must measure these norms. Measuring norms is not as straightforward as it might appear. Social norms can be considered a latent variable, as we cannot interview a society as we interview an individual. Instead, social norms can be proxied by aggregating individual perceptions or behaviors, or through focus groups or observations. We plan to use several questions as proxy variables, from which we can derive the latent variable. Question S9Q4 directly asks individuals what they think their neighbors think of child labor[7]. Additionally, there are several perceptions and knowledge questions which can be aggregated at the community level. We can also measure child labor incidence at the community level. All of these variables combined inform us about community-level behaviors and knowledge, or social norms.

In the literature of child labor, sociologists, psychologists, and other social scientists consider knowledge and perception questions to be valid proxies for community norms. They use average responses at the community level, including these as a covariate in a regression on child

[7] S9Q4: "How much do you think your neighbors agree with children working?"

labor incidence. Economists, however, do not use these questions out of concern for measurement error. Instead they use the incidence of child labor at the community level as a proxy for social norms. This average is used as a covariate in a regression of child labor. The major problem in this approach is that the individual variable is endogenous to the average since the individual value is part of the average. A common solution is to calculate the average at the community excluding the individual value (a jack-knife approach). However, in other social sciences, this is not perceived as a threat to the validity of the estimation. Regardless, the statistical significance and the direction of the coefficient of the community-level average will be interpreted as to how community norms are associated with individual behavior. Additionally, we will investigate social norms through FGDs and KIIs. While qualitative data does not give us a magnitude or significance for the influence of social norms, these data will provide another avenue to triangulate the latent variable of social norms.

In practice, we will analyze social norms in two ways—first, through comparison of community-level perceptions over time; and second, through a regression or a correlation between community-level norms and individual behavior. This two ways can be explicitly expressed in the following regressions:

Community perceptions over time:

$$P_{dmt} = \pi_0 + \pi_1 Treat_{dmt} + \pi_2 Time_t + \pi_3 Treat_{dmt} \cdot Time_t + \mathrm{r_{dmt}}$$

This equation measures a linear trend on changes on perceptions and the differences between treatment and control wards. π_0 measures the initial social norm level, π_1 measured the difference in social norms level at the initial status between treatment and control communities. π_2 measures the growth rate of change on social norms over time, and π_3 measures the difference in the growth rate of social norms between treatment and control communities.

Correlation between community-level norms and individual behavior:

$$Y_{idmt} = \sum_{t=1}^{r} \delta_t + \gamma\, \mathrm{Treat}_{dmt} + \theta\, Y_{dm0} + \omega \mathrm{P_{dmt}} + r_{dmt} + u_{mt} + e_{idmt}$$

The previous equation is similar to the first equation that measure individual outcomes with the difference that ω and P_{dmt} are included. The former measures the correlation that social norms affect individual behavior.

4 Survey Implementation

4.1 Survey Firm

The survey work will be completed by a local survey firm. Following a competitive process, a firm that has expertise and capacity in collecting and analyzing child labor survey has been selected. We have selected National Labor Academy (NLA), a Kathmandu based policy research institution for the survey work.

The survey firm will assemble a team of enumerators and supervisors and mobilize the team to complete the survey. We will train the survey team on the use of technology in the survey. The survey firm will also provide translation services, obtain ward-level household list, and coordinate with the local authorities while implementing the survey. They will also perform the necessary cognitive testing, pilot the survey instruments in the field, and collect and analyze qualitative data.

4.2 Questionnaire

The draft survey instrument is based on our hypotheses and desk review of similar surveys both globally and in Nepal. The survey contains the following modules (for the complete questionnaire please see attached excel file):

Household Survey

1. Demographic Information including education and employment of all household members;
2. employment of child family members who are not living in the household;
3. hazardous activities, long hours for children and time of work;
4. employment of children who are not members of the family and are not living in the household; This is for domestic helpers and children who live away from home.
5. knowledge, perceptions, and awareness about child labor; and
6. shocks, debts and assets of household.

Child Survey

1. Demographics and education;

2. household duties;
3. employment; and
4. hazardous jobs

Questions on child labor, hazardous labor and long hours were developed based on the definition in Section 2.3 Definitions of Child Labor. Questions from previous UNICEF surveys were used to determine the incidence of child labor. Questions on perceptions or attitudes towards child labor have been taken from the study conducted in Peru by Dammert, Anna (2008). This study attempts to improve measurement of child labor indicators, including household-level perceptions of child labor. These questions are aligned with the sample media we have reviewed from the intervention. Specifically, we will use the following perception questions about child labor. Responses to the below questions follow a four option Likert scale.

- How much do you agree with child labor?
- Do you agree or disagree with the following statements:
  The work that children do is hurtful to them.
  Children's work should be eliminated.

Questions on knowledge regarding legality of child labor are as follows:

- What is youngest age at which child can start working?
- If a thirteen year old is working is it breaking the law?

We will survey an adult and all children aged 5-17 in the household who is present at the time of data collection.

It is possible that respondents may change their responses to these questions as a result of being asked them repeatedly. However, because we will ask these questions to both the treatment and control group, we assume that this potential bias will occur equally in both the treatment and control groups. Hence, any differences between the groups can be attributed to the intervention, and not the set of questions. Furthermore, we will have a unique opportunity to investigate this question, since in this study, 50% of the respondents will complete the survey three times, and 50% will complete it four times. We can measure the differences in response to these questions between the two groups, to understand if this bias is occurring.

4.3 Survey Administration: Technology, Training, Supervision, and Quality Control

The survey firm will use smart phones in data collection. Using mobile devices in data collection increases efficiency while minimizing both cost and error rates. The survey firm has used tablets in Nepal for data collection, and ND has successfully used tablets for data collection in other countries, e.g., in Benin, Burkina Faso, Ghana, Haiti, Indonesia, Tanzania, and Uganda. Data collected using smart phones will be available for analysis and quality control checks on the same day of data collection. Data will be de-identifiable and accessible only to the research team.

Commented [HKC-I1]: I changed from tablets to smart phones to be more accurate.

Local enumerators will collect quantitative as well as qualitative data. We will travel to Nepal to train enumerators in partnership with NLA. We will be present to observe data collection during piloting phase and approximately the first week of data collection. We will be available to troubleshoot issues that arise, and address them in real time. During this time, we will monitor the following to ensure enumerators are following proper protocol:

- *Sampling strategy:* Are enumerators following proper protocol in selecting households?
- *Informed Consent:* Are enumerators reading the informed consent text verbatim? Are they ensuring that respondents understand the consent form? Are they documenting refusal rate?
- *Survey implementation:* Are enumerators asking questions correctly? Are they establishing trust with the respondents? Are they providing prompts when necessary? Are they reading options, and categorizing responses correctly? Are they comfortable using the technology?
- *Timing:* Are enumerators completing the adequate number of surveys? Is one enumerator taking too much or too little time to complete the survey?

We are familiar with threats to rigorous data collection, and have devised methods to detect errors early on, and correct them promptly. Data quality control will occur both in the field and electronically. These measures are described below:

- *In the field:* Supervisors will be trained on protocol for reviewing responses before uploading completed surveys. A team of back-checkers will also survey a randomly selected sample of households. Back-checkers will confirm data collected that is unlikely to

change, such as demographic information. This will ensure that households have been visited.

- *Electronically:* We will develop the appropriate statistical routines for internal consistency and validation checks. These routines will report key statistics such as average amount of time spent on a survey per enumerator, number of responses completed per enumerator, and summary statistics of specific questions which we identify as likely to produce errors. We will identify these questions during training. This will allow us to review data to be sure that in-field checks have been correctly implemented, to identify errors and address them early-on. This automated quality control will occur daily during the pilot and first week of data collection, and weekly thereafter unless otherwise needed.

  We will develop additional checks during the early stages of data analysis as needed.

Data collection will be simultaneously carried out in different locations throughout Nepal. Mobilizing interviewers in different zones simultaneously requires a great deal of resources and careful planning. We will ensure monitoring of survey activities by communicating with field supervisors via email and/or cell phone during the initial phase of data collection. Our local partner will support the monitoring process.

5 Additional Considerations

5.1 Ethical Considerations

The IRB's major role is to safeguard the rights and welfare of all human subjects who participate in research. In compliance with Federal law and institutional policy, all research projects involving human subjects must be reviewed and approved by the IRB. We have received ethical clearance from University of Notre Dame's IRB process for the household-level questionnaire. The child questionnaire is currently under expedited review. Evaluations conducted by Notre Dame personnel are subject to the University of Notre Dame's IRB process.

We do not anticipate any direct risk to individuals due to their participation in this study. Every data collection will begin with informed consent. Data will be collected only from those households/people who give consent. We are aware that the households and people who give consent may be different than those who do not as it may be influenced by their socioeconomic status and awareness level. This may introduce biases. We will keep this in mind while administrating the survey and find best approach to mitigate this. Both parents and children must give consent/assent to conduct the survey which will be read to the interviewers before starting the questionnaire. The forms can be found in Appendix 4.

The data that we gather from the households and personal interviews will be kept in password-protected secure servers, ensuring only authorized members of the research team will have access to identifiable data. No identifiable information will be included in analysis and reporting.

5.2 Recent Earthquake and Political Situation and its Impact on our Study

Although the earthquakes in Nepal in April and May of 2015 did not have a huge impact in our study municipalities, it did cause delay in the launching of this study, as UNICEF Nepal was heavily involved in relief and recovery work. Despite the delay, we will be able to complete the study within the given timeframe. We also think that the earthquake will have some indirect impacts on the child labor population in general. We anticipate there will be a surge of child labor in the municipalities, as the affected families may move to city areas in order to find jobs.

In recent months two study municipalities had witnessed heightened political problem with shutting down of transportation, offices and businesses. However, the situation has improved now and we can move for the data collection.

5.3 Monitoring Approach

Monitoring program activities is particularly important in this study, to ensure compliance with randomization and phased-in implementation. We will monitor UNICEF Nepal's program implementation through communication with the following three partners:

1. *UNICEF Program Staff:* We communicate regularly with UNICEF Nepal and municipalities. This includes a yearly trip to Nepal to monitor field activities.
2. *Nepal based researchers:* These researchers work closely with the municipalities, and can provide information on implementation of program activities. They will regularly visit the field to monitor the field activities and communicate their observations to us.
3. *Survey Firm:* NLA will also be included in monitoring the activities in each municipality and report us.

If, through this monitoring data, we identify a significant barrier to the impact evaluation, we will inform DOL accordingly. We will also develop a plan to either overcome the issue or modify the evaluation if necessary, and share this plan with DOL for approval. If the randomization is violated, we will likewise inform DOL, along the actions we will take during the analysis to address the deviation from pure randomization.

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Appendix 1

Focus Group Discussion (FGD) Checklist with discussion questions

1. Community level information

   Trend in CL employment; girls, boys, and by sectors
   Trend in CL supply (from and outside municipality); girls and boys, and by sectors
   Typical events that increased/decreased CL

   Trend in working conditions of CL
   -wages
   -gender of CL
   -work load
   -Schooling
   -Violence/ punishment

   Community outlook towards CL
   Social pressure against CL employment
   Social pressure against CL supply
   Support system for vulnerable children poised to become CL
   Institutional arrangement to deal with CL issues—Ward, NGO/CBO
   Role of Child clubs, users' group/mother group
   Role of schools in preventing CL
   Role of schools in preventing dropout of children
2. Sectors of child labor employment by importance, number, working conditions
3. State of child labor related interventions, their effectiveness
4. Who is working on CL issues, what are they doing, since when
5. What have been impact of such activities in improving conditions of CL, in reduction of CL
6. Have CL been withdrawn and given rehabilitation service in the municipality
7. Give view on such reintegration activity—are they effective, are they creating pressure to employers

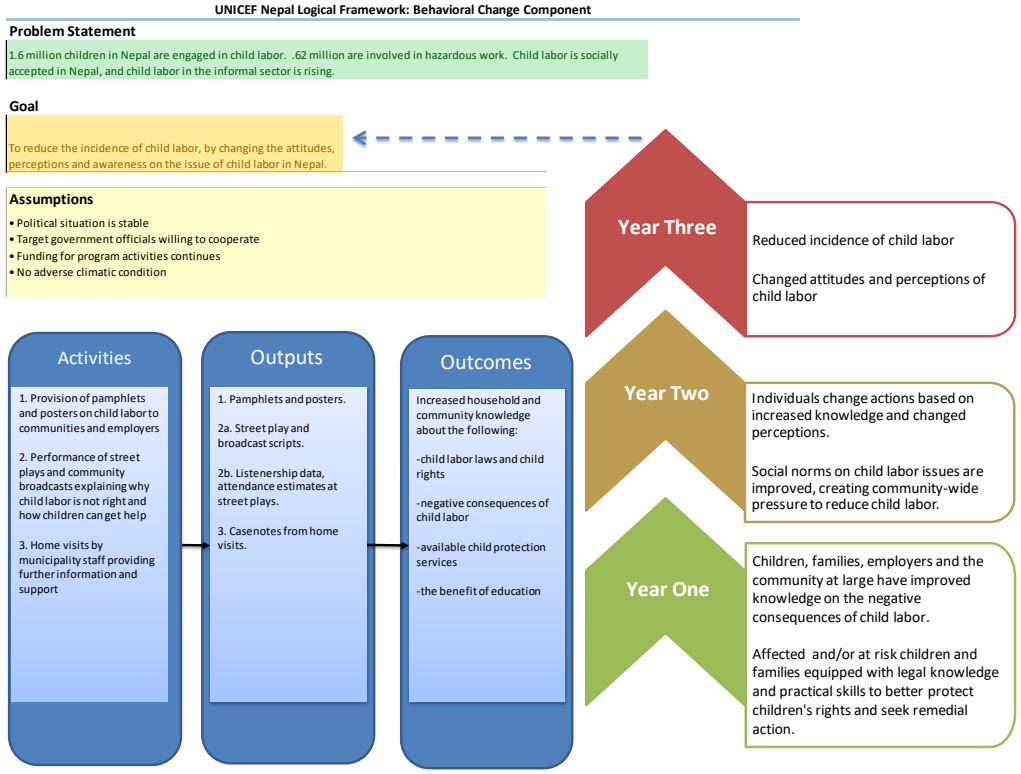
Key Informant Survey Checklist

1. Triggering factors for CL employment and supply
2. Trend in child labor employment, gender and employment sector(s)
3. Factors behind the trend
4. Working conditions: improving?
5. What is leading to improvement?
   Programs, interventions, income improvement, awareness increase

6. Who are working on CL issue
7. Are their work effective
8. Have CL been withdrawn and given rehabilitation service in the municipality
9. Give view on such reintegration activity—are they effective, are they creating pressure to the employers
10. What has worked well in dealing with CL problem
11. What has not worked and why
12. Please suggest three ways CL problem can be solved
13. Please suggest role of municipality in solving the problem

Appendix 2

Logic Framework



Appendix 3

Timing and work plan

(Updated August 24, 2016)

Project name: Closing the Child labor and Forced Labor Evidence Gap: Impact Evaluation in Nepal

Implementer: University of Notre Dame

SCA #: IL-26699-14-75-K-18
Duration: December 15, 2014-Dec 15, 2019

Team members: *US based team*: Juan Carlos Guzman (**JC**), CO-PI; Lila Kumar Khatiwada (**LK**), CO-PI; Eva Dziadula (**ED**), Economist; Danice Brown (**DB**), Support Investigator; and, Tushi Baul (**TB**), Statistician. *Nepal based team:* Shiva Sharma (**SS**), Sr. Researcher/Child Labor; Uddhav Paudyal (**UP**), Support Investigator; and, Bindu Poudel (**BP**), Survey Manager.

Activities and timeframe

Activities are listed according to year from 2015 to 2019. A deliverable date of each activity is provided inside the month.

1st year:

Activities	Responsibility	First year-2015											
		J	F	M	A	M	J	J	A	S	O	N	D
1. Travel to Nepal for the orientation and planning meeting with the partners - UNICEF Nepal - Municipality people - Program implementers	LK & ED							26	4				
2. Draft evaluation design preparation - Team meeting	LK, JC, TB, DB, ED, SS,									28			

- Consultation with partners and USDOL - Draft evaluation design *(deliverable*)													
3. Tech progress report *(deliverable)*	LK, JC				30						31		

2nd year:

Activities	Responsibility	Second year-2016											
		J	F	M	A	M	J	J	A	S	O	N	D
4. Final evaluation Design - Incorporate all the suggestions - Prepare the final design - Final design (*deliverable*)	JC, LK, ED, TB, DB, SS,						10						
5. Preparation of survey materials - Contract for survey (sub-grantee) - Sub award matrix (*deliverable*)	LK, DB, TB., JC, ED				10								
- Prepare questionnaire, key questions for FGD, consent (*deliverable*)	LK, DB, JC, ED						10						
- Ethical review - IRB approval *(deliverable)*	TB												
- Consent/parental permission and assent forms *(deliverable)*	TB, LK, ED,						15						
- Prepare smartphone based survey	LK, JC, student assistant												
- Training manual *(deliverable)*	LK, TB, ED												
6. Baseline data collection - Travel to Nepal	LK, ED, TB,									7			
- Piloting of instrument - Training to enumerators - Supervise quantitative and qualitative data collection work	LK, TB, with Nepal team (SS, UP, BP)									16 30			
7. Data analysis and baseline report preparation - data analysis plan *(deliverable)*	ED, JC, TB, LK										30		
- Draft baseline report *(deliverable)*	TB, JC, LK, ED, SS, UP, BP											30	
- final survey instrument/tools (*deliverable*)	LK, JC, TB												

8. Final baseline report - incorporate all feedbacks *(Deliverable)*	LK, JC, TB, ED												31
- Baseline survey datasets	LK, TB												31
9. Technical progress report *(Deliverable)*	LK, JC				30						31		

3rd year:

Activities	Responsibility	Third year-2017											
		J	F	M	A	M	J	J	A	S	O	N	D
10. Technical progress report	LK, TB				30						31		
11. Second survey - travel to Nepal and supervise survey work	LK, TB, SS, UP, BP							15	15				
- Data analysis plan *(deliverable)*	LK, JC, TB, ED									30			
12. Second survey data analysis and draft inter-mediate report *(deliverable)*	JC, TB, LK, ED,										30		
13. Second survey intermediate report - incorporate all feedbacks *(Deliverable)*	LK, JC, DB, SS,												31
14. Second survey datasets *(deliverable)*	LK, JC, DB											31	

4th year:

Activities	Responsibility	Fourth year-2018											
		J	F	M	A	M	J	J	A	S	O	N	D
15. Technical progress report *(Deliverable)*	LK, TB				30						31		
16. Third survey - travel to Nepal and supervise data collection work	LK, JC	15											
- Data analysis plan *(deliverable)*	LK, JC, TB		15										
17. Third survey data analysis and draft inter-mediate report *(deliverable)*	JC, LK, ED, TB, SS				15								
18. Third survey intermediate report	LK, TB, ED, DB, SS,						15						

- incorporate all feedbacks *(Deliverable)*													
19. Third survey datasets *(deliverable)*	LK, TB, DB						15						
20. Fourth survey - travel to Nepal	TB and Nepal based staff							10					
- Data analysis plan *(deliverable)*	LK, JC, TB								15				
21. Fourth survey data analysis and draft intermediate report *(deliverable)*	JC, LK, ED, TB, SS									15			
22. Fourth survey intermediate report - incorporate all feedbacks *(Deliverable)*	LK, TB, ED, DB											15	
23. Fourth survey datasets *(deliverable)*	LK, TB, DB											15	

5th year:

Activities	Responsibility	Fifth year-2019											
		J	F	M	A	M	J	J	A	S	O	N	D
24. Technical progress report *(Deliverable)*	LK, JC				30								
25. Endline survey - travel to Nepal	JC, LK							15					
- Data analysis plan *(Deliverable)*	JC, LK								15				
- Draft report *(Deliverable)*	JC, LK, ED, TB, SS									15			
26. Final report - incorporate all feedbacks *(Deliverable)*	JC, LK, ED, TB, SS										15		
27. Draft qualitative study report *(Deliverable)*	LK, DB, SS										15		
28. Final qualitative study report *(Deliverable)*	JC, LK, DB										15		
29. Survey datasets *(Deliverable)*	JC, DB, TB, ED											15	
30. Final Report with survey package *(Deliverable)*	LK, JC, DB												15
31. Public use datasets, log of analysis, data	LK, JC, DB												15

crosswalks, data tables *(Deliverable)*													
32. Sharing lessons learned workshop in Nepal - travel to Nepal	LK, TB											10	
33. Sharing lessons learned workshop in DC	LK, JC												10
34. Draft result summary report *(Deliverable)*	LK, JC, TB, ED												15
35. Final results summary report *(Deliverable)*	LK, JC, TB, ED												15
36. Inventory list preparation *(Deliverable)*	JC, LK, BP												
37. Property inventory and closeout report. *(Deliverable)*	LK, JC, BP, SS												15

Appendix 4

Consent for household survey

Read the following statements to the most knowledgeable member of the household and answer any questions the individual may have. Do not begin the interview until all questions have been addressed and the individual has agreed to participate in the study.

- Hello, my name is _____ I am talking with people about the economic activities of families in communities like this. The information will be used in a study about child labor in municipalities.
- I would like to ask you some questions about the people who live in your home.
- Your participation in this study is voluntary. If you choose to talk with me, you can choose to not answer some questions or end the interview at any time.
- Your answers to the questions will be kept private and no one will know what you said. Your name will not be used in any reports.
- The interview will take about 45 minutes.
- I will answer any questions that you have about the study before we begin. Do you have any questions about the study?
- May we start the interview?

Interviewer Certification of Consent:
Respondent gave verbal consent
1. Yes
2. No

Parental consent:

Instructions to Interviewer:

We want you to attempt to interview all children in the household aged 5-17 years old. This form can be used to obtain parental consent for more than one child. Read the following statements to a parent/guardian of the children residing in household and answer any questions the individual(s) may have. Do not begin to interview a child until all questions have been addressed, the parent/guardian has agreed to let the child/children participate in the study, and the child has agreed to be interviewed.

- Now I would like to ask some questions of [child's/children's name(s)].
- Your child/children does/do not have to answer the questions and he/she/they can stop at any time.
- Your child's/children's answers will be kept private and used only for this research.
- Your child's/children's name(s) will not be used in any reports.
- The interview with each child will take less than 50 minutes[8].
- Do you have any questions of me before I talk with your child/children?
- May I talk with your child/children in private?

Interviewer Certification of Parental Consent:

[8] This information will be added once the pilot is completed.

Parent gave the consent:
1. Yes
2. No

Verbal Informed Assent Statement: Child Questionnaire Assent

Name of Child: _____

Instructions to Interviewer: This form is to be used to obtain assent from a respondent over the age of 9 and younger than 17 years. Assent must be obtained for each respondent, in addition to parental consent, which must be attained first. Read the following statements to the selected respondent and answer any questions the respondent may have. DO NOT begin the interview until a parent has given consent, all questions have been addressed, and the respondent has agreed to participate in the study. Do not interview the respondent if he/she does not give assent, even if the parent has given consent.

- Hello, my name is _____. I am talking with children who work in communities like this one. The information I collect will be used in a study about children in Nepal who work.
- Your mother/father has given me permission to talk with you.
- I would like to ask you some questions about the work you do.
- You can choose not to answer any question and you can stop the interview at any time.
- Your answers to the questions will be kept private and no one else will know what you said.
- Your name will not be used in any reports.
- It will take about XX minutes to talk with me.
- Do you have any questions about the study?
- May we begin?

Interviewer Certification of Consent:
The respondent gave the verbal consent
1. Yes
2. No