

COVID-19 lockdowns and children's health and well-being*

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Abstract

This paper studies the health and well-being of children during the COVID-19 lockdowns in a developing country context. Using surveys for low-income households in rural areas of Pakistan, we find that lockdowns are associated with worsened health and well-being of children. Exploring potential economic and noneconomic mechanisms behind this negative association, we find that children participating in the labor market due to extreme poverty suffer the worst impact from lockdowns. These results call for policies that target resources towards households where children's participation in the labor market is more likely since leaving vulnerable children behind will have a lasting economic impact for developing economies.

Key words: COVID-19; Health; Well-being; Lockdowns; School closure; Child labor.

JEL codes: I12, I15, I25, I31, J13

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1 Introduction

The COVID-19 pandemic has had an unprecedented impact on the human capital development of children around the world, with over 1.6 billion children being out of school at some point in 2020 as part of lockdown measures (United Nations, 2020).¹ To make matters worse, the economic impact of the COVID-19 pandemic is likely to push millions of households into severe poverty (Hevia et al., 2020) and children away from schools and into child labor (see Edmonds, 2006). The well-documented nexus between growth and human capital development implies that this massive ongoing disruption to the school system in many developing countries will likely have far-reaching and detrimental consequences. Importantly, the negative impact of the pandemic on children’s human capital development is likely to go well beyond education and include other important aspects of human capital such as physical and mental well-being.

Due to extreme poverty and weak health infrastructures, developing countries have a heightened risk of their populations developing severe forms of COVID-19 and possibly dying due to the limited availability of hospital care and the unequal distribution of COVID-19 vaccines (Ataguba and Ataguba, 2020). Although children appear to be less vulnerable to COVID-19 compared to adults, side effects do exist. In addition, drastic and sudden changes to children’s daily lives impact their mental health, diet, sleep habits, and quality of life. For example, one study surveying parents of children aged 7-13 years in Turkey found that during the pandemic, children gained weight, their tendency to sleep increased, and the lockdown negatively impacted their emotional well-being and self-esteem (Adibelli and Sümen, 2020). Furthermore, the closure of schools, in concert with the restriction of outdoor activities during lockdowns, may lead to social isolation and feelings of loneliness with consequences for children’s mental health and well-being (de Figueiredo et al., 2021).

The consequences of lockdowns on children’s health and well-being in developing countries is therefore potentially devastating, and the United Nations has rightly urged actions to be taken to prevent the “crisis from becoming a generational catastrophe”. In this regard, science has the responsibility to contribute data and analyses to inform policy responses that are tailored to specific contexts. Since the beginning of the pandemic, research has examined the consequences of lockdowns for children’s outcomes with the aim of understanding the underlying mechanisms to inform policy responses. Initially, research was dominated by studies from developed countries (e.g., Parolin and Lee, 2021; Takaku and Yokoyama, 2021), however, quickly also focused on developing countries, recognizing that the experience of lockdowns is likely to be very different for children in these countries (e.g., Ahmed et al., 2020; Bauer et al., 2021; Eyawo et al., 2021;

¹The United Nations. 2020. “Policy Brief: Education during COVID-19 and beyond.” <https://unsdg.un.org/resources/policy-brief-education-during-covid-19-and-beyond>.

Jones et al., 2021a). For example, children in developing countries were out of school for longer periods than their counterparts in developed countries (e.g., Jones et al., 2021a,b). By October 2020, they already lost nearly four month of schooling whereas the loss was 6 weeks in developed countries (UNESCO et al., 2020). Even when participating in remote education, children in developing countries experienced greater barriers, such as limited internet connectivity and access to electronic devices (e.g., Jones et al., 2021a; Hossain, 2021). It is thus not surprising that studies from developing countries document limited reach and effectiveness of remote education during the COVID-19 pandemic, further increasing education disparities with consequences that go far beyond education (van Cappelle et al., 2021).

Not only the school closures but also the negative economic impact of lockdowns may affect children in developing countries particularly badly due to the well-established link between a negative economic situation and worse children's health and well-being (Beegle et al., 2009; Aizer, 2017; Ibrahim et al., 2019). For many families in developing countries, lockdowns worsened the financial situation with impacts, for example, on food security, the quality of nutrition, housing and health (Osendarp et al., 2021). The COVID-19 pandemic led to shocks in the global and national food systems, resulting in a decrease in food stock and a rise in food prices (Workie et al., 2020). Previous research found that households in poor rural areas react to food price changes, in particular, price increases, which negatively affects their food consumption and the quality of nutrition (Huang et al., 2022). Evidence from developing countries also shows that these stressors erode parents' ability to function efficiently, their mental health, and their quality of parenting which can have a negative effect on their children's health and well-being (e.g., Cluver et al., 2020; Hastings et al., 2021; Zafar et al., 2021). Moreover, low-income households in developing countries often make a difficult choice between their child's schooling and participation in work (e.g., Baland and Robinson, 2000), a decision that is far different from that faced by parents from a developed economy. Despite the fact that in developing countries vulnerabilities are exacerbated, with serious consequences for children, significantly less research related to COVID-19 has been conducted in developing countries compared to developed countries (Usuzaki et al., 2021), calling for increased research efforts in developing countries to produce context-informed findings to support the development of informed, nuanced pandemic responses (Ahmed et al., 2020; Bauer et al., 2021).

In this paper, we study the impact of lockdowns on the human capital development of children in a developing country context, focusing on their health and well-being. In particular, we make use of contacts we made for other work pre-COVID with a large sample of low-income households with public school children in the Kasur region of Punjab, Pakistan. The context of Pakistan lends itself well to our research question because of the generally poor education system in the country, the continued prevalence of child work due to extreme poverty, and the lack of health

care facilities, which are common issues faced by many other developing economies.

We derived our sample by recontacting parents from whom we collected the initial data in 2018. Having this sample to draw upon has the important advantage that, from our earlier work, we know that these are all low-income households that have at least one child that, while of school age, has a meaningful likelihood of engaging in economic activity for the household. As such, while the sample is not representative of Pakistan or developing countries as whole, it represents outcomes of some of the most vulnerable children because of the low-income environment and the potential additional burden of increased work activity. For the survey, parents were contacted twice by phone in 2020, first in August/September (wave one) and then again in November/December (wave two), both times when schools were closed during nationally instituted lockdowns. Parents were asked about their children's health and well-being (these variables included aspects of physical, mental and social health), the child's economic work activity, and their own economic status and mental health.

One of the key challenge we had to overcome when designing the survey was how to collect pre-COVID information. Using our 2018 data as baseline pre-COVID data was not feasible as we did not have information on health and well-being from this earlier study and 2018 is arguably too long in the past to use as the pre-COVID baseline for early 2020. The data for pre-COVID (baseline) is therefore taken from the August/September survey by asking parents to recall information from immediately prior to the pandemic lockdown. A similar approach of using parent-reported perception of their children's health has been used in many surveys in prior research (see, e.g., [Currie and Stabile, 2006](#)). This approach is also common in other scenarios where, in contrast to collecting retrospective information, investigators are interested in collecting data for counterfactual situations. Several studies in the context of the COVID-19 pandemic ([Arcidiacono et al., 2020](#); [Aucejo et al., 2020](#); [Wiswall and Zafar, 2021](#)) rely on this type of survey design. For example, [Aucejo et al. \(2020\)](#) asks subjects to provide their expectation on how their GPA would have been in the absence of the pandemic. While the retrospective pretest and counterfactual scenario differ in terms of the *state* in question, the common usage of the design underscores that many studies rely on respondents providing information about two states in one period. Nevertheless, recall bias is often cited as a major issue in such surveys. However, there is evidence in the literature that shorter recall periods for micro data reduce recall bias ([Kjellsson et al., 2014](#)), and a salient period of reference is an important factor in whether the retrospective accounts are subject to recall decay ([Smith and Thomas, 2003](#); [Judge and Schechter, 2009](#)). The combination of the recall period being relatively short (7 months) and the significance of the event in question (global pandemic) should both help to minimize the recall bias in our study.

Exploiting the panel structure of our data, we first find that all our measures of health and well-being of children worsened significantly during both lockdown one and lockdown two rel-

ative to prior to the lockdowns. Moreover, while some measures such as physical health appear to be worse in lockdown two, others such as mental health and life quality appear to actually improve during the second lockdown, suggesting some adaptation to the circumstances. We also find that while both male and female children are negatively affected during the lockdowns, male children fair worse in some measures of well-being in the first lockdown.

We next explore economic and noneconomic mechanisms behind the negative relation of lockdowns and children's health and well-being. In terms of economic mechanisms, we find that a worse economic state based on household income plays only a marginal role in the worsened health and well-being of children during the lockdowns. However, extreme poverty that led to children participating in the labor market appears to be a key driver of the negative impacts during lockdowns. In particular, the impact of lockdowns for working children in terms of their physical health, mental health, satisfaction with social relations, and quality of life are all significantly worse relative to that for a child who does not work. Other mechanisms, such as psychological state of the parent and the parental support, play minimal roles. We are cognizant that the evidence in this paper is not causal and provides suggestive causal mechanisms, however these results call for direct policies designed to establish health programs to support the health and well-being of vulnerable children, combined with targeting resources towards households where children's participation in the labor market is likely. In so doing, such policies will mitigate the negative impact of the pandemic on the human capital development of these badly affected children reducing the divergence in economic development both within and across countries.

2 Pandemic lockdowns and children's well-being

Nationwide pandemic lockdowns coincided with school closures and led to numerous restrictions on social interactions. Such limitations can have a direct impact on children's well-being. Research has shown that peer relationships, particularly friendships, play an important role in children's well-being and facilitate a reciprocal support system for regulating emotions ([Hay et al., 2004](#)). However, lockdowns hindered interactions with friends and nonfamily members. While children in developed economies could continue some mode of social exchange through digital means, in developing economies, low-income households do not have access to the internet or low-cost telephonic means to sustain remote connection. We, therefore, expect that lockdown periods themselves can have a strong negative effect on children's well-being by hindering social interactions primarily due to school closure. However, there are also economic and noneconomic mechanisms through which pandemic lockdowns can affect the well-being of children.

Economic Mechanisms: The first mechanism pertains to economic worries associated with the pandemic impacting a household's income and the subsistence of low-income families. This economic channel is particularly relevant in developing economies, where the lack of a safety net can shape children's present and future. This scenario has been attested by long-standing research in economics showing that even short-run income variability in low-income countries can affect children's schooling rates and engagement in labor (see [Edmonds, 2006](#)). The direct impact of a negative economic situation on children's health and well-being ([Beegle et al., 2009](#); [Ibrahim et al., 2019](#)) is also well-established. The pandemic has wreaked havoc on family incomes, with no or limited support from the government. Economic problems and anxiety, especially among low-income households, is prominent during the pandemic and its impact is devastating, as documented for African countries, where 256 million individuals – approximately 77% of the population – lived in households that experienced lost income during the pandemic ([Josephson et al., 2021](#)). Similar evidence has been reported from Pakistan where households were affected by widespread job and income loss, resulting in increased rates of anxiety and stress ([Akmal et al., 2020](#); [Baranov et al., 2021](#); [Tas et al., 2021](#)).

Another economic mechanism that is specific to developing countries is child's engagement in the labor market. The prevalence of child labor in developing countries is in stark contrast to the protected status of children in developed economies. In particular, the International Labour Organization (ILO) reports that most of the approximately 265 million working children around the world are from developing economies. As a result, in developing economies, child labor is common ([Edmonds, 2007](#)); children have opportunities to work productively and contribute to their household income. However, whether children engage in economic activity is decided by the parents who often face a complex decision to choose between their child's schooling and child labor market participation ([Baland and Robinson, 2000](#)).

Economic worries alone can impact the well-being of children, but, more importantly, extreme poverty is expected to lead many parents to resort to having their child work. Limited economic resources is the primary reason cited by the literature for children's engagement in labor ([Hanushek, 1992](#)). A report by the ILO and the UN children's fund (UNICEF) warns that "globally, nine million additional children are at risk of being pushed into child labour by the end of 2022 as a result of the pandemic, which could rise to 46 million without access to critical social protection coverage."

Premature engagement of children in economic activity leads to exposure to dangerous environments at work, which are known to impact children's health (see [Ibrahim et al. \(2019\)](#) for a systematic literature review). The impacts go well beyond physical health and encompass psychological problems, as research indicates that in certain areas of Pakistan, 90 percent of working

children under the age of 14 years have been sexually harassed or exploited.² Working children are, therefore, more vulnerable than nonworking children, and the extreme poverty linked to the COVID-19 pandemic is likely to have made matters worse. Moreover, the effect of the lockdown may be mediated through engagement in child labor due to extreme poverty.

Noneconomic Mechanisms: The second mechanism is via an intergenerational channel, whereby parents own psychological state is affected by the lockdown, which can indirectly affect their children's well-being. Research from before the pandemic consistently shows that poverty and economic worries, in particular if these are persistent and chronic, damage adults' psychological health, with negative consequences for children's functioning (Santiago et al., 2011). In addition, exposure to traumatic events, in particular those that are out of an individual's control, for example, a life-threatening illness, can erode one's subjective well-being and mental health (Buccioli and Zarri, 2020). The accumulation of economic worries, health concerns and increased responsibilities of child care during school closure are all likely factors that are particularly stressful for parents and families (Prime et al., 2020). A recently published study surveying parents in Pakistan who had at least one child younger than 18 years has shown that stressors such as those related to the pandemic, including uncertainty of the situation, social isolation, and financial stress, can erode parents' ability to function efficiently, their mental health, and their quality of parenting (Zafar et al., 2021).

Moreover, the unusual events surrounding the pandemic and the lockdown may cause heightened worries among children whereby they look towards their parents for comfort. However, during the lockdown, parent's own psychological state may impact their ability to meet their child's heightened needs adequately, especially to assume the role of an educator during school closures (Zafar et al., 2021). Lack of parental support can therefore be another channel that could negatively affect children's health and well-being during a lockdown.

Mechanisms in the Context of Pakistan In this paper, we aim to study the impact of lockdowns on children's health and well-being and to highlight the potential channels that may exacerbate or attenuate the consequences of the pandemic. We do so in the context of Pakistan where both economic and noneconomic mechanisms described above are relevant. In particular, Pakistan is regarded as a low income country often exposed to economic and political shocks. Economically the country was struggling even before the pandemic with fiscal deficits, current

²(U.S. Embassy- Islamabad. Reporting. January 14, 2020, U.S. Department of State. Trafficking in Persons Report- 2019: Pakistan. Washington, DC, June 1, 2019. <https://www.state.gov/reports/2019-trafficking-in-persons-report/> and Nazish, Kiran. Pakistan's shame: the open secret of child sex abuse in the workplace. The Guardian, June 15, 2018. <https://www.theguardian.com/global-development/2018/jun/15/pakistanshame-open-secret-child-sex-abuse-workplace-kasur>

account deficits, and a low growth rate. All in all, pre pandemic the country's economic state could not absorb the disruption caused by the pandemic. The special survey by the Pakistan Bureau Statistics evaluating the impact of COVID-19 on Pakistan's economy and food security estimated 20.6 million people to suffer job losses and 6.7 million people experience a decrease in income. The impact on low income households who often engage in the informal labor market was estimated to be substantially greater. This tied with the observed lack of food security for about 10% of the population who went without food for a day or longer and another 30% that obtained food with difficulty. Noneconomically, amongst those who suffered an economic shock, roughly 54% coped by decreasing their subscription of health services and roughly 50% responded by reducing the quantity and quality of food consumption. Other noneconomic worries during the pandemic ranged from delayed payments, taking up loans from friends and family, selling property and eating away savings.

To ease household's economic and noneconomic worries, during the pandemic lockdowns on April 1st 2020, the government of Pakistan responded with a one time financial assistance called Ehsaas Emergency Cash Program. This program disbursed a total of 179 billion PKR to the impacted households who received financial assistance of PKR 12000 (roughly \$70) for four months. In terms of eligibility, any individual who is a taxpayer, car owner, government servant and their spouses and people who have a history of foreign traveling were not eligible to receive a monthly stipend or any other facility under the Ehsaas programme. The eligibility was cross checked using the confidential national socio-economic registry database (NSER). The world bank ranked this program as the fourth best program in terms of the number of people covered. In 2021, the second phase was also launched which covered 12 million deserving families. This program therefore mitigated some of the negative effects of lockdowns, therefore we view our estimated effects to be a lower bound. In the absence of government assistance, these effects would be more negative.

In this context, our analysis can make several hypotheses about the potential mechanisms at play during the lockdown in Pakistan.

- *Hypothesis 1:* Lockdowns negatively affect children's health and well-being.
- *Hypothesis 2:* In terms of the economic mechanism, we hypothesize that the negative effect of lockdown on children's well-being would be most prominent for children who experience extreme poverty – which is captured by households' poverty level to be so high that the child engages in economic activity during the lockdowns.
- *Hypothesis 3:* In terms of the non economic mechanisms, we hypothesize that the negative effect on children's health and well-being will be more pronounced for children whose

parents report either the worst psychological state or do not support their children’s educational goals during the lockdown.

3 Data and Methodology

Institutional background: A few distinct features define the public school system in Pakistan. In public schools, the academic year runs from April to March, and final exams therefore occur in March. The majority of these schools are segregated by gender, and most children pursue primary and middle-school education at the same public school.³ All these features guided our access to parent-child pairs in the sampled schools, as described in this paper.

Original sample selection: Our original study was conducted between April and June 2018.⁴ The study was approved by the author’s university’s IRB (protocol : 15-2018) and conducted in accordance with human subject guidelines. To construct the sample for the original study, we acquired parents’ contact information from school records. The children (median age of 12 years) had recently completed their final year of primary school education (grade 5), and conditional on passing a central exam, they transitioned to middle school for the next academic year. To facilitate data collection, we restricted the sample to schools for which it was possible for students to transition within the same school, which is common in Pakistan. We concentrated on rural and peri-rural localities of the Kasur district in Punjab. We chose the district of Kasur in Punjab because the average level of various development indicators (such as school dropout rate, monthly income of those employed, population involved in agriculture, youth labor market participation and crime rate) in Punjab are closest to those observed in Kasur, according to the district-wise data collected from the Alif Ailaan campaign (2013-2018) for education in Pakistan. This process left a pool of 45 schools from which we randomly selected the sample. We selected 32 schools, where the probability of a school being chosen for our sample increased with the number of students in grade 5. The distribution of these schools by grade and gender is provided in Table A1.

We then took all students at these 32 schools enrolled in grade 5 (in February 2018) who were due to transition to middle school (grade 6) at the start of April 2018 after taking the central exam. In April, with the school’s cooperation, we accessed the school records for the previous academic year and the current academic year and collected the addresses of the parents of students enrolled in one of the sampled schools during the previous academic year (i.e., prior to the transition). We then collected information using parent-child pair surveys during the period from April to June

³In Appendix A, we provide more details about the province/district selection.

⁴For more details on the original sample, see [Malik and Mihm \(2022\)](#).

2018. The total number of observations collected was 1,506, and 90 of these observations were parental variables collected from nonparental guardians. We excluded such children and based our study on the sample of 1,416 parent-child observations.

Follow-ups: The sample of parents and their contact information acquired during our original survey provided us with the basis to recontact parents for two additional follow-up surveys during the two nationwide lockdowns in 2020.⁵ The follow-ups were approved by the author’s university’s IRB (protocol : HRPP-2020-98) and conducted in accordance with human subject guidelines. In Pakistan, schools were first closed nationwide on March 14, 2020. The first nationally instituted lockdown of schools and other activities to combat COVID-19 lasted until September 15, 2020, when schools reopened for the 2020-2021 academic year. Between November 25, 2020, and December 25, 2020, schools were closed nationwide a second time to control the spread of the virus. Parents were recontacted for a first follow-up in August-September 2020 (wave 1) and for a second follow-up in November-December 2020 (wave 2) during the school closures. For wave 1, we were able to reach 980 parents from the baseline sample, and of these 980 parents contacted in the first follow-up, we were able to recontact 975 parents for wave 2. Attrition was approximately 30% across the baseline and the two follow-up waves.

The main reasons for attrition were that the contact numbers collected at baseline were not working or phone numbers were transferred to another person by phone providers. In the past few years, the major phone companies in Pakistan have been mandated to enhance their records about the owners of phone numbers (such as their national ID cards), and under this mandate, many phone numbers where the registration was not accompanied by proper paperwork led to cancellation of numbers and/or transfer of the same phone number to another recipient. To ensure that the follow-up waves did not introduce any systematic bias, such as only male children/literate/richer parents responded to the follow-up, we present in Table A2 that for important socioeconomic variables, the subsamples we were able to contact for the follow-ups were remarkably similar (using the original data), as the p-values for the differences in these variables across samples are always insignificant. This allows us to rule out the possibility of systematic bias in the follow-up waves.⁶

At both follow-ups in 2020, parents were contacted by phone because restriction due to the COVID-19 pandemic prohibited face-to-face survey collection. Moreover, because the acquisition of information directly from children through phone calls is forbidden in Pakistan, phone interviews were conducted with parents at both time points to adhere to the institutional protocols of the institution that conducted this survey in Pakistan and the COVID-19-related restrictions

⁵Appendix A provides the script of the two waves.

⁶We discuss further challenges faced by our survey design in the Appendix B.

(standard operating procedures (SOPs)) in place with regard to human subject research.⁷

Outcome variables: To estimate the impact of the COVID-19 pandemic on children’s health and well-being, additional information was collected from parents. A similar approach of using parent-reported perception of their children’s health has been used in many surveys in prior research (see, e.g., [Currie and Stabile, 2006](#)). The included questions pertained to aspects of children’s physical health (“In general, how would you rate your child’s physical health [before/during the current lockdown]?”), mental health (“In general, how would you rate your child’s mental health and ability to think [before/during the current lockdown]?”), sleep quality (“In general, how would you rate your child’s sleep quality [before/during the current lockdown]?”), eating habits (“In general, how would you rate your child’s eating habits [before/during the current lockdown]?”), social health (“In general, how would you rate your child’s satisfaction with his/her social activities and relationships [before/during the current lockdown]?”) and life quality (“In general, how would you rate your child’s quality of life [before/during the current lockdown]?”). The responses were collected on a Likert scale: 1. Poor, 2. Fair, 3. Good, 4. Very Good, 5. Excellent.

Such child’s health-related questions are often asked to parents by health officials, are psychometrically validated and are commonly used by the world health survey conducted by the World Health Organization (WHO), the National Health Interview Survey (NHIS) conducted by the Centers for Disease Control and Prevention (CDC) ([Blewett et al., 2020](#); [Drew, 2021](#)), and surveys reported in the literature (see, e.g., [Belanger and Suchodoletz, 2021](#)).

Independent variables: The main independent variable of interest is the time variable, with three periods. The first period corresponds to time before the pandemic, and the second and third periods correspond to lockdown one and lockdown two, respectively.

We are also interested in time-varying factors, which we utilize in two ways. The first is to help us understand the economic and noneconomic mechanisms highlighted in Section 2 in driving the impact of lockdowns on children’s health and well-being. For this, we make use of the binary variables of economic and noneconomic factors since binary variables facilitate interpretation across different factors that are measured on a Yes/No scale and because continuous measures have different units. The second use of these factors is to include additional controls, where we make use of the continuous variables when available. Below, we describe the construction of each of these factors.

The first factor we consider is the economic state of the household. The family structure in developing economies differs from that in developed economies. Within developing countries,

⁷At all three measurement points, participants were compensated for their participation.

there is substantial variation in family size. While some families comprise just the nuclear family, others, especially in rural settings, include multiple generations. Often, the head of the family (usually a male member) is the breadwinner. For these reasons, instead of using income, we construct a continuous variable of income per capita for each period, which is based on two questions asked to parents: (1) “What is your household’s average monthly income (in local currency)?”, and (2) “What is the family size of this household?”⁸ Some data for income are not reported. As a result, following [Fruehwirth et al. \(2019\)](#), we address this issue by replacing nonreported or zero income with zero and include an additional binary variable for missing income, which takes a value of 0 if income is zero. We include this dummy in our specification to avoid any systematic attrition of the data that could impact the results. For the binary variable, we restrict ourselves to the sample where we have reported income and code it as follows. If the household’s income per capita is more than its own mean income prior to and during the lockdown periods, we code the variable as 1; otherwise, it takes a value of 0.

As the second economic factor, which captures extreme poverty of the household, we consider whether the child engages in economic activity or not prior to and during the lockdowns. No consensus exists on whether it is better to ask parents or the child about the child’s work activity, and while [Dillon et al. \(2012\)](#) find little difference between work reported by children and that reported by their guardians, [Dammert and Galdo \(2013\)](#) find the reports to be inconsistent in a significant number of cases. Since we could not ask the child directly in the follow-up phone survey (due to restrictions by the host country), we asked the child’s guardian whether the child engaged in any economic activity or not (extensive margin) prior to the lockdowns and during the lockdowns, as we believe the guardians are well suited to answer this type of question. Specifically, we asked parents “Does your child do any work for a wage, salary, commission or any payment in kind (excluding domestic household work) [before/during the current lockdown]?”. We code the response to this question as 1 if the child engages in any economic activity; otherwise, child labor is coded as 0.

In terms of noneconomic factors, we include the general, psychological state of parents, which is shown to play a pivotal role in children’s outcomes. We measure this factor using 11 questions from [Goldberg \(1988\)](#), which are also validated by [Goldberg et al. \(1997\)](#). The questions include “During this period [before/during the current lockdown] have you been losing confidence (feeling unhappy, feel unable to face up difficulties, feel you are playing a useful part in life, feel worthless, feel depressed, feel unable to overcome difficulties, feel strained, unable to enjoy

⁸Using consumption rather than income data as a measure of household welfare is generally preferable in a developing country context. However, we were constrained in the time we could request participants to devote to our telephone survey so additionally gathering consumption data was not feasible given it requires more extensive range of questions (see, e.g., [Beegle et al., 2012b](#)). In light of this limitation, the analysis based around this variable needs to be interpreted with some caution.

day to day, having difficulty sleeping)?”. The responses are on a Likert scale: 1. Never, 2. Rarely, 3. Sometimes, 4. Often, 5. All the time.

Note that our design minimizes the common method variance bias (CMV). Podsakoff and Organ (1986) defines CMV as when the estimates of the relationships between two or more constructs are biased because they are measured with the same method. However, in our setting, when we ask parents about their own psychological state and their child’s health and well-being, we made an explicit effort to use a different type of scale (frequency-based scale for parents and quality-based scale for children) and reversed the order of choices such that choices in ascending order are associated with worse psychological state for the parent questions (Never to Often) but ascending order for the child questions (Poor to Excellent). This approach eliminates common scale properties and balances the positive and negative items. Such methods have been used by numerous papers to address CMV (Jordan and Troth, 2020). Nevertheless, we are cognizant that this approach cannot fully eliminate the potential for a CMV bias but given the restriction placed on our data collection we could only try to minimize the bias.

We construct a continuous measure of parent’s general health by aggregating the scale for all the questions and dividing it by the number of questions responded to. To assess how closely related these sets of questions are as a group, we calculate Cronbach’s alphas, which are 0.82, 0.95 and 0.85 (for periods 1, 2 and 3, respectively). These alphas indicate a high degree of internal consistency. We also construct a dummy variable, where we code a parent having a good psychological state as 1 if the continuous measure is less than or equal to 2, which, on average, corresponds to never and rarely responses for individual questions; otherwise, the parent’s good psychological state variable is coded as 0.

The second noneconomic variable we construct is based on the question “During this period [before/during the current lockdown] were you involved in supporting your child with their educational activities?”. While this question is broad and can capture both financial and non-financial support, as education is free for our sampled children the question likely captures mainly non-financial aspects of support of the child’s education such as providing supportive environment conducive to learning. We construct a dummy variable that takes a value of 1 if the parents respond yes and 0 otherwise.

Statistical model: Our primary empirical specification is an individual fixed effect estimation, as follows,

$$y_{it} = \alpha_i + \beta_t Lockdown_t + \mu_{it}, \quad (1)$$

where $i = 1 \dots N$ represents the identity of the child and $t = 0, 1, 2$ denotes the period relative to the lockdowns. y denotes the outcome variables, which include a child’s physical health, mental health, sleep quality, eating habits, satisfaction with social relationships and quality of life. *Lockdown₀* represents the period prior to a lockdown and is the omitted period, *Lockdown₁* denotes lockdown 1 and *Lockdown₂* denotes lockdown 2. For each of these periods, in online Appendix Figure A.8.1-A.8.6, we present a summary of our outcome variables. α_i are individual specific intercepts and contain $Z_{i,1}$, which are observable and unobservable individual specific characteristics in *Lockdown₀* that differ between individuals but are constant over time, such that $\alpha_i = \alpha_0 + \gamma Z_i$. Finally, μ_{it} denotes the error term.

The coefficients of primary interest are β_1 and β_2 , which correspond to the two lockdown periods and use within-subject variation across periods. These coefficients can be interpreted as the impact of the lockdown period relative to the no-lockdown period before the COVID-19 pandemic. In the robustness exercise, we include additional variables, such as whether the respondent is a father or mother⁹, income per capita, missing income, child’s engagement in labor, and whether the parent provides support for educational activity of their child. As we mention above, we try to limit CMV bias arising from using a survey of the parents to assess both their own and their child’s psychological state by using different scales. Nevertheless, we also include parental psychological state as a control variable in our robustness exercise to control for an impact from the bias on our findings.

In addition to estimating the average impacts of lockdown periods on children’s health and well-being, we explore whether economic and noneconomic mechanisms, denoted by F (and which instead of being additional controls are now interaction variables and include economic state of the household, child’s engagement in economic activity, psychological state of the parent and support provided by the parent for educational activities), can shed light on whether these factors exacerbate or attenuate the impact of lockdowns on children’s outcomes. To do so, we estimate a regression model that includes interactions between the period indicator and the factor F :

$$y_{it} = \alpha_i + \beta_t \text{Lockdown}_t + \kappa_t F_{it} + \delta_t \text{Lockdown}_t \times F_{it} + \mu_{it}. \quad (2)$$

We first study each factor individually; then, in a separate specification, we jointly estimate an interaction model in which we include all factors and their interactions with periods simultaneously.

⁹In our data, 88.2% of the respondents are fathers, and remaining are mothers.

4 Results

In this section, we start by presenting the effect of lockdowns on children’s health and well-being, as perceived by their parents.

4.1 Main Results

Using specification 1, we estimate the effect of the lockdown periods relative to prelockdown on parent’s perceived health and well-being outcomes for their children and present the results in Panel A of Table 1. The mean level of health outcomes prior to the lockdowns are provided in the table as the constant term. From the coefficients corresponding to each of the lockdown periods, we can see that parents perceived their children to have worse physical health, mental health, sleep quality, eating habits, social satisfaction and life quality during the lockdown periods relative to prior to the lockdown. During the first lockdown, parents report that the mental health, social satisfaction and life quality of their child is only fair relative to good prior to the lockdown, and physical health during the second lockdown is only good relative to very good prior to the lockdowns. Therefore, we find strong evidence in favor of Hypothesis 1 that lockdowns negatively affect children’s health and well-being.

Table 1: The impact of lockdowns on children’s health and well-being

	(1)	(2)	(3)	(4)	(5)	(6)
Panel A	Physical Health	Mental Health	Sleep Quality	Eating Habits	Social Satisfaction	Life Quality
1st Lockdown	-0.07** (0.025)	-0.63*** (0.032)	-0.17*** (0.021)	-0.15*** (0.018)	-0.67*** (0.030)	-0.60*** (0.029)
2nd Lockdown	-0.63*** (0.025)	-0.44*** (0.032)	-0.19*** (0.021)	-0.15*** (0.018)	-0.39*** (0.030)	-0.37*** (0.029)
constant	4.03*** (0.017)	3.62*** (0.022)	4.09*** (0.015)	4.09*** (0.013)	3.56*** (0.021)	3.55*** (0.021)
Panel B	Hypothesis Testing					
<i>Lockdown 2 vs. Lockdown 1</i>	-0.55***	0.19***	-0.02	0.00	0.28***	0.23***
<i>Test p-value</i>	[0.001]	[0.001]	[0.314]	[1.000]	[0.001]	[0.001]
<i>Total Obs</i>	2925	2925	2925	2925	2925	2925
<i>Total Individuals</i>	975	975	975	975	975	975

Note: Panel A presents estimates from specification 1. Standard errors are in brackets. In Panel B, p-values [in square brackets] are for the null hypothesis that the coefficients of two subsamples (as specified in Panel B) are equal. All numeric values are displayed up to 3 decimal places. Stars indicate significance: * $p < 0.050$, ** $p < 0.010$, *** $p < 0.001$.

The smaller coefficients for the second lockdown compared to the first lockdown suggest that the effect is less negative for the second lockdown. To ascertain whether, statistically speaking,

Table 3: The impact of lockdowns on children's health and well-being by Gender

Sample 1: Females = 0						
Panel A	(1) Physical Health	(2) Mental Health	(3) Sleep Quality	(4) Eating Habits	(5) Social Satisfaction	(6) Life Quality
Lockdown 1	-0.08* (0.037)	-0.70*** (0.049)	-0.16*** (0.030)	-0.17*** (0.027)	-0.77*** (0.046)	-0.75*** (0.044)
Lockdown 2	-0.70*** (0.037)	-0.45*** (0.049)	-0.19*** (0.030)	-0.17*** (0.027)	-0.42*** (0.046)	-0.45*** (0.044)
constant	3.95*** (0.048)	3.46*** (0.063)	4.03*** (0.039)	4.03*** (0.035)	3.39*** (0.059)	3.35*** (0.057)
Panel B Hypothesis Testing						
<i>Lockdown 2 - Lockdown 1</i>	-0.62***	0.25***	-0.03	0.01	0.34***	0.30***
<i>Test p-value</i>	[0.000]	[0.000]	[0.348]	[0.711]	[0.000]	[0.000]
<i>Total Obs</i>	1650	1650	1650	1650	1650	1650
<i>Total Individuals</i>	550	550	550	550	550	550
Sample 2: Females = 1						
Panel A	(1) Physical Health	(2) Mental Health	(3) Sleep Quality	(4) Eating Habits	(5) Social Satisfaction	(6) Life Quality
1st Lockdown	-0.12** (0.041)	-0.66*** (0.051)	-0.20*** (0.039)	-0.13*** (0.032)	-0.65*** (0.048)	-0.54*** (0.048)
2nd Lockdown	-0.59*** (0.041)	-0.55*** (0.051)	-0.22*** (0.039)	-0.14*** (0.032)	-0.44*** (0.048)	-0.40*** (0.048)
constant	4.03*** (0.042)	3.66*** (0.053)	4.12*** (0.041)	4.15*** (0.033)	3.61*** (0.050)	3.59*** (0.050)
Panel B Hypothesis Testing						
<i>Lockdown 2 - Lockdown 1</i>	-0.47***	0.11***	-0.02	-0.01	0.20***	0.15***
<i>Test p-value</i>	[0.000]	[0.016]	[0.631]	[0.674]	[0.000]	[0.001]
<i>Total Obs</i>	1275	1275	1275	1275	1275	1275
<i>Total Individuals</i>	425	425	425	425	425	425

Note: Panel A presents estimates from specification 1. Standard errors are in brackets. In Panel B, p-values [in square brackets] are for the null hypothesis that the coefficients of two subsamples (as specified in Panel B) are equal. All numeric values are displayed up to 3 decimal places. Stars indicate significance: * $p < 0.050$, ** $p < 0.010$, *** $p < 0.001$.

the effects are less negative, we test if the coefficient for the second lockdown is significantly different to the coefficient for the first lockdown and present the p-values in Panel B. We find that apart from physical health, the other well-being measures mostly improve in the second lockdown compared to the first. This dynamic effect across lockdown periods could be explained by the adaptation strategies or adjusted expectations about the lockdown after the first lockdown. While the impact is permanently negative during the lockdown periods, the effects are weaker in the latter lockdown than during the first one.

In online Appendix Table B.1, we show that when we include additional controls, the results described above remain unchanged.

Note that since the specification includes individual fixed effects, the direct effect of gender on health outcomes is absorbed. We therefore split the sample by gender, and present the results in Table 3 where the first panel is for the sample of male children, and the second panel is for the sample of female children. We find that while both male and female children are negatively affected in lockdown 1 and lockdown 2, the effects on mental health, social interactions and life quality has improved over the two lockdowns for both sample. There is a suggestive evidence that in lockdown 1 male children experience a larger negative effect compared to female children for mental health, social satisfaction and quality of life. In the context of Pakistan, this is intuitive because it is usually male children who have some form of social interactions with other children outside the home. However, during the lockdowns, such interactions became limited, which affected the social lives of male children. Female children, on the other hand, usually spend more time indoors and were not as strongly affected by stringent rules limiting interactions with neighbors or other children. Additionally, the effects during lockdown 2 for females are similar to those for males for sleep quality, social interactions, and life quality, suggesting that the gender differences vanish from lockdown 1 to lockdown 2. These results are consistent with our hypothesis that there is some adaptation mechanism at play that weakens the negative effect of the first lockdown, even though the effects continue to be negative in most cases.

4.2 Potential Mechanisms

In this section, we explore whether the estimated relationship between lockdown periods and children's health and well-being described in Section 4.1 can be explained by the economic and noneconomic mechanisms described in Section 2. For the economic mechanisms, we consider the dummy for above/below mean income per capita in one specification and the child's status in terms of their engagement in the labor market in another specification. Both variables are relevant features for developing economies, and the latter factor is specifically in stark contrast to the environment faced by children in developed economies and represents extreme poverty. For noneconomic mechanisms, we consider the dummy representing parent's good and bad psychological state prior to and during the lockdowns and the dummy for the presence and absence of support of parents for their children's school-related work. To easily see the impacts, for each analysis, we study the within-period effect across two subsamples and we study the effect across periods for each subsample.

4.2.1 Economic Mechanism

Economic State: We estimate specification 2 and present the results in Table 4.¹⁰ In the first subsample, our first group of interest is children belonging to households with good economic state (i.e., children whose household did not experience reduced income relative to the baseline income), and the comparison group is children whose households experience a poor economic state (i.e., children whose household experience reduced income during the lockdowns relative to the baseline). We present the differential effects and the associated p-values for these two groups in each period (prior to the lockdown, lockdown 1 and lockdown 2).

The results show that prelockdown, a good economic state is associated with better mental health, social satisfaction and quality of life. However, during the first lockdown, the economic state of the household does not appear to be relevant to the well-being of children, and during the second lockdown, a better economic state is associated with better physical health and eating habits of children.

For the second analysis, we focus on children whose households have a poor economic state (a good economic state) and look at the impact on health outcomes during versus prior to lockdowns. The results show that children from both types of households suffer adversely in terms of their well-being during the pandemic. During the second lockdown, the negative effect for children with good versus poor economic state is significantly attenuated in terms of physical health and eating habits. In online Appendix Table B.2, we control for all variables, such as income per capita, missing income, parents psychological state and parent's support, and show that similar results hold.

In the online Appendix Table B.3, we also use an alternative definition of economic state defined using the pre-lockdown income levels. In particular, we code Poor Household = 1 for households with pre-lockdown income level below sample's average pre-lockdown income and code Poor Household = 0 if the income exceeds the sample's average income. Similar to the analysis based on two genders, this economic state variable does not vary over time within subject so we analyze the two sub-samples separately and present these results in Appendix Table B.3. The first panel presents the results for rich households while the second panel presents the same results for poor households. Similar to the second analysis results in the interaction model, we find that negative health and well-being of children is common to both types of households and the estimates are not substantially different in sign and size across the two types of households.

Child Labor: In 2019, the province of Punjab passed the Punjab Domestic Workers Act of 2019, which prohibits children aged 15 years and under from working in any domestic service capacity. Despite this act, approximately 12.4% of the children aged 5-14 years in the province of

¹⁰Note that we exclude individuals for whom income is not reported prior to and during the lockdowns.

Table 4: Economics state

	(1)	(2)	(3)	(4)	(5)	(6)
Panel A	Physical Health	Mental Health	Sleep Quality	Eating Habits	Social Satisfaction	Life Quality
Lockdown 1	-0.05 (0.055)	-0.48*** (0.072)	-0.18*** (0.050)	-0.21*** (0.043)	-0.45*** (0.067)	-0.43*** (0.066)
Lockdown 2	-0.77*** (0.062)	-0.26** (0.082)	-0.27*** (0.057)	-0.31*** (0.049)	-0.19* (0.076)	-0.23** (0.075)
Good Economic State	0.02 (0.059)	0.22** (0.077)	-0.01 (0.054)	-0.09* (0.046)	0.28*** (0.072)	0.22** (0.071)
Good Economic State X Lockdown 1	-0.08 (0.10)	-0.14 (0.14)	0.00 (0.096)	0.08 (0.081)	-0.24 (0.13)	-0.14 (0.13)
Good Economic State X Lockdown 2	0.36*** (0.096)	-0.24 (0.13)	0.14 (0.088)	0.26*** (0.075)	-0.25* (0.12)	-0.19 (0.12)
Constant	4.03*** (0.043)	3.51*** (0.057)	4.11*** (0.040)	4.16*** (0.034)	3.41*** (0.053)	3.43*** (0.053)
Panel B	Hypothesis Testing					
Prelockdown	0.02	0.22**	-0.01	-0.09	0.28***	0.22**
Good Economic State vs. Bad						
<i>p-value</i>	[0.759]	[0.004]	[0.847]	[0.048]	[0.001]	[0.002]
Lockdown 1	-0.06	0.08	-0.02	-0.01	0.05	0.06
Good Economic State vs. Bad						
<i>p-value</i>	[0.316]	[0.333]	[0.797]	[0.835]	[0.538]	[0.328]
Lockdown 2	0.38***	-0.02	0.13**	0.17***	0.04	0.03
Good Economic State vs. Bad						
<i>p-value</i>	[0.001]	[0.757]	[0.012]	[0.001]	[0.559]	[0.641]
Bad Economic State	-0.05	-0.48***	-0.18**	-0.21***	-0.45***	-0.43***
Lockdown 1 vs. Prelockdown						
<i>p-value</i>	[0.362]	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]
Good Economic State	-0.13*	-0.62***	-0.19**	-0.13*	-0.68***	-0.57***
Lockdown 1 vs. Prelockdown						
<i>p-value</i>	[0.046]	[0.001]	[0.002]	[0.011]	[0.001]	[0.001]
Bad Economic State	-0.768***	-0.26**	-0.27***	-0.31***	-0.19*	-0.23**
Lockdown 2 vs. Prelockdown						
<i>p-value</i>	[0.001]	[0.002]	[0.001]	[0.001]	[0.011]	[0.003]
Good Economic State	-0.41***	-0.50***	-0.13**	-0.05	-0.44***	-0.41***
Lockdown 2 vs. Prelockdown						
<i>p-value</i>	[0.001]	[0.001]	[0.003]	[0.178]	[0.001]	[0.001]
<i>Total Obs</i>	2259	2259	2259	2259	2259	2259
<i>Total Individuals</i>	753	753	753	753	753	753

Note: Panel A presents estimates from specification 2. Standard errors are in brackets. In Panel B, p-values [in square brackets] are for the null-hypothesis that the coefficients of two sub-samples (as specified in the first column of Panel B) are equal. All numeric values are displayed up to 3 decimal places. Stars indicate significance: * $p < 0.050$, ** $p < 0.010$, *** $p < 0.001$.

Punjab engage in some form of labor. In our baseline data (in 2018 when the median child's age was 12), approximately 16% of children were involved in labor. Just prior to and during the first lockdown, approximately 25% of the children engaged in economic activities, and the percentage increased to 40% during the second lockdown. As a result, from March 2020 to Dec 2020, there is an approximately 60% increase in the number of children who engage in economic activities. This scenario indicates a desperate economic state of households, where children are forced into work for subsistence. In such a state, the health and well-being of children who work are more likely to be impacted because of the direct effects of child labor on children's health and well-being.

Table 5: Child Labor

	(1)	(2)	(3)	(4)	(5)	(6)
Panel A	Physical Health	Mental Health	Sleep Quality	Eating Habits	Social Satisfaction	Life Quality
Lockdown 1	-0.10*** (0.023)	-0.42*** (0.036)	-0.14*** (0.025)	-0.18*** (0.022)	-0.48*** (0.034)	-0.42*** (0.034)
Lockdown 2	-0.17*** (0.026)	-0.31*** (0.040)	-0.18*** (0.028)	-0.11*** (0.024)	-0.24*** (0.037)	-0.23*** (0.037)
Child Labor	-0.06 (0.046)	-0.01 (0.072)	-0.01 (0.051)	0.02 (0.043)	-0.05 (0.067)	0.00 (0.067)
Child Labor X Lockdown 1	0.14* (0.062)	-0.85*** (0.096)	-0.11 (0.068)	0.09 (0.058)	-0.75*** (0.090)	-0.72*** (0.090)
Child Labor X Lockdown 2	-1.07*** (0.059)	-0.33*** (0.092)	-0.03 (0.064)	-0.11* (0.055)	-0.34*** (0.086)	-0.34*** (0.085)
Constant	4.04*** (0.016)	3.63*** (0.024)	4.09*** (0.017)	4.09*** (0.015)	3.57*** (0.023)	3.55*** (0.023)
Panel B	Hypothesis Testing					
Prelockdown Child Labor vs. Not	-0.06	-0.01	-0.01	0.02	-0.05	0.00
<i>p-value</i>	[0.177]	[0.874]	[0.872]	[0.600]	[0.465]	[0.953]
Lockdown 1 Child Labor vs. Not	0.08	-0.86***	-0.12**	0.12**	-0.80***	-0.72***
<i>p-value</i>	[0.056]	[0.001]	[0.006]	[0.003]	[0.001]	[0.001]
Lockdown 2 Child Labor vs. Not	-1.14***	-0.34***	-0.04	-0.09*	-0.39***	-0.34***
<i>p-value</i>	[0.001]	[0.001]	[0.282]	[0.010]	[0.001]	[0.001]
No Child Labor Lockdown 1 vs. Prelockdown	-0.10***	-0.42***	-0.14***	-0.18***	-0.48***	-0.42***
<i>p-value</i>	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]
Child Labor Lockdown 1 vs. Prelockdown	0.04	-1.27***	-0.26***	-0.09	-1.22***	-1.14***
<i>p-value</i>	[0.484]	[0.001]	[0.001]	[0.091]	[0.001]	[0.001]
No Child Labor Lockdown 2 vs. Prelockdown	-0.17***	-0.31***	-0.18***	-0.11***	-0.24***	-0.23***
<i>p-value</i>	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]
Child Labor Lockdown 2 vs. Prelockdown	-1.25***	-0.64***	-0.21***	-0.22***	-0.57***	-0.58***
<i>p-value</i>	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]
<i>Total Obs</i>	2925	2925	2925	2925	2925	2925
<i>Total Individuals</i>	975	975	975	975	975	975

Note: Panel A presents estimates from specification 2. Standard errors are in brackets. In Panel B, p-values [in square brackets] are for the null hypothesis that the coefficients of two subsamples (as specified in Panel B) are equal. All numeric values are displayed up to 3 decimal places. Asterisks indicate significance: * $p < 0.050$, ** $p < 0.010$, *** $p < 0.001$.

We, therefore, assess whether the impact of the lockdowns is worse for children who engage in the labor market.

We estimate specification 2 with the status of the child's labor as the interaction variable and present the results in Table 5. In the first subsample, our first group of interest is children who work (child labor), and the comparison group is children who do not work. We present the differential effects and the associated p-values for these two groups in each period (prior to the

lockdown, lockdown 1 and lockdown 2). We see that while prior to the lockdown the health outcomes for the two groups are not significantly different from each other, during lockdown 1 and lockdown 2, children who work have lower well-being compared to children who do not work. For the second analysis, we focus on children who do not work (and children who work), and look at the impact on health outcomes during versus prior to lockdowns. We find, regardless of whether children work or not, that the effect of a lockdown is negative, but the effect is worse for children who work in each period (as indicated by the significant interaction term). This finding holds when we focus on lockdown 1 or lockdown 2. We also observe that these effects appear to be stronger during lockdown 1 than lockdown 2, indicating adaptation and learning. Overall, we find evidence in favor of Hypothesis 2 that the negative effect of lockdown on children's well-being is most prominent for children who experience extreme poverty – which is captured by households' poverty level to be so high that the child is engaging in economic activity during the lockdowns.

In online Appendix Table B.4, we control for all variables, such as income per capita, missing income, parent's psychological state and parent's support, and show that similar results hold. In the online Appendix Tables B.5 - B.6, we also consider how the effect of child labor differs across genders by splitting the sample and re-estimating the interaction model. We find that the overall effects are reflected for both genders.

4.2.2 Noneconomic Mechanism

Psychological state of parents: As mentioned in Section 2, a parent's own psychological state is a potential mechanism driving children's health and well-being during lockdowns. We use the psychological index as an interaction factor and estimate specification 2 and present results in Table 6.

Our results indicate that while parent's good or bad psychological state has no significant impact on children's well-being or health prior to the pandemic, during the lockdowns, the psychological state is important only in terms of a few dimensions of children's well-being. During the first lockdown, parents with a good psychological state have children with better mental health, social satisfaction and life quality, but during the second lockdown, these effects are evident only for physical health.

To ascertain whether the effects of the lockdown are mediated through parent's psychological state, we find that regardless of the state, lockdowns have a negative effect on children's well-being. The effects are significantly attenuated for children's mental health and social satisfaction if the parent has a good psychological state during the first lockdown, and the same conclusion holds for physical health during the second lockdown.¹¹ In online Appendix Table B.7, we con-

¹¹We observe a somewhat negative effect on quality of life in the second lockdown relative to prelockdown for

Table 6: Psychological state

	(1)	(2)	(3)	(4)	(5)	(6)
Panel A	Physical Health	Mental Health	Sleep Quality	Eating Habits	Social Satisfaction	Life Quality
Lockdown 1	-0.03 (0.12)	-0.83*** (0.16)	-0.28* (0.11)	-0.16 (0.097)	-0.83*** (0.15)	-0.56*** (0.15)
Lockdown 2	-1.09*** (0.13)	-0.31 (0.17)	-0.26* (0.12)	-0.22* (0.099)	-0.29 (0.16)	-0.03 (0.15)
Psychological State	-0.11 (0.12)	0.10 (0.16)	-0.06 (0.11)	-0.02 (0.097)	0.09 (0.15)	0.33* (0.15)
Psychological State X Lockdown 1	-0.16 (0.13)	0.44** (0.17)	0.16 (0.12)	0.01 (0.10)	0.37* (0.16)	0.19 (0.16)
Psychological State X Lockdown 2	0.61*** (0.13)	-0.15 (0.17)	0.07 (0.12)	0.09 (0.10)	-0.10 (0.16)	-0.36* (0.16)
Constant	4.13*** (0.12)	3.53*** (0.16)	4.15*** (0.11)	4.11*** (0.095)	3.47*** (0.15)	3.23*** (0.15)
Panel B	Hypothesis Testing					
Prelockdown						
Good Psychological State vs. Bad	-0.11	0.10	-0.06	-0.02	0.09	0.33
<i>p-value</i>	[0.375]	[0.545]	[0.585]	[0.864]	[0.549]	0.029
Lockdown 1						
Good Psychological State vs. Bad	-0.27***	0.54***	0.10*	-0.01	0.46***	0.53***
<i>p-value</i>	[0.001]	[0.001]	[0.010]	[0.865]	[0.001]	[0.001]
Lockdown 2						
Good Psychological State vs. Bad	0.50***	-0.05	0.01	0.08*	-0.01	-0.03
<i>p-value</i>	[0.001]	[0.423]	[0.877]	[0.028]	[0.934]	[0.642]
Bad Psychological State						
Lockdown 1 vs. Prelockdown	-0.03	-0.83***	-0.28*	-0.17	-0.83***	-0.57***
<i>p-value</i>	[0.783]	[0.001]	[0.012]	[0.089]	[0.001]	[0.001]
Good Psychological State						
Lockdown 1 vs. Prelockdown	-0.20***	-0.38***	-0.13***	-0.15***	-0.46***	-0.37***
<i>p-value</i>	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]
Bad Psychological State						
Lockdown 2 vs. Prelockdown	-1.09***	-0.31	-0.26*	-0.22*	-0.29	-0.03
<i>p-value</i>	[0.001]	[0.060]	[0.026]	[0.026]	[0.063]	[0.830]
Good Psychological State						
Lockdown 2 vs. Prelockdown	-0.47***	-0.46***	-0.19***	-0.13***	-0.39***	-0.39***
<i>p-value</i>	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]
<i>Total Obs</i>	2925	2925	2925	2925	2925	2925
<i>Total Individuals</i>	975	975	975	975	975	975

Note: Panel A presents estimates from specification 2. Standard errors are in brackets. In Panel B, p-values [in square brackets] are for the null hypothesis that the coefficients of two subsamples (as specified in the first column of Panel B) are equal. All numeric values are displayed up to 3 decimal places. Asterisks indicate significance: * $p < 0.050$, ** $p < 0.010$, *** $p < 0.001$.

control for all variables, such as income per capita, missing income, child labor status and parent's support, and show that similar results hold. Overall, these results suggest that the psychological state of parents is important; however, the evidence is not systematic across lockdowns or evident for most of the dimensions of well-being we study.

parents with a good psychological state versus a bad psychological state, which we cannot rationalize.

Parental Support: The role of parents in supporting their children’s education prior to the lockdown and, more importantly, during the lockdown may be crucial for children’s well-being. However, parents own worries during the pandemic may crowd out the time parents can provide to adequately meet their child’s needs, especially for education. We now analyze whether this factor drives the relationship between lockdowns and children’s health and well-being presented in our main results.

Table 8: Parental support

	(1)	(2)	(3)	(4)	(5)	(6)
Panel A	Physical Health	Mental Health	Sleep Quality	Eating Habits	Social Satisfaction	Life Quality
Lockdown 1	-0.03 (0.029)	-0.78*** (0.038)	-0.18*** (0.026)	-0.14*** (0.022)	-0.77*** (0.036)	-0.68*** (0.035)
Lockdown 2	-0.74*** (0.028)	-0.47*** (0.037)	-0.16*** (0.025)	-0.14*** (0.022)	-0.40*** (0.035)	-0.37*** (0.035)
Support	0.18 (0.16)	0.04 (0.21)	0.13 (0.15)	0.07 (0.13)	0.24 (0.20)	0.11 (0.20)
Support X Lockdown 1	-0.32 (0.17)	0.41 (0.22)	-0.11 (0.15)	-0.11 (0.13)	0.10 (0.21)	0.14 (0.21)
Support X Lockdown 2	0.21 (0.17)	0.04 (0.22)	-0.23 (0.15)	-0.11 (0.13)	-0.18 (0.21)	-0.11 (0.21)
Constant	4.02*** (0.017)	3.62*** (0.022)	4.08*** (0.015)	4.09*** (0.013)	3.56*** (0.021)	3.55*** (0.021)
Panel B	Hypothesis Testing					
Prelockdown Support vs. No Support	0.18	0.04	0.13	0.07	0.24	0.12
<i>p-value</i>	[0.264]	[0.858]	[0.362]	[0.595]	[0.240]	[0.564]
Lockdown 1 Support vs. No Support	-0.14**	0.45***	0.03	-0.04	0.34***	0.26***
<i>p-value</i>	[0.006]	[0.001]	[0.550]	[0.259]	[0.001]	[0.001]
Lockdown 2 Support vs. No Support	0.39***	0.08	-0.10*	-0.04	0.05	0.01
<i>p-value</i>	[0.001]	[0.211]	[0.022]	[0.286]	[0.384]	[0.889]
No Support Lockdown 1 vs. Prelockdown	-0.03	-0.78***	-0.18***	-0.14***	-0.77***	-0.68***
<i>p-value</i>	[0.352]	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]
Support Lockdown 1 vs. Prelockdown	-0.34*	-0.36	-0.28	-0.25	-0.67***	-0.54**
<i>p-value</i>	[0.037]	[0.093]	[0.054]	[0.053]	[0.001]	[0.007]
No Support Lockdown 2 vs. Prelockdown	-0.74***	-0.47***	-0.16***	-0.14***	-0.40***	-0.37***
<i>p-value</i>	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]
Support Lockdown 2 vs. Prelockdown	-0.54***	-0.42	-0.40**	-0.25	-0.58**	-0.48*
<i>p-value</i>	[0.001]	[0.051]	[0.008]	[0.054]	[0.005]	[0.018]
<i>Total Obs</i>	2925	2925	2925	2925	2925	2925
<i>Total Individuals</i>	975	975	975	975	975	975

Note: Panel A presents estimates from specification 2. Standard errors are in brackets. In Panel B, p-values [in square brackets] are for the null hypothesis that the coefficients of two subsamples (as specified in the first column of Panel B) are equal. All numeric values are displayed up to 3 decimal places. Asterisks indicate significance: * $p < 0.050$, ** $p < 0.010$, *** $p < 0.001$.

We estimate specification 2 with the parental support for educational activities as the interaction variable and present the results in Table 8. The results indicate that parental support versus absence of support prior to the lockdown does not significantly affect the well-being of children; however, the presence of support is associated with better mental health, social satisfaction and quality of life during the first lockdown and with better physical health during the second lockdown.

To ascertain how much of the negative effect of the lockdown is driven by parental support, we find that regardless of the support, all children experience negative effects of lockdowns. However, parental support is not a potential mechanism as the interaction effects are not significant. Unlike Hypotheses 1 and 2, we therefore find little evidence in favor of Hypothesis 3 that the negative effect on children’s health and well-being would be more pronounced for children whose parents report either the worst psychological state or do not support their children’s educational goals during the lockdown.

In online Appendix Table B.8, we control for all variables, such as income per capita, missing income, child labor status and parent’s psychological state, and show that similar results hold.

Discussion of mechanisms: Amongst all the mechanisms, we find that child labor plays a crucial role in driving the negative effect of *both* lockdowns relative to the prelockdown period, supporting Hypothesis 2. In particular, children engaged in economic activity are affected more negatively than are children who do not participate in the labor market. For all other mechanisms, while there are some significant interactions (such as economic state in lockdown 2 and psychological state in lockdown 1), there is no systematic difference and so we find little evidence in favor of Hypothesis 3. This is especially the case when we simultaneously include all the mechanisms described above. We present this result in Table 9. For brevity, we do not include the additional panel for hypothesis testing and are interested in the coefficients associated with the interaction terms. The results show that extreme poverty that pushes children to participate in the labor market is the most important potential mechanism driving the negative effect of the lockdowns, especially during the second lockdown, where the estimates for lockdown 2 are also nonsignificant and absorbed by this potential mechanism.

5 Conclusion

This paper studies the relationship between COVID-19-related lockdowns and the health and well-being of children of low-income households in rural areas of Pakistan. We find that the two periods of national lockdowns are associated with significantly lower measures of health and well-being, as reported by parents. We also find that for some measures, but not all, the

Table 9: All mechanisms

	(1)	(2)	(3)	(4)	(5)	(6)
	Physical Health	Mental Health	Sleep Quality	Eating Habits	Social Satisfaction	Life Quality
Lockdown 1	-0.22 (0.13)	-0.64** (0.20)	-0.31* (0.15)	-0.30* (0.13)	-0.66*** (0.19)	-0.43* (0.19)
Lockdown 2	-0.39** (0.14)	0.034 (0.21)	-0.31 (0.16)	-0.25 (0.13)	-0.03 (0.20)	0.21 (0.20)
Good Economic State	-0.04 (0.048)	0.11 (0.072)	-0.03 (0.054)	-0.09* (0.046)	0.19** (0.069)	0.14* (0.068)
Good Economic State X Lockdown 1	0.00 (0.085)	-0.05 (0.13)	0.01 (0.096)	0.09 (0.081)	-0.16 (0.12)	-0.08 (0.12)
Good Economic State X Lockdown 2	0.15 (0.079)	-0.14 (0.12)	0.16 (0.089)	0.24** (0.075)	-0.17 (0.11)	-0.13 (0.11)
Child Labor	-0.05 (0.051)	0.06 (0.075)	-0.00 (0.057)	0.05 (0.048)	-0.04 (0.072)	-0.02 (0.071)
Child Labor X Lockdown 1	0.11 (0.071)	-0.82*** (0.11)	-0.13 (0.080)	0.07 (0.068)	-0.60*** (0.10)	-0.54*** (0.10)
Child Labor X Lockdown 2	-1.03*** (0.071)	-0.60*** (0.11)	-0.09 (0.079)	-0.16* (0.067)	-0.45*** (0.100)	-0.45*** (0.099)
Psychological State	-0.12 (0.13)	0.00 (0.19)	-0.11 (0.14)	-0.04 (0.12)	-0.10 (0.18)	0.16 (0.18)
Psychological State X Lockdown 1	0.14 (0.13)	0.40* (0.19)	0.20 (0.15)	0.12 (0.12)	0.39* (0.18)	0.24 (0.18)
Psychology X Lockdown 2	0.06 (0.13)	-0.19 (0.20)	0.12 (0.15)	0.04 (0.13)	-0.07 (0.19)	-0.34 (0.19)
Support	0.02 (0.17)	0.24 (0.25)	0.21 (0.19)	0.12 (0.16)	0.10 (0.24)	0.05 (0.23)
Support X Lockdown 1	-0.12 (0.17)	-0.05 (0.26)	-0.23 (0.19)	-0.17 (0.16)	0.02 (0.24)	0.00 (0.24)
Support X Lockdown 2	0.08 (0.17)	-0.26 (0.26)	-0.37 (0.19)	-0.22 (0.16)	-0.16 (0.24)	-0.11 (0.24)
Constant	4.19*** (0.13)	3.58*** (0.19)	4.23*** (0.14)	4.19*** (0.12)	3.58*** (0.18)	3.33*** (0.18)
<i>Total Obs</i>	2259	2259	2259	2259	2259	2259
<i>Total Individuals</i>	753	753	753	753	753	753

Note: This table presents estimates from specification 2. Standard errors are in brackets. All numeric values are displayed up to 3 decimal places. Asterisks indicate significance: * $p < 0.050$, ** $p < 0.010$, *** $p < 0.001$.

association is less negative during the second lockdown than it is during the first, indicating some adaption to the circumstances.

Exploring possible mechanisms behind the negative impact of lockdowns, we find that the economic mechanism in the form of extreme poverty pushing children into active participation in the labor market is an important driver. In particular, we find the negative impact of lockdowns for children engaged in economic activity is associated with significantly worse outcomes along a number of dimensions of well-being during both lockdowns. These results are important given health and well-being are important features of human capital development. Pandemic leaving most vulnerable children further behind in terms of development will have implications for economic divergence both within and across countries

With the pandemic far from over, our results call for policy interventions during future lock-

downs to help counteract the negative effects of lockdowns on children in developing countries. Our results, that children's health and well-being is especially negatively affected during COVID for children who work due to extreme economic poverty, suggest that targeting limited resources at households in which children are likely to be engaged in economic activity may be particularly effective at mitigating the negative effects of lockdowns. While the Ehsaas cash transfer program in Pakistan has been praised for its coverage and ability to help the most vulnerable households, it is not currently designed to provide additional assistance to children who work. With previous literature showing cash transfers can be effective in aiding health and well-being in crises settings such as pandemics (see [van Daalen et al. \(2022\)](#) for a recent review), our results indicate providing cash transfers based on child work status may be a fruitful avenue for policy makers to explore.

These policies should be multidimensional, such that they are not limited to addressing the immediate negative economic effects of lockdowns while ignoring the other COVID-19 related risks relating to health and well-being of children, their lack of access to vital family and care service, the increased likelihood of domestic violence (for an excellent review, see [Doyle Jr and Aizer, 2018](#)), and child marriages and beyond.¹² Moreover, in future, as schools reopen, it will be these children who will need additional incentives (cash transfer program) and policy attention to successfully bring them back to school. To retain such children in the education system and to ensure their effective learning, simultaneous programs geared towards their psychological well-being can be beneficial ([Josephson et al., 2021](#)).

¹²The OECD. 2020. "OECD Policy Responses to Coronavirus (COVID-19): Combating COVID-19's effect on children." <https://www.oecd.org/coronavirus/policy-responses/combating-covid-19-s-effect-on-children-2e1f3b2f/>.

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Online Appendix: COVID-19 lockdowns and children's health and well-being

September 14, 2022

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A. Information on Survey and Variables

Province/District Selection: We select Punjab province for the following reasons. While out of the four provinces of Pakistan, Punjab is the most populous and contributes the largest share of GDP to the national economy,¹³ but similar to other provinces also suffers from alarmingly low rates of school enrollments.¹⁴ Additionally, the government of Punjab has recently made an effort to collect education-related statistics (which are not always available for other provinces).

Geographically, we choose the district of Kasur in Punjab¹⁵ because the average level of various development indicators (such as school drop-out rates, monthly income of employed, population involved in agriculture, youth labor market participation and crime rate) in Punjab are closest to those observed in Kasur; therefore, Kasur can be regarded as a close representation of Punjab in many important factors. While various representative dataset available for Pakistan use different stratification strategy, we find many development indicators calculated using the Labor Force Survey or Pakistan Social and Living Standard Measure (PSLM) 2011 to confirm that the statistics for Kasur are closer to the average statistics for Punjab. See, Figures A.1-A.7, which are based on the Labor Force Survey (2015).¹⁶ This exercise confirms that irrespective of the data employed, Kasur is close to Punjab's average development status.

¹³Punjab is home to more than 52% of the population of Pakistan (Census 2017, Pakistan) and contributes more than 57% of Pakistan's GDP

¹⁴Recently published statistics ([Alif Ailaan: Education Survey, 2016](#)) highlight that of the estimated 26 million children in Punjab between the ages of 5 and 16 years, 11.4 million are out of school. Moreover, 5.1 million children are enrolled in government primary schools, but only 3.4 million are enrolled in middle and secondary schools.

¹⁵Kasur is neighbored by Lahore to the east, Nankana Sahib to the north, Faisalabad to the west and Okara and India to the south.

¹⁶Some of the averages from PSLM for Kasur and Punjab, respectively are: percentage of population never enrolled: 32.2% and 32.4%; percentage of population involved in cultivation: 33.6% and 34.7%; percentage of population employed: 87% and 83%; wages of working population: PKR 9822 and PKR 9787.

Figure A.1: Dropout 2015

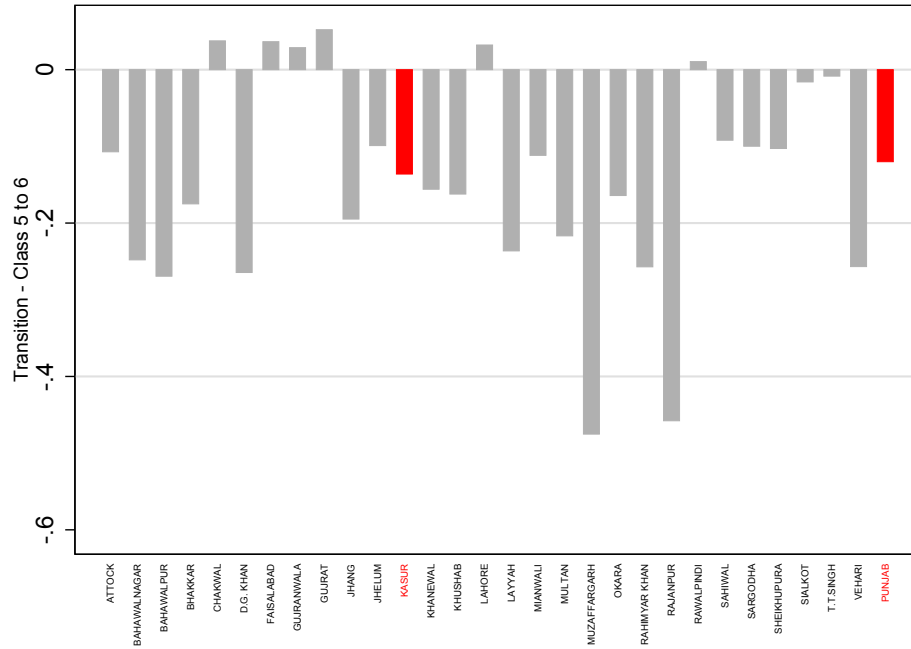


Figure A.2: Real Wage 2015

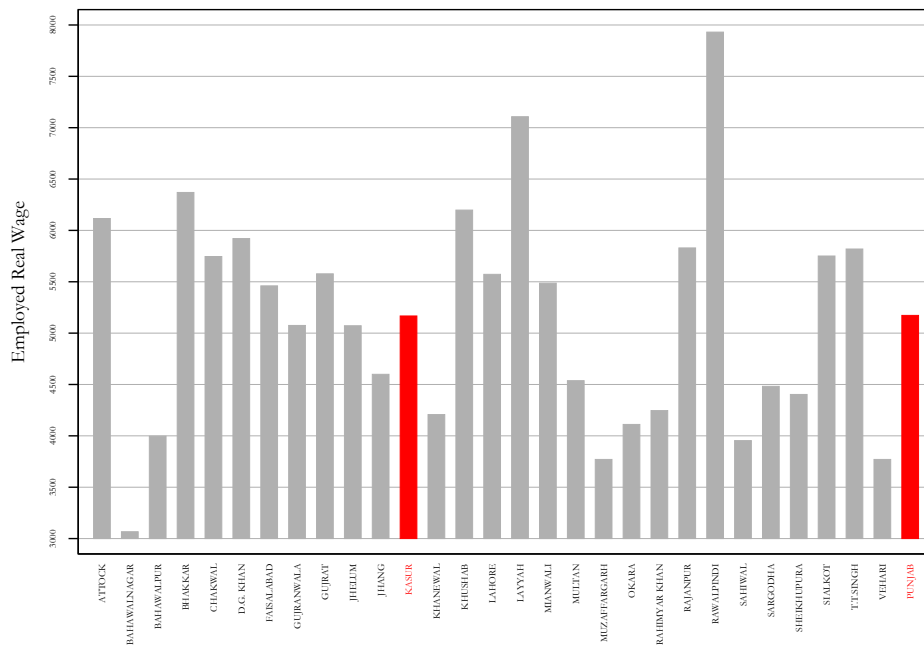


Figure A.3: Employment 2015

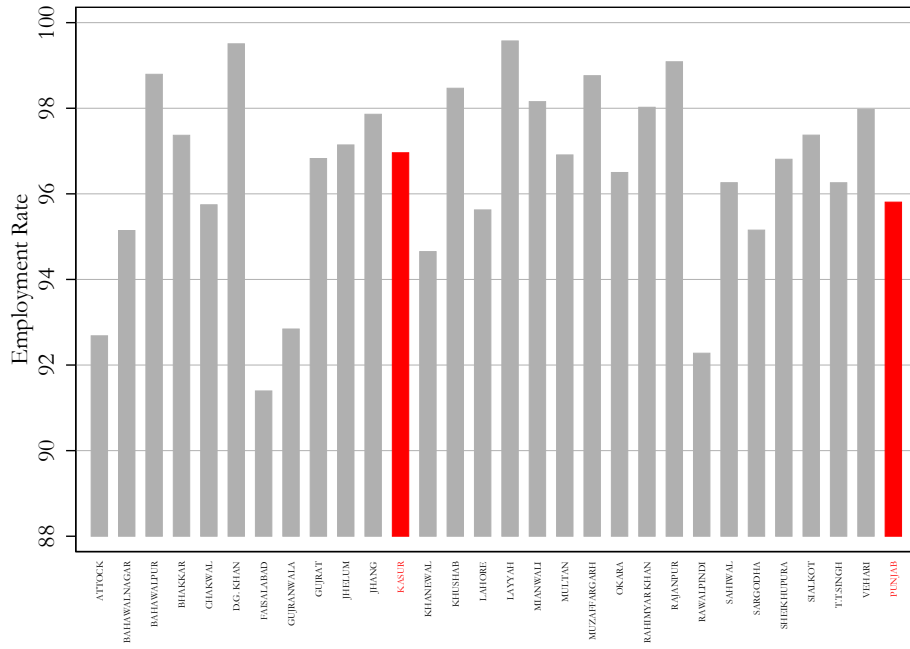


Figure A.4: Employed Population in Cultivation 2015

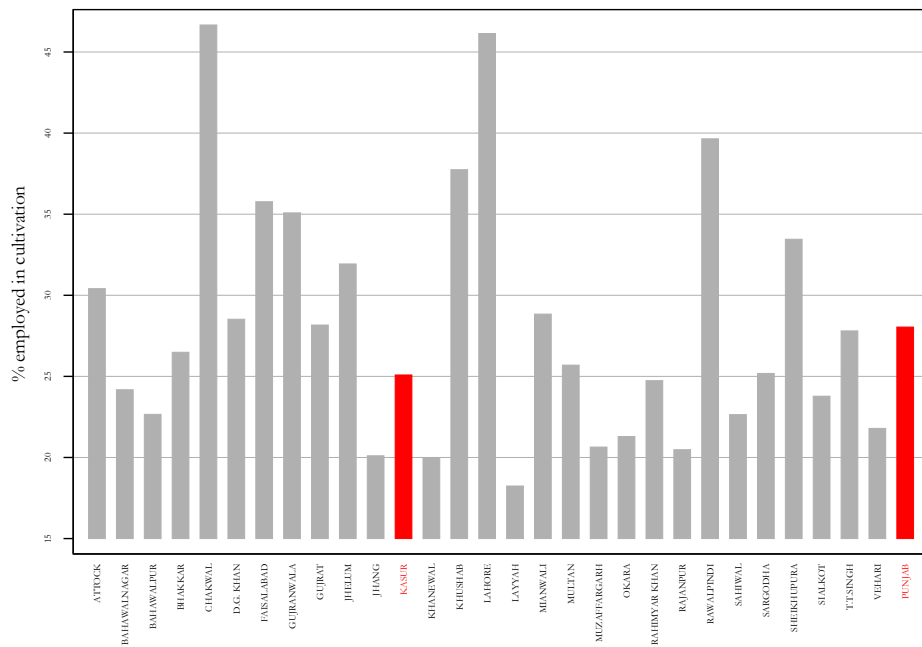


Figure A.5: Female Youth Population Employed 2015

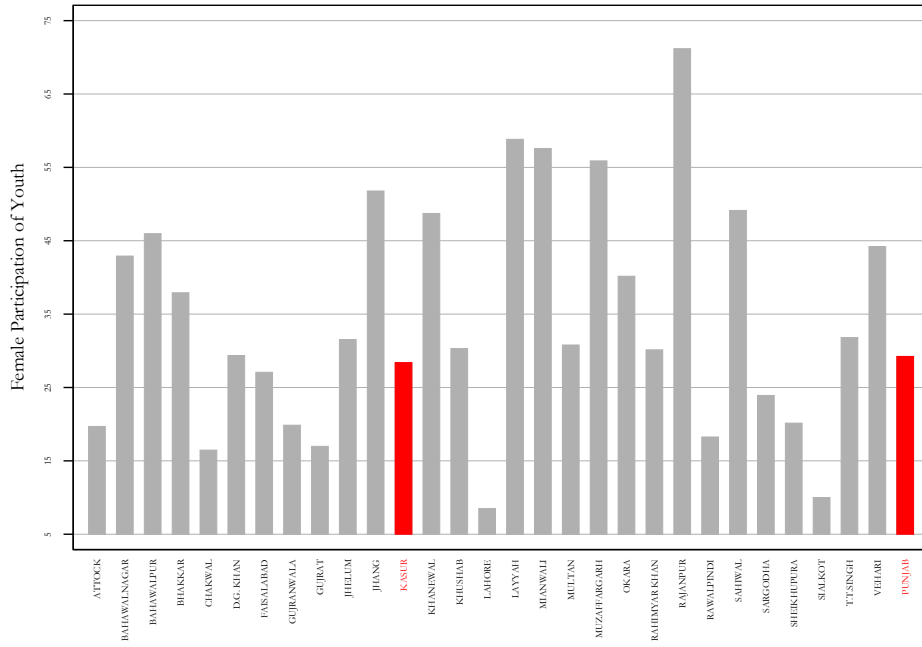


Figure A.6: Male Youth Population Employed 2015

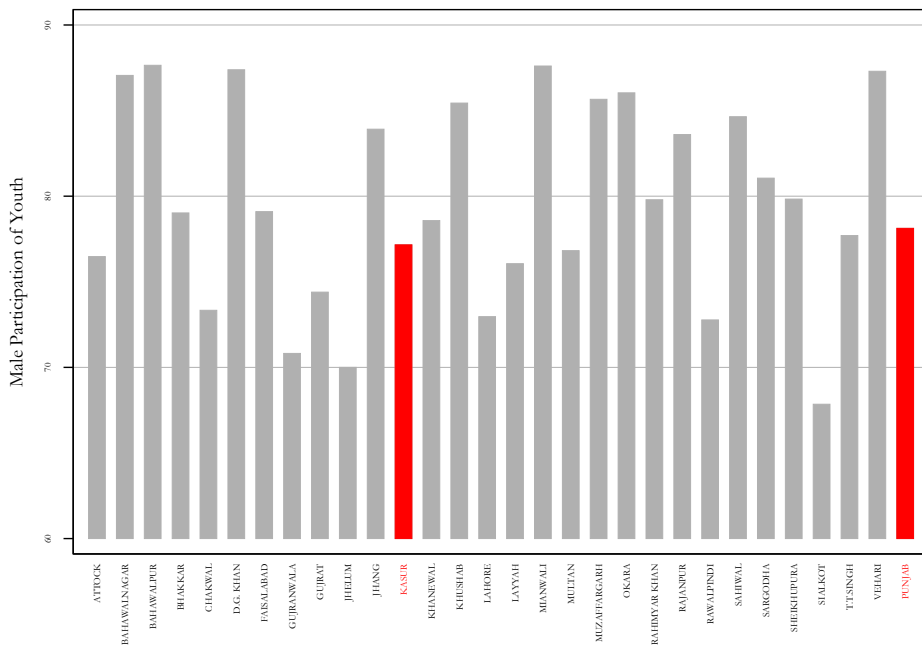


Figure A.7: Crime rate 2015

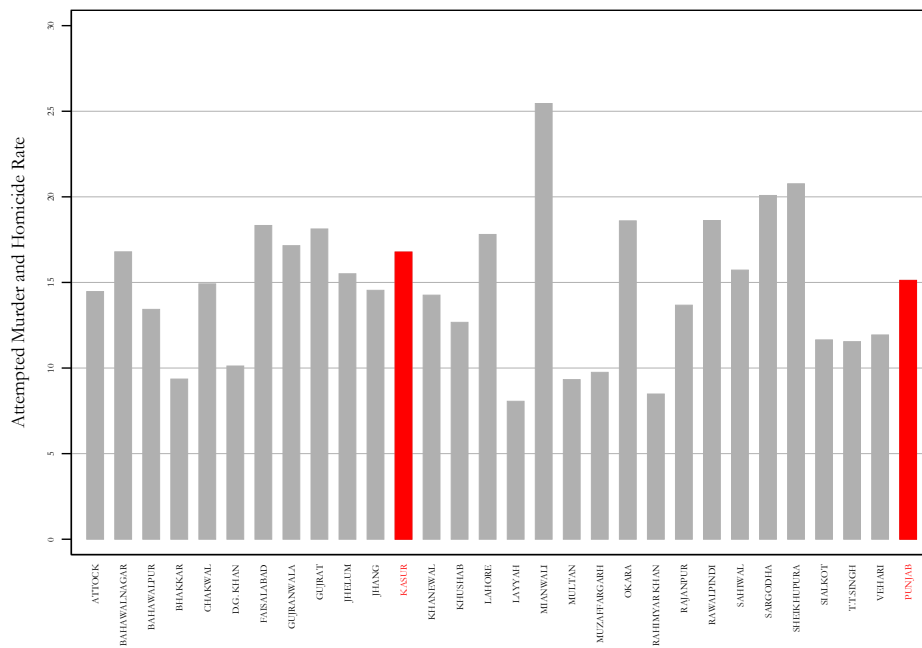


Table A1: School Sample in 2018

Gender	Total Schools			Our Sample		
	High	Middle	Total	High	Middle	Total
Female	11	10	21	11	4	15
Male	8	16	24	5	12	17
Total	19	26	45	16	16	32

Note: This table provides the distribution of schools by school level and gender.

Table A2: Balance Table

Variable	N	(1)	(2)	(3)	(1)-(2)	(1)-(3)	(2)-(3)		
		Mean/SE	Mean/SE	Mean/SE				T-test P-value	
Father's Literacy (Y/N)	1417	0.34 (0.013)	980	0.34 (0.015)	975	0.34 (0.015)	0.998	0.944	0.951
Mother's Literacy (Y/N)	1417	0.15 (0.009)	980	0.14 (0.011)	975	0.14 (0.011)	0.825	0.756	0.934
Father's Age	1409	43.43 (0.177)	974	43.62 (0.216)	969	43.64 (0.216)	0.489	0.451	0.954
Mother's Age	1411	38.92 (0.165)	978	39.10 (0.197)	973	39.13 (0.197)	0.471	0.413	0.928
Child's Age	1415	14.86 (1.705)	979	13.34 (0.943)	974	13.35 (0.947)	0.488	0.492	0.993
Child's Gender	1416	0.46 (0.013)	980	0.44 (0.016)	975	0.44 (0.016)	0.178	0.198	0.957
log(Income) Household	1417	7.43 (0.107)	980	7.38 (0.129)	975	7.40 (0.129)	0.757	0.838	0.923
Household Size	1411	6.84 (0.040)	975	6.86 (0.047)	970	6.86 (0.048)	0.739	0.711	0.972

Note: This table provides the number of observations in each wave of the sample, namely, original sample, wave 1 and wave 2, along with the mean statistics for each specified variable in the original sample. The values displayed for the t-tests are p-values.

Disclosures for survey-based studies: The transcript of the survey questions for wave 1 and wave 2 is provided below. These waves are part of a longer term project, where the baseline data was initially collected to understand the impact of parent's religiosity on their child's human capital development back in 2018, and future waves are intended to understand how COVID disruptions (primarily economic in nature) shape child's and parent's responses toward schooling as we transition out of the pandemic, and how these individual responses are interrelated among family members, taking a family systems perspective.

The baseline wave was used for [Malik and Mihm \(2022\)](#). At the time of the revision, we used wave 1 to also collect a few questions on religiosity of parents, but those questions were not used in the current paper and were only utilized to address referee's comments for [Malik and Mihm \(2022\)](#). All remaining questions related to child's health, economic state, child labor, psychology of parents and support from parents were utilized in the current project apart from those related to the longer term study of the transition of children back to schooling as the pandemic subsides. Table [A3](#) and [A4](#) provide the summary statistics of the variables constructed.

Table A3: Summary Table: Wave 1

	Mean	SD	25th %tile	Median	75th %tile	Min	Max	N
Control Variables								
Log HH Income per capita	7.39	4.04	8.85	9.47	9.74	0.00	11.29	975
Missing Log HH Income per capita	0.22	0.42	0.00	0.00	0.00	0.00	1.00	975
Female	0.44	0.50	0.00	0.00	1.00	0.00	1.00	975
Father	0.88	0.32	1.00	1.00	1.00	0.00	1.00	975
Independent Variables								
Good Economics State	0.61	0.49	0.00	1.00	1.00	0.00	1.00	753
Child Labor	0.25	0.43	0.00	0.00	1.00	0.00	1.00	975
Psychological State	0.54	0.50	0.00	1.00	1.00	0.00	1.00	975
Support	0.33	0.47	0.00	0.00	1.00	0.00	1.00	975
Outcome Variables								
Physical Health	3.95	0.57	4.00	4.00	4.00	2.00	5.00	975
Mental Health	2.99	1.24	2.00	3.00	4.00	1.00	5.00	975
Sleep Quality	3.91	0.65	4.00	4.00	4.00	1.00	5.00	975
Eating Habits	3.94	0.58	4.00	4.00	4.00	1.00	5.00	975
Social Satisfaction	2.90	1.14	2.00	3.00	4.00	1.00	5.00	975
Life Quality	2.95	1.12	2.00	3.00	4.00	1.00	5.00	975

Note: This table provides the number of observations in wave 1, along with the summary statistics (mean, standard deviation, p25, p50, p27, min and max) for each specified variable in the sample.

Table A4: Summary Table: Wave 2

	Mean	SD	25th %tile	Median	75th %tile	Min	Max	N
Control Variables								
Log HH Income per capita	7.39	4.04	8.85	9.47	9.74	0.00	11.29	975
Missing Log HH Income per capita	0.22	0.42	0.00	0.00	0.00	0.00	1.00	975
Female	0.44	0.50	0.00	0.00	1.00	0.00	1.00	975
Father	0.88	0.32	1.00	1.00	1.00	0.00	1.00	975
Independent Variables								
Good Economics State	0.61	0.49	0.00	1.00	1.00	0.00	1.00	753
Child Labor	0.41	0.49	0.00	0.00	1.00	0.00	1.00	975
Psychological State	0.70	0.46	0.00	1.00	1.00	0.00	1.00	975
Support	0.30	0.46	0.00	0.00	1.00	0.00	1.00	975
Outcome Variables								
Physical Health	3.40	0.87	3.00	3.00	4.00	2.00	5.00	975
Mental Health	3.18	0.95	2.00	3.00	4.00	2.00	5.00	975
Sleep Quality	3.89	0.67	4.00	4.00	4.00	1.00	5.00	975
Eating Habits	3.94	0.56	4.00	4.00	4.00	2.00	5.00	975
Social Satisfaction	3.18	0.93	2.00	3.00	4.00	2.00	5.00	975
Life Quality	3.18	0.90	3.00	3.00	4.00	2.00	5.00	975

Note: This table provides the number of observations in wave 2, along with the summary statistics (mean, standard deviation, p25, p50, p27, min and max) for each specified variable in the sample.

Wave 1

Wave 1		
	Date	
	Time	
1	Conducted by Enumerator	120. Hamza Mehmood 121. Ali Shahab 122. Kabir Ali 123. Qasim Khalil 124. Mubashir Ali 125. Malik Nauman 126. Sidra Inayat 777. Others, please specify _____
2	Household ID	
3	Did someone pick up the call?	1. Yes 2. No
4	Child Name: CHILD NAME	1. Yes 2. No
5	Father's Name: FATHER'S NAME	1. Yes 2. No
6	Mother's Name: MOTHER'S NAME	1. Yes 2. No
7	Is the father of the Child alive?	1. Yes 2. No
8	Is the mother of the Child alive?	1. Yes 2. No
9	We need to talk to RESPONDENT NAME. Can you please bring him / her on the call?	1. Yes, I am RESPONDENT NAME. 0. Yes, I can give you RESPONDENT NAME number. 2. Wait, let me get RESPONDENT NAME on call. 3. Yes, but RESPONDENT NAME is not available right now. 4. No.
	If Q9=3: Okay I will call you later to talk to RESPONDENT NAME. Thank you for your time	
	If Q9=0: Please note the number of RESPONDENT NAME.	
	If Q9=1 or Q9=2: Statement of Purpose of the study: The purpose of this research project is to collect basic work and education related information for your family. This is a research project being conducted by a University Professor. You are invited to participate in this research project because	

	<p>you have a school-going child.</p> <p>Procedure, Duration and Payoff: Your participation in this research study is voluntary. There is a fixed payment of 100 PKR as a mobile credit. The duration of this study is approximately 15 minutes.</p> <p>Risk and Benefits: There are no known risks associated with your participation in this project beyond those of everyday life. Although you will receive no direct benefits apart from the payments, this project may help the researcher to better understand the underlined question.</p> <p>Voluntary nature and Confidentiality: You may choose not to participate. If you decide to participate in this research survey, you may withdraw at any time. If you decide not to participate in this study or if you withdraw from participating at any time, you will not be penalized. Your responses will be confidential and all data is stored in a password protected electronic format. To help protect your confidentiality, the surveys will not contain your country issued ID number that will personally identify you. The results of this study will be used for scholarly purposes only.</p> <p>Contact Details: If there is anything about the study or your participation that is unclear or that you do not understand, or if you have questions or wish to report a research-related problem or injury, you may contact: Antje von Suchodoletz (+971-56-3192808) or Samreen Malik (+971-50-4415197) (or) Shan-Mohammad Malik (+92-322-7788110). For questions about your rights as a research participant, you may contact the University Institutional Review Board, New York University (Abu Dhabi), (+971) 2 628 4313 or IRBnyuad@nyu.edu.</p>	
	Please select your choice below.	
10	You were read the above information.	1. Agree 2. Disagree
11	You voluntarily agree to participate; and,	1. Agree 2. Disagree

12	You are at least 18 years of age.	1. Agree 2. Disagree
If Q10=1 AND Q11=1 AND Q13=1:		
13	BEFORE the Covid Shutdown-19 Shutdown, was your child CHILD NAME enrolled in school?	1. Yes 2. No
14	BEFORE the Covid Shutdown-19 Shutdown, did your child CHILD NAME drop out from school?	1. Yes 2. No
	School Going Before Covid-19 Shutdown	
16	Did CHILD NAME change the school in past two years?	1. Yes 2. No
17	Is CHILD NAME still going to SCHOOL NAME?	1. Yes 2. No
18	Name of the school of CHILD NAME?	
19	Did CHILD NAME complete his/her school year during April 2019 - March 2020?	1. Yes 2. No 888. Refused to Answer
20	Did CHILD NAME sit in the final exams in March 2020?	1. Yes 2. No 888. Refused to Answer
21	How did CHILD NAME perform in school final exams?	1. Excellent 2. Medium 3. Poor 999. Don't know 888. Refused to Answer
22	How many days of the last school year, April 2019-March 2020 BEFORE COVID SHUTDOWN, did CHILD NAME miss school?	
23	What was usually the reason for CHILD NAME non-attendance?	1. Sick 2. Wake up late 3. Not interested in going to school 4. To do some household chores 5. To conduct some family business transactions 6. Teacher punishment scared

		7. School does not provide quality education 8. Job 9. Work in the field 777. Other, please specify. 999. Don't know 888. Refused to Answer
24	Will CHILD NAME return to the school after the schools reopen?	1. Yes 2. No 999. Don't know 888. Refused to Answer
25	Using the scale, tell us if the following reason seems likely or unlikely explanation of you being not sure about sending back the child.	
a	Sickness of CHILD NAME	1. Extremely likely 2. Moderately likely 3. Slightly likely 4. Neither likely nor unlikely 5. Slightly unlikely 6. Moderately unlikely 7. Extremely unlikely
aa	Is this reason related to covid?	1. Related to Covid 2. Not Related to Covid
b	Take care of another sick member in the family	1. Extremely likely 2. Moderately likely 3. Slightly likely 4. Neither likely nor unlikely 5. Slightly unlikely 6. Moderately unlikely 7. Extremely unlikely
bb	Is this reason related to covid?	1. Related to Covid 2. Not Related to Covid
c	Take care of siblings	1. Extremely likely 2. Moderately likely 3. Slightly likely 4. Neither likely nor unlikely 5. Slightly unlikely 6. Moderately unlikely 7. Extremely unlikely
cc	Is this reason related to covid?	1. Related to Covid 2. Not Related to Covid
d	Death of close family member	1. Extremely likely 2. Moderately likely 3. Slightly likely 4. Neither likely nor unlikely 5. Slightly unlikely 6. Moderately unlikely 7. Extremely unlikely
dd	Is this reason related to covid?	1. Related to Covid 2. Not Related to Covid
e	Income problems at home	1. Extremely likely 2. Moderately likely 3. Slightly likely 4. Neither likely nor unlikely 5. Slightly unlikely

		6. Moderately unlikely 7. Extremely unlikely
ce	Is this reason related to covid?	1. Related to Covid 2. Not Related to Covid
f	Need to work to earn income	1. Extremely likely 2. Moderately likely 3. Slightly likely 4. Neither likely nor unlikely 5. Slightly unlikely 6. Moderately unlikely 7. Extremely unlikely
ff	Is this reason related to covid?	1. Related to Covid 2. Not Related to Covid
g	Help with Household chores	1. Extremely likely 2. Moderately likely 3. Slightly likely 4. Neither likely nor unlikely 5. Slightly unlikely 6. Moderately unlikely 7. Extremely unlikely
gg	Is this reason related to covid?	1. Related to Covid 2. Not Related to Covid
h	Lack of School fees	1. Extremely likely 2. Moderately likely 3. Slightly likely 4. Neither likely nor unlikely 5. Slightly unlikely 6. Moderately unlikely 7. Extremely unlikely
hh	Is this reason related to covid?	1. Related to Covid 2. Not Related to Covid
i	Lack of School supplies or uniform	1. Extremely likely 2. Moderately likely 3. Slightly likely 4. Neither likely nor unlikely 5. Slightly unlikely 6. Moderately unlikely 7. Extremely unlikely
ii	Is this reason related to covid?	1. Related to Covid 2. Not Related to Covid
j	Other Reasons?	
26	In your opinion, how important education of CHILD NAME is?	1. Extremely important 2. Very important 3. Moderately important 4. Slightly important 5. Not at all important 888. Refused to Answer
27	What is the highest level of education do you think CHILD NAME will attain in the future?	1. Preschool 2. Primary 3. Secondary 4. High school 5. University of higher 6. Non-standard curriculum 7. Drop out from school

		777. Other, please specify 999. Don't know 888. Refused to Answer
28	For each activity below, tell us how many hours did CHILD NAME spent on in a day during Covid-19.	
a	School & School work	
b	Paid work (inside or outside home)	
c	Unpaid work (inside or outside home)	
d	Playing with friends, games or toys or watching TV, using phone	
e	Other Activities	
	Total number of hours are COVID HOURS. Please go back and correct the hours	
29	What is the family size of the household including yourself?	
30	How many of the members from the family size of this household are part of your own family?	
31	Which religion do you identify yourself with?	1. Sunni Muslim 2. Shia Muslim 3. Deobandi Muslim 4. Al-e-Hadis Muslim 5. Christian 6. Hindu 777. Other, please specify _____ 888. Refused to Answer
32	Does your religious activities affect the time you could potentially spend on your work for earning income?	1. Never 2. Rarely 3. Sometimes 4. Often 5. All the time 888. Refused to Answer
33	Does your religious belief emphasizes the importance of education of CHILD NAME?	1. Not at all 2. Somewhat 3. Very little 4. To a great extent 888. Refused to Answer
34	Religious circle are the people you often meet with in religious settings. How often have you had an experience where you were able to economically benefit because you knew someone from your religious circle?	1. Never 2. Rarely 3. Sometimes 4. Often 5. All the time 888. Refused to Answer
35	How often do you spend time with your children talking about religious teachings?	1. Never 2. Rarely 3. Sometimes 4. Often 5. All the time

		888. Refused to Answer
36	How often do you spend time with your children helping with school work and education?	1. Never 2. Rarely 3. Sometimes 4. Often 5. All the time 888. Refused to Answer
37	How often do you spend time with your children playing with them?	1. Never 2. Rarely 3. Sometimes 4. Often 5. All the time 888. Refused to Answer
38	How often do you spend time with your children taking them for outside activities?	1. Never 2. Rarely 3. Sometimes 4. Often 5. All the time 888. Refused to Answer
39	How often parents of other children in CHILD NAME school get involved with your child CHILD NAME education or educational activities?	1. Never 2. Rarely 3. Sometimes 4. Often 5. All the time 888. Refused to Answer
40	What is your current marital status?	1. Married 2. Widowed 3. Separated 4. Divorced 5. Single/Never Married 888. Refused to Answer
41	What is your current age?	
Answer the following questions related to responding parent's main work in an average week BEFORE Covid shut down:		
42	Did you engage in any work (that pays) at least for one hour?	1. Yes 2. No
43	Even if you did not work that pays for an hour, did you engage in some other activities such as working on your own business, unpaid work, paid work such as commission or small scale work which pays either in cash or kind	1. Yes 2. No
44	Which of the following describe your work situation at your main work?	1. Employee 2. Own account worker 3. Employer 4. Member of producer's cooperative 5. Unpaid family work 888. Refused to Answer
45	What was your household's average monthly income (in local currency)?	

46	In addition to the main work, did you do any other work?	1. Yes 2. No
47	Were you looking for a job?	1. Yes 2. No
48	Did you perform any of the household related chores (such as cooking, cleaning, washing etc)?	1. Yes 2. No
Answer the following questions related to responding parent's main work in an average week DURING Covid shut down		
49	Did you engage in any work (that pays) at least for one hour?	1. Yes 2. No
50	Even if you did not work that pays for an hour, did you engage in some other activities such as working on your own business, unpaid work, paid work such as commission or small scale work which pays either in cash or kind	1. Yes 2. No
51	Which of the following describe your work situation at your main work?	1. Employee 2. Own account worker 3. Employer 4. Member of producer's cooperative 5. Unpaid family work 888. Refused to Answer
52	What was your household's average monthly income (in local currency)?	
53	In addition to the main work, did you do any other work?	1. Yes 2. No
54	Were you looking for a job?	1. Yes 2. No
55	Did you perform any of the household related chores (such as cooking, cleaning, washing etc)?	1. Yes 2. No
Please answer the following questions for OTHER RESPONDENT. •		
56	For enumerator only: Is OTHER RESPONDENT alive?	1. Yes 2. No
57	What is his/her age?	
58	Did OTHER RESPONDENT engage in any work (that pays) at least for one hour?	1. Yes 2. No
59	Which of the following describe OTHER RESPONDENT work situation at your main work?	1. Employee 2. Own account worker 3. Employer 4. Member of producer's cooperative 5. Unpaid family work 888. Refused to Answer

60	In addition to the main work, did the non-responding parent do any other work?	1. Yes 2. No
61	Were he/she looking for a job?	1. Yes 2. No
62	During lock down, Did OTHER RESPONDENT engage in any work (that pays) at least for one hour?	1. Yes 2. No
63	During lock down, Which of the following describe OTHER RESPONDENT work situation at your main work?	1. Employee 2. Own account worker 3. Employer 4. Member of producer's cooperative 5. Unpaid family work 888. Refused to Answer
64	During lock down, In addition to the main work, did the non-responding parent do any other work?	1. Yes 2. No
65	Were he/she looking for a job?	1. Yes 2. No
Now we are going to ask few questions about CHILD NAME.		
66	What is CHILD NAME current age?	
67	At what age did CHILD NAME start to work for the first time in your life (as a regular or casual employee, own-account worker, employer or unpaid family worker)?	
Answer the following questions related to CHILD NAME main work in an average week BEFORE Covid shut down		
68	Did CHILD NAME engage in any work (that pays) at least for one hour?	1. Yes 2. No
69	For each of the following activities, did CHILD NAME spend at least an hour on it?	
a	Run or do any kind of business, big or small, for yourself or with one or more partners?	1. Yes 2. No
b	Do any work for a wage, salary, commission or any payment in kind (excluding domestic work)	1. Yes 2. No
c	Do any work as a domestic worker for a wage, salary or any payment in kind?	1. Yes 2. No
d	Help unpaid in a household business of any kind (Do not count normal housework)	1. Yes 2. No
e	Do any work on your own or the household's plot, farm, food garden, or help in growing farm produce or in looking after animals for the household?	1. Yes 2. No

f	Do any construction or major repair work on his/her own home, plot, or business or those of the household?	1. Yes 2. No
g	Catch any fish, prawns, shells, wild animals or other food for sale or household food?	1. Yes 2. No
h	Fetch water or collect firewood for household use?	1. Yes 2. No
i	Produce any other good for this household use?	1. Yes 2. No
j	Other	1. Yes 2. No
69	Which of the following describe CHILD NAME work situation at your main work?	1. Employee 2. Own account worker 3. Employer 4. Member of producer's cooperative 5. Unpaid family work 888. Refused to Answer
70	What was CHILD NAME average monthly cash income from the main work (in local currency)?	
71	For an average day on which a child worked, how many hours did CHILD NAME actually work on his/her main job?	
72	In addition to the main work, did CHILD NAME do any other work?	1. Yes 2. No
73	For an average day on which a child worked, how many hours did CHILD NAME actually work on his/her other job?	
74	Were CHILD NAME looking for a job?	1. Yes 2. No
75	Did CHILD NAME perform any of the household related chores (such as cooking, cleaning, washing etc.)?	1. Yes 2. No
76	For an average day of the week before COVID, how many hours did the child spent on performing the household tasks as specified in the last question?	
Answer the following questions related to CHILD NAME main work in an average week DURING Covid shut down		
77	Did CHILD NAME engage in any work (that pays) at least for one hour?	1. Yes 2. No

78	For each of the following activities, did CHILD NAME spend at least an hour on it?	
a	Run or do any kind of business, big or small, for yourself or with one or more partners?	1. Yes 2. No
b	Do any work for a wage, salary, commission or any payment in kind (excluding domestic work)	1. Yes 2. No
c	Do any work as a domestic worker for a wage, salary or any payment in kind?	1. Yes 2. No
d	Help unpaid in a household business of any kind (Do not count normal housework)	1. Yes 2. No
e	Do any work on your own or the household's plot, farm, food garden, or help in growing farm produce or in looking after animals for the household?	1. Yes 2. No
f	Do any construction or major repair work on his/her own home, plot, or business or those of the household?	1. Yes 2. No
g	Catch any fish, prawns, shells, wild animals or other food for sale or household food?	1. Yes 2. No
h	Fetch water or collect firewood for household use?	1. Yes 2. No
i	Produce any other good for this household use?	1. Yes 2. No
j	Other	1. Yes 2. No
79	Which of the following describe CHILD NAME work situation at your main work?	1. Employee 2. Own account worker 3. Employer 4. Member of producer's cooperative 5. Unpaid family work 888. Refused to Answer
80	What was CHILD NAME average monthly cash income from the main work (in local currency)?	
81	For an average day on which a child worked, how many hours did CHILD NAME actually work on his/her main job?	
82	In addition to the main work, did CHILD NAME do any other work?	1. Yes 2. No

83	For an average day on which a child worked, how many hours did CHILD NAME actually work on his/her other job?	
84	Were CHILD NAME looking for a job?	1. Yes 2. No
85	Did CHILD NAME perform any of the household related chores (such as cooking, cleaning, washing etc)?	1. Yes 2. No
86	For an average day of the week before COVID, how many hours did the child spent on performing the household tasks as specified in the last question?	
Now I want to ask few questions about your health.		
The following questions are about how you felt during an average month BEFORE the Covid shutdown		
87	Did you feel alone?	1. Never 2. Rarely 3. Sometimes 4. Often 5. All the time 888. Refused to Answer
88	Did you feel isolated from others?	1. Never 2. Rarely 3. Sometimes 4. Often 5. All the time 888. Refused to Answer
89	Did you feel left out?	1. Never 2. Rarely 3. Sometimes 4. Often 5. All the time 888. Refused to Answer
The following questions are about your lifestyle during an average month BEFORE the Covid shutdown		
90	During the past month before Covid, have you been able to concentrate on what you are doing?	1. Never 2. Rarely 3. Sometimes 4. Often 5. All the time 888. Refused to Answer
91	During the past month before Covid, have you lost much sleep over worry?	1. Never 2. Rarely 3. Sometimes 4. Often 5. All the time 888. Refused to Answer
92	During the past month before Covid, have you felt you are playing a useful part in things?	1. Never 2. Rarely 3. Sometimes 4. Often 5. All the time 888. Refused to Answer

93	During the past month before Covid, have you felt constantly under strain?	1. Never 2. Rarely 3. Sometimes 4. Often 5. All the time 888. Refused to Answer
94	During the past month before Covid, have you felt you could not overcome difficulties?	1. Never 2. Rarely 3. Sometimes 4. Often 5. All the time 888. Refused to Answer
95	During the past month before Covid, have you been able to enjoy your normal day-to-day activities?	1. Never 2. Rarely 3. Sometimes 4. Often 5. All the time 888. Refused to Answer
96	During the past month before Covid, have you been able to face up to your problems?	1. Never 2. Rarely 3. Sometimes 4. Often 5. All the time 888. Refused to Answer
97	During the past month before Covid, have you been feeling unhappy or depressed?	1. Never 2. Rarely 3. Sometimes 4. Often 5. All the time 888. Refused to Answer
98	During the past month before Covid, have you been losing confidence in yourself?	1. Never 2. Rarely 3. Sometimes 4. Often 5. All the time 888. Refused to Answer
99	During the past month before Covid, have you been thinking of yourself as a worthless person?	1. Never 2. Rarely 3. Sometimes 4. Often 5. All the time 888. Refused to Answer
100	During the past month before Covid, have you been feeling reasonably happy, all things considered?	1. Never 2. Rarely 3. Sometimes 4. Often 5. All the time 888. Refused to Answer
The following questions are about how you felt during an average month DURING the Covid shutdown		
101	Did you feel alone?	1. Never 2. Rarely 3. Sometimes 4. Often 5. All the time 888. Refused to Answer

102	Did you feel isolated from others?	1. Never 2. Rarely 3. Sometimes 4. Often 5. All the time 888. Refused to Answer
103	Did you feel left out?	1. Never 2. Rarely 3. Sometimes 4. Often 5. All the time 888. Refused to Answer
The following questions are about your lifestyle during an average month DURING the Covid shutdown		
104	During the past month during Covid, have you been able to concentrate on what you are doing?	1. Never 2. Rarely 3. Sometimes 4. Often 5. All the time 888. Refused to Answer
105	During the past month during Covid, have you lost much sleep over worry?	1. Never 2. Rarely 3. Sometimes 4. Often 5. All the time 888. Refused to Answer
106	During the past month during Covid, have you felt you are playing a useful part in things?	1. Never 2. Rarely 3. Sometimes 4. Often 5. All the time 888. Refused to Answer
107	During the past month during Covid, have you felt constantly under strain?	1. Never 2. Rarely 3. Sometimes 4. Often 5. All the time 888. Refused to Answer
108	During the past month during Covid, have you felt you could not overcome difficulties?	1. Never 2. Rarely 3. Sometimes 4. Often 5. All the time 888. Refused to Answer
109	During the past month during Covid, have you been able to enjoy your normal day-to-day activities?	1. Never 2. Rarely 3. Sometimes 4. Often 5. All the time 888. Refused to Answer
110	During the past month during Covid, have you been able to face up to your problems?	1. Never 2. Rarely 3. Sometimes 4. Often 5. All the time 888. Refused to Answer

111	During the past month during Covid, have you been feeling unhappy or depressed?	1. Never 2. Rarely 3. Sometimes 4. Often 5. All the time 888. Refused to Answer
112	During the past month during Covid, have you been loosing confidence in yourself?	1. Never 2. Rarely 3. Sometimes 4. Often 5. All the time 888. Refused to Answer
113	During the past month during Covid, have you been thinking of yourself as a worthless person?	1. Never 2. Rarely 3. Sometimes 4. Often 5. All the time 888. Refused to Answer
114	During the past month during Covid, have you been feeling reasonably happy, all things considered?	1. Never 2. Rarely 3. Sometimes 4. Often 5. All the time 888. Refused to Answer
Now I want to ask few questions about CHILD NAME health.		
The following questions are about your child during an average month BEFORE the Covid Shutdown.		
115	In general, how would you rate your child CHILD NAME's physical health?	1. Poor 2. Fair 3. Good 4. Very Good 5. Excellent
116	In general, how would you rate your child CHILD NAME's quality of life?	1. Poor 2. Fair 3. Good 4. Very Good 5. Excellent
117	In general, how would you rate your child CHILD NAME's satisfaction with his/her social activities and relationships?	1. Poor 2. Fair 3. Good 4. Very Good 5. Excellent
118	In general, how would you rate your child CHILD NAME's mental health and ability to think?	1. Poor 2. Fair 3. Good 4. Very Good 5. Excellent
119	In general, how would you rate your child CHILD NAME's sleep quality?	1. Poor 2. Fair 3. Good 4. Very Good 5. Excellent
120	In general, how would you rate your child CHILD NAME's eating habits?	1. Poor 2. Fair 3. Good 4. Very Good

		5. Excellent
The following questions are about your child during an average month DURING the Covid Shutdown.		
121	In general, how would you rate your child CHILD NAME's physical health?	1. Poor 2. Fair 3. Good 4. Very Good 5. Excellent
122	In general, how would you rate your child CHILD NAME's quality of life?	1. Poor 2. Fair 3. Good 4. Very Good 5. Excellent
123	In general, how would you rate your child CHILD NAME's satisfaction with his/her social activities and relationships?	1. Poor 2. Fair 3. Good 4. Very Good 5. Excellent
124	In general, how would you rate your child CHILD NAME's mental health and ability to think?	1. Poor 2. Fair 3. Good 4. Very Good 5. Excellent
125	In general, how would you rate your child CHILD NAME's sleep quality?	1. Poor 2. Fair 3. Good 4. Very Good 5. Excellent
126	In general, how would you rate your child CHILD NAME's eating habits?	1. Poor 2. Fair 3. Good 4. Very Good 5. Excellent
126	Contact number	
127	Network	1. Jazz/Warid 2. Ufone 3. Telenor 4. Zong 5. Don't know
128	Status of survey	1. Complete 2. Refused 3. Partial Refusal 4. Did not pick up 5. Wrong number 6. Issue with the number 7. Phone was powered off 8. Rescheduled 9. Wrong Household

Wave 2

Wave 2		
	Date	
	Time	
1	Conducted by enumerator	120. Hamza Mehmood 121. Malik Nauman 122. Ali Shahab 123. Mubashar 124. Sidra Inayat 777. Others, please specify _____
2	Household ID	
3	Did someone pick up the call?	1. Yes 2. No
4	Child Name: CHILD NAME	1. Yes 2. No
5	Father's name: FATHER NAME	1. Yes 2. No
6	Mother's name: MOTHER NAME	1. Yes 2. No
7	Is the father of the child alive?	1. Yes 2. No
8	Is the mother of the Child alive?	1. Yes 2. No
9.	We need to talk to RESPONDENT NAME. Can you please bring him/her on the call?	1. Yes I am REPPONDENT NAME 0. Yes, I can give you RESPONDENT NAME number 2. Wait let me get RESPOND NAME on call 3. Yes but RESPONDENT NAM is not available right now 4. No
	IF Q9=3: Okay, I will call you later to talk to RESPONDENT NAME. Thank you for your time	
	If Q9=0 Please note the number of RESPONDENT NAME.	
	IF Q9=1 or Q9=2: Statement of Purpose of the study: The purpose of this research project is to collect basic work and education related information for your family. This is a research project being conducted by a University Professor. You are invited to participate in this	

<p>research project because you have a school-going child.</p> <p>Procedure, Duration and Payoff: Your participation in this research study is voluntary. There is a fixed payment of 100 PKR as a mobile credit. The duration of this study is approximately 15 minutes.</p> <p>Risk and Benefits: There are no known risks associated with your participation in this project beyond those of everyday life. Although you will receive no direct benefits apart from the payments, this project may help the researcher to better understand the underlined question.</p> <p>Voluntary nature and Confidentiality: You may choose not to participate. If you decide to participate in this research survey, you may withdraw at any time. If you decide not to participate in this study or if you withdraw from participating at any time, you will not be penalized. Your responses will be confidential and all data is stored in a password protected electronic format. To help protect your confidentiality, the surveys will not contain your country issued ID number that will personally identify you. The results of this study will be used for scholarly purposes only.</p> <p>Contact Details: If there is anything about the study or your participation that is unclear or that you do not understand, or if you have questions or wish to report a research-related problem or injury, you may contact: Antje von Suchodoletz (+971-56-3192808) or Samreen Malik (+971-50-4415197) (or) Shan-Mohammad Malik (+92-322-7788110). For questions about your rights as a research participant, you may contact the University Institutional Review Board, New York University (Abu</p>	
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	Dhabi), (+971) 2 628 4313 or IRBnyuad@nyu.edu .	
	Please select your choice below.	
10	You were read the above information.	1. Agree 2. Disagree
11	You voluntarily agree to participate; and,	1. Agree 2. Disagree
12	You are at least 18 years of age.	1. Agree 2. Disagree
If Q10=1 AND Q11=1 AND Q13=1:		
The period between the two lockdowns spans from September 16th to November 26th when the SCHOOLS WERE OPEN. (2) The period during the current lockdown spans from November 26th till the schools reopen, so the period is when the SCHOOLS ARE AGAIN CLOSED. (3) After the current lockdown period refers to the period AFTER THE SCHOOLS reopen in January. Kindly, answer the following questions in light of that.		
13	In BETWEEN the two LOCKDOWNS, did your child CHILD NAME return to school?	1. Yes 2. No 888. Refused to Answer
14	In BETWEEN the two LOCKDOWNS has your child CHILD NAME drop out from school?	1. Yes 2. No 888. Refused to Answer
The period between the two lockdowns spans from September 16th to November 26th. Kindly, answer the following questions in light of that.		
15	Did CHILD NAME change the school in BETWEEN the two lockdowns	1. Yes 2. No
16	Is CHILD NAME still going to SCHOOL NAME?	1. Yes 2. No
17	Name of the school of CHILD NAME?	
18	Did CHILD NAME sit in any exam in BETWEEN the two LOCKDOWNS?	1. Yes 2. No 888. Refused to Answer
19	Did CHILD NAME face any problems in adjusting to the school when attending school in between the two lockdowns?	1. Yes 2. No

20	How many days in BETWEEN the two LOCKDOWNS, did CHILD NAME miss school?	
21	What was usually the reason for CHILD NAME non-attendance in School in BETWEEN the two LOCKDOWNS?	<ol style="list-style-type: none"> 1. Sick 2. Wake up late 3. Not interested in going to school 4. To do some household chores 5. To conduct some family business transactions 6. Teacher punishment scared 7. School does not provide quality education 8. Job 9. Work in the field 10. Because of fear of corona 777. Other, please specify _____ 999. Don't know 888. Refused to Answer
22	Will CHILD NAME return to the school when the schools will reopen AFTER the current lockdown?	<ol style="list-style-type: none"> 1. Yes 2. No 999. Don't know 888. Refused to Answer
23	Using the scale, tell us if the following reason seems likely or unlikely explanation of you being not sure about sending back the child WHEN THE SCHOOLS REOPEN AFTER THE CURRENT LOCKDOWN.	
a	Sickness of CHILD NAME	<ol style="list-style-type: none"> 1. Extremely likely 2. Moderately likely 3. Slightly likely 4. Neither likely nor unlikely 5. Slightly unlikely 6. Moderately unlikely 7. Extremely unlikely
aa.	Is this reason related to covid?	<ol style="list-style-type: none"> 1. Related to Covid 2. Not Related to Covid
b.	Take care of another sick member in the family	<ol style="list-style-type: none"> 1. Extremely likely 2. Moderately likely 3. Slightly likely 4. Neither likely nor unlikely 5. Slightly unlikely 6. Moderately unlikely 7. Extremely unlikely
bb.	Is this reason related to covid?	<ol style="list-style-type: none"> 1. Related to Covid 2. Not Related to Covid
c.	Take care of siblings	<ol style="list-style-type: none"> 1. Extremely likely 2. Moderately likely

		3. Slightly likely 4. Neither likely nor unlikely 5. Slightly unlikely 6. Moderately unlikely 7. Extremely unlikely
cc.	Is this reason related to covid?	1. Related to Covid 2. Not Related to Covid
d.	Death of close family member	1. Extremely likely 2. Moderately likely 3. Slightly likely 4. Neither likely nor unlikely 5. Slightly unlikely 6. Moderately unlikely 7. Extremely unlikely
dd.	Is this reason related to covid?	1. Related to Covid 2. Not Related to Covid
e.	Income problems at home	1. Extremely likely 2. Moderately likely 3. Slightly likely 4. Neither likely nor unlikely 5. Slightly unlikely 6. Moderately unlikely 7. Extremely unlikely
ee.	Is this reason related to covid?	1. Related to Covid 2. Not Related to Covid
f.	Need to work to earn income	1. Extremely likely 2. Moderately likely 3. Slightly likely 4. Neither likely nor unlikely 5. Slightly unlikely 6. Moderately unlikely 7. Extremely unlikely
ff.	Is this reason related to covid?	1. Related to Covid 2. Not Related to Covid
g.	Help with Household chores	1. Extremely likely 2. Moderately likely 3. Slightly likely 4. Neither likely nor unlikely 5. Slightly unlikely 6. Moderately unlikely 7. Extremely unlikely
gg.	Is this reason related to covid?	1. Related to Covid 2. Not Related to Covid
h.	Lack of School fees	1. Extremely likely 2. Moderately likely 3. Slightly likely 4. Neither likely nor unlikely 5. Slightly unlikely 6. Moderately unlikely 7. Extremely unlikely

hh.	Is this reason related to covid?	1. Related to Covid 2. Not Related to Covid
i.	Lack of School supplies or uniform	1. Extremely likely 2. Moderately likely 3. Slightly likely 4. Neither likely nor unlikely 5. Slightly unlikely 6. Moderately unlikely 7. Extremely unlikely
ii.	Is this reason related to covid?	1. Related to Covid 2. Not Related to Covid
j.	Other Reasons?	
24	In your opinion, how important education of CHILD NAME is?	1. Extremely important 2. Very important 3. Moderately important 4. Slightly important 5. Not at all important 888. Refused to Answer
25	What is the highest level of education do you think CHILD NAME will attain in the future?	1. Preschool 2. Primary 3. Secondary 4. High school 5. University of higher 6. Non-standard curriculum 7. Drop out from school 777. Other, please specify 999. Don't know 888. Refused to Answer
26	For each activity below, tell us how many hours did CHILD NAME spent on in a day in BETWEEN the two LOCKDOWNS.	
a.	School & School work	
b.	Paid work (inside or outside home)	
c.	Unpaid work (inside or outside home)	
d.	Playing with friends, games or toys or watching TV, using phone	
e.	Other Activities	
Total number of hours are COVID HOURS. Please go back and correct the hours		
27	For each activity below, tell us how many hours did CHILD NAME spent on in a day DURING the CURRENT LOCKDOWNS.	
a.	School & School work	

b.	Paid work (inside or outside home)	
c.	Unpaid work (inside or outside home)	
d.	Playing with friends, games or toys or watching TV, using phone	
e.	Other Activities	
Total number of hours are COVID HOURS. Please go back and correct the hours		
28	What is the family size of the household including yourself?	
29	How many of the members from the family size of this household are part of your own family?	
30	What is your current marital status?	1. Married 2. Widowed 3. Separated 4. Divorced 5. Single/Never Married 888. Refused to Answer
31	What is your current age?	
Answer the following questions related to responding parent's main work in an average week in BETWEEN the two LOCKDOWNS.		
32	Did you engage in any work (that pays) at least for one hour?	1. Yes 2. No
33	Even if you did not work that pays for an hour, did you engage in some other activities such as working on your own business, unpaid work, paid work such as commission or small scale work which pays either in cash or kind?	1. Yes 2. No
34	Which of the following describe your work situation at your main work?	1. Employee 2. Own account worker 3. Employer 4. Member of producer's cooperative 5. Unpaid family work 888. Refused to Answer
35	What was your household's average monthly income (in local currency)?	
36	In addition to the main work, did you do any other work?	1. Yes 2. No
37	Were you looking for a job?	1. Yes 2. No

38	Did you perform any of the household related chores (such as cooking, cleaning, washing etc)?	1. Yes 2. No
Answer the following questions related to responding parent's main work in an average week in DURING THE CURRENT LOCK DOWN?		
39	Did you engage in any work (that pays) at least for one hour?	1. Yes 2. No
40	Even if you did not work that pays for an hour, did you engage in some other activities such as working on your own business, unpaid work, paid work such as commission or small scale work which pays either in cash or kind	1. Yes 2. No
41	Which of the following describe your work situation at your main work?	1. Employee 2. Own account worker 3. Employer 4. Member of producer's cooperative 5. Unpaid family work 888. Refused to Answer
42	What was your household's average monthly income (in local currency)?	
43	In addition to the main work, did you do any other work?	1. Yes 2. No
44	Were you looking for a job?	1. Yes 2. No
45	Did you perform any of the household related chores (such as cooking, cleaning, washing etc.)?	1. Yes 2. No
Please answer the following questions for OTHER RESPONDENT for the period in BETWEEN the two LOCKDOWNS.		
46	For enumerator only: Is OTHER RESPONDENT alive?	1. Yes 2. No
47	What is his/her age?	
48	Did OTHER RESPONDENT engage in any work (that pays) at least for one hour?	1. Yes 2. No
49	Which of the following describe OTHER RESPONDENT work situation at your main work?	1. Employee 2. Own account worker 3. Employer 4. Member of producer's cooperative 5. Unpaid family work

		888. Refused to Answer
50	In addition to the main work, did the non-responding parent do any other work?	1. Yes 2. No
51	Were he/she looking for a job?	1. Yes 2. No
52	During lock down, Did OTHER RESPONDENT engage in any work (that pays) at least for one hour?	1. Yes 2. No
53	During lock down, Which of the following describe OTHER RESPONDENT work situation at your main work?	1. Employee 2. Own account worker 3. Employer 4. Member of producer's cooperative 5. Unpaid family work 888. Refused to Answer
54	During lock down, In addition to the main work, did the non-responding parent do any other work? Were he/she looking for a job?	1. Yes 2. No
Now we are going to ask few questions about CHILD NAME.		
55	What is CHILD NAME current age?	
Answer the following questions related to CHILD NAME main work in an average week in BETWEEN the two LOCKDOWNS		
56	Did CHILD NAME engage in any work (that pays) at least for one hour?	1. Yes 2. No
57	For each of the following activities, did CHILD NAME spend at least an hour on it?	
a.	Run or do any kind of business, big or small, for yourself or with one or more partners?	1. Yes 2. No
b.	Do any work for a wage, salary, commission or any payment in kind (excluding domestic work)	1. Yes 2. No
c.	Do any work as a domestic worker for a wage, salary or any payment in kind?	1. Yes 2. No
d.	Help unpaid in a household business of any kind (Do not count normal housework)	1. Yes 2. No
e.	Do any work on your own or the household's plot, farm, food garden, or	1. Yes 2. No

	help in growing farm produce or in looking after animals for the household?	
f.	Do any construction or major repair work on his/her own home, plot, or business or those of the household?	1. Yes 2. No
g.	Catch any fish, prawns, shells, wild animals or other food for sale or household food?	1. Yes 2. No
h.	Fetch water or collect firewood for household use?	1. Yes 2. No
i.	Produce any other good for this household use?	1. Yes 2. No
j.	Other	1. Yes 2. No
58	Which of the following describe CHILD NAME work situation at your main work?	1. Employee 2. Own account worker 3. Employer 4. Member of producer's cooperative 5. Unpaid family work 888. Refused to Answer
59	What was CHILD NAME average monthly cash income from the main work (in local currency)?	
60	For an average day on which a child worked, how many hours did CHILD NAME actually work on his/her main job?	
61	In addition to the main work, did CHILD NAME do any other work?	1. Yes 2. No
62	For an average day on which a child worked, how many hours did CHILD NAME actually work on his/her other job?	
63	Were CHILD NAME looking for a job?	1. Yes 2. No
64	Did CHILD NAME perform any of the household related chores (such as cooking, cleaning, washing etc.)?	1. Yes 2. No
65	For an average day of the week before COVID, how many hours did the child	

	spent on performing the household tasks as specified in the last question?	
Answer the following questions related to CHILD NAME main work in an average week DURING THE CURRENT LOCK DOWN		
66.	Did CHILD NAME engage in any work (that pays) at least for one hour?	1. Yes 2. No
67	For each of the following activities, did CHILD NAME spend at least an hour on it?	
a.	Run or do any kind of business, big or small, for yourself or with one or more partners?	1. Yes 2. No
b.	Do any work for a wage, salary, commission or any payment in kind (excluding domestic work)	1. Yes 2. No
c.	Do any work as a domestic worker for a wage, salary or any payment in kind?	1. Yes 2. No
d.	Help unpaid in a household business of any kind (Do not count normal housework)	1. Yes 2. No
e.	Do any work on your own or the household's plot, farm, food garden, or help in growing farm produce or in looking after animals for the household?	1. Yes 2. No
f.	Do any construction or major repair work on his/her own home, plot, or business or those of the household?	1. Yes 2. No
g.	Catch any fish, prawns, shells, wild animals or other food for sale or household food?	1. Yes 2. No
h.	Fetch water or collect firewood for household use?	1. Yes 2. No
i.	Produce any other good for this household use?	1. Yes 2. No
j.	Other	1. Yes 2. No

68	Which of the following describe CHILD NAME work situation at your main work?	1. Employee 2. Own account worker 3. Employer 4. Member of producer's cooperative 5. Unpaid family work 888. Refused to Answer
69	What was CHILD NAME average monthly cash income from the main work (in local currency)?	
70	For an average day on which a child worked, how many hours did CHILD NAME actually work on his/her main job?	
71	In addition to the main work, did CHILD NAME do any other work?	1. Yes 2. No
72	For an average day on which a child worked, how many hours did CHILD NAME actually work on his/her other job?	
73	Were CHILD NAME looking for a job?	1. Yes 2. No
74	Did CHILD NAME perform any of the household related chores (such as cooking, cleaning, washing etc.)?	1. Yes 2. No
75	For an average day of the week before COVID, how many hours did the child spent on performing the household tasks as specified in the last question?	
Now I want to ask few questions about your health.		
The following questions are about how you have felt in the period BETWEEN the two LOCKDOWNS		
76	Did you feel alone?	1. Never 2. Rarely 3. Sometimes 4. Often 5. All the time 888. Refused to Answer
77	Did you feel isolated from others?	1. Never 2. Rarely 3. Sometimes 4. Often 5. All the time 888. Refused to Answer
78	Did you feel left out?	1. Never 2. Rarely

		3. Sometimes 4. Often 5. All the time 888. Refused to Answer
The following questions are about your lifestyle in the period BETWEEN the two LOCKDOWNS		
79	During this period, have you been able to concentrate on what you are doing?	1. Never 2. Rarely 3. Sometimes 4. Often 5. All the time 888. Refused to Answer
80	During this period, have you lost much sleep over worry?	1. Never 2. Rarely 3. Sometimes 4. Often 5. All the time 888. Refused to Answer
81	During this period, have you felt you are playing a useful part in things?	1. Never 2. Rarely 3. Sometimes 4. Often 5. All the time 888. Refused to Answer
82	During this period, have you felt constantly under strain?	1. Never 2. Rarely 3. Sometimes 4. Often 5. All the time 888. Refused to Answer
83	During this period, have you felt you could not overcome difficulties?	1. Never 2. Rarely 3. Sometimes 4. Often 5. All the time 888. Refused to Answer
84	During this period, have you been able to enjoy your normal day-to-day activities?	1. Never 2. Rarely 3. Sometimes 4. Often 5. All the time 888. Refused to Answer
85	During this period, have you been able to face up to your problems?	1. Never 2. Rarely 3. Sometimes 4. Often 5. All the time 888. Refused to Answer
86	During this period, have you been feeling unhappy or depressed?	1. Never 2. Rarely 3. Sometimes

		4. Often 5. All the time 888. Refused to Answer
87	During this period, have you been losing confidence in yourself?	1. Never 2. Rarely 3. Sometimes 4. Often 5. All the time 888. Refused to Answer
88	During this period, have you been thinking of yourself as a worthless person?	1. Never 2. Rarely 3. Sometimes 4. Often 5. All the time 888. Refused to Answer
89	During this period, have you been feeling reasonably happy, all things considered?	1. Never 2. Rarely 3. Sometimes 4. Often 5. All the time 888. Refused to Answer
The following questions are about how you felt during an average month DURING THE CURRENT LOCKDOWN		
90	Did you feel alone?	1. Never 2. Rarely 3. Sometimes 4. Often 5. All the time 888. Refused to Answer
91	Did you feel isolated from others?	1. Never 2. Rarely 3. Sometimes 4. Often 5. All the time 888. Refused to Answer
92	Did you feel left out?	1. Never 2. Rarely 3. Sometimes 4. Often 5. All the time 888. Refused to Answer
The following questions are about your lifestyle during an average month DURING THE CURRENT LOCKDOWN		
93	During this period, have you been able to concentrate on what you are doing?	1. Never 2. Rarely 3. Sometimes 4. Often 5. All the time 888. Refused to Answer

94	During this period, have you lost much sleep over worry?	1. Never 2. Rarely 3. Sometimes 4. Often 5. All the time 888. Refused to Answer
95	During this period, have you felt you are playing a useful part in things?	1. Never 2. Rarely 3. Sometimes 4. Often 5. All the time 888. Refused to Answer
96	During this period, have you felt constantly under strain?	1. Never 2. Rarely 3. Sometimes 4. Often 5. All the time 888. Refused to Answer
97	During this period, have you felt you could not overcome difficulties?	1. Never 2. Rarely 3. Sometimes 4. Often 5. All the time 888. Refused to Answer
98	During this period, have you been able to enjoy your normal day-to-day activities?	1. Never 2. Rarely 3. Sometimes 4. Often 5. All the time 888. Refused to Answer
99	During this period, have you been able to face up to your problems?	1. Never 2. Rarely 3. Sometimes 4. Often 5. All the time 888. Refused to Answer
100	During this period, have you been feeling unhappy or depressed?	1. Never 2. Rarely 3. Sometimes 4. Often 5. All the time 888. Refused to Answer
101	During this period, have you been losing confidence in yourself?	1. Never 2. Rarely 3. Sometimes 4. Often 5. All the time 888. Refused to Answer

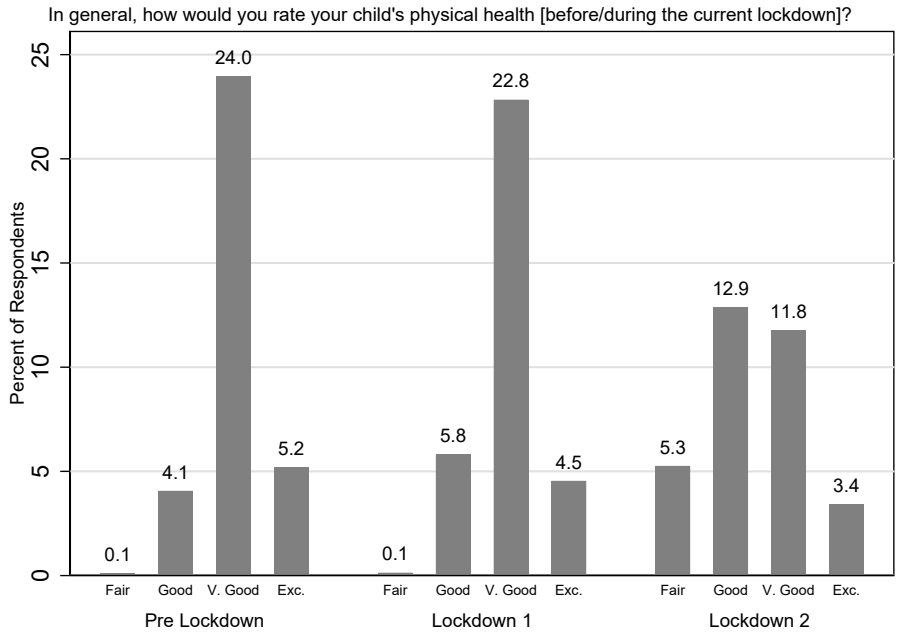
102	During this period, have you been thinking of yourself as a worthless person?	1. Never 2. Rarely 3. Sometimes 4. Often 5. All the time 888. Refused to Answer
103	During this period, have you been feeling reasonably happy, all things considered?	1. Never 2. Rarely 3. Sometimes 4. Often 5. All the time 888. Refused to Answer
Now I want to ask few questions about CHILD NAME health.		
The following questions are about your child during an average month in the period BETWEEN the two LOCKDOWNS		
104	In general, how would you rate your child CHILD NAME's physical health?	1. Poor 2. Fair 3. Good 4. Very Good 5. Excellent
105	In general, how would you rate your child CHILD NAME's quality of life?	1. Poor 2. Fair 3. Good 4. Very Good 5. Excellent
106	In general, how would you rate your child CHILD NAME's satisfaction with his/her social activities and relationships?	1. Poor 2. Fair 3. Good 4. Very Good 5. Excellent
107	In general, how would you rate your child CHILD NAME's mental health and ability to think?	1. Poor 2. Fair 3. Good 4. Very Good 5. Excellent
108	In general, how would you rate your child CHILD NAME's sleep quality?	1. Poor 2. Fair 3. Good 4. Very Good 5. Excellent
109	In general, how would you rate your child CHILD NAME's eating habits?	1. Poor 2. Fair 3. Good 4. Very Good 5. Excellent
The following questions are about your child during an average month DURING THE CURRENT LOCKDOWN		
110	In general, how would you rate your child CHILD NAME's physical health?	1. Poor 2. Fair 3. Good

		4. Very Good 5. Excellent
111	In general, how would you rate your child CHILD NAME's quality of life?	1. Poor 2. Fair 3. Good 4. Very Good 5. Excellent
112	In general, how would you rate your child CHILD NAME's satisfaction with his/her social activities and relationships?	1. Poor 2. Fair 3. Good 4. Very Good 5. Excellent
113	In general, how would you rate your child CHILD NAME's mental health and ability to think?	1. Poor 2. Fair 3. Good 4. Very Good 5. Excellent
114	In general, how would you rate your child CHILD NAME's sleep quality?	1. Poor 2. Fair 3. Good 4. Very Good 5. Excellent
115	In general, how would you rate your child CHILD NAME's eating habits?	1. Poor 2. Fair 3. Good 4. Very Good 5. Excellent
116	What efforts were made by the school to engage the child in schooling activity during lockdown 1 [time reference - Mid march to mid-September]?	
a.	paper-based take-home packages for children	1. Yes 2. No
b.	regular check-ins with child/parents i.e. teachers monitors child's learning on a day-to-day basis	1. Yes 2. No
c.	use of government supported digital website/apps with content	1. Yes 2. No
d.	use of TV programmes	1. Yes 2. No
e.	use of radio learning programmes	1. Yes 2. No
f.	Other	1. Yes, please specify _____ 2. No

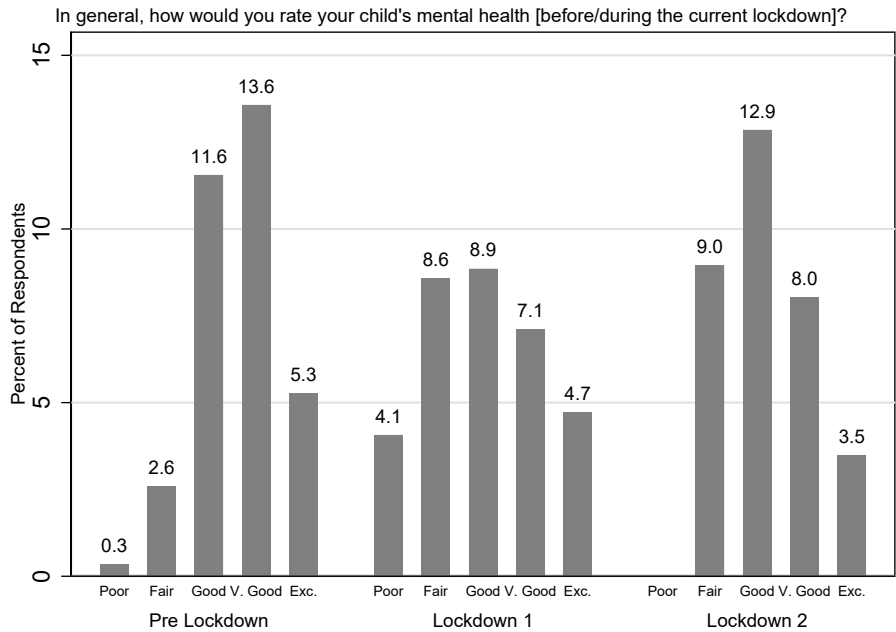
117	What efforts were made by the school to engage the child in schooling activity during lock down 2 [time reference - November 26th to 24th December]?	
a.	paper-based take-home packages for children	1. Yes 2. No
b.	regular check-ins with child/parents i.e. teachers monitors child's learning on a day-to-day basis	1. Yes 2. No
c.	use of government supported digital website/apps with content	1. Yes 2. No
d.	use of TV programmes	1. Yes 2. No
e.	use of radio learning programmes	1. Yes 2. No
f.	Other	1. Yes, please specify _____ 2. No
118	What efforts were made by you and your spouse to engage the child in schooling activity during lock down 1 [time reference - Mid march to mid-September]?	
a.	child-oriented books availability and use at home (i.e., books at home and parent read to child)	1. Yes 2. No
b.	parents support child with homework	1. Yes 2. No
c.	parents support child in using take-home learning packages	1. Yes 2. No
d.	Others	1. Yes, please specify _____ 2. No
119	What efforts were made by you and your spouse to engage the child in schooling activity during lock down 2 [time reference - November 26th to 24th December]?	
a.	child-oriented books availability and use at home (i.e., books at home and parent read to child)	1. Yes 2. No

b.	parents support child with homework	1. Yes 2. No
c.	parents support child in using take-home learning packages	1. Yes 2. No
d.	Others	1. Yes, please specify _____ 2. No
120	Do you own a TV?	1. Yes 2. No
121	Do you own a radio?	1. Yes 2. No
122	Do you have internet connection?	1. Yes 2. No
123	Mobile	1. Yes 2. No
124	Cabel	1. Yes 2. No
125	Did you use TV, radio or internet for child's schooling during the shut-down?	1. Yes 2. No
126	Contact number	
127	Network	1. Jazz/Warid 2. Ufone 3. Telenor 4. Zong 5. Don't know
128	Status of survey	1. Complete 2. Refused 3. Partial Refusal 4. Did not pick up 5. Wrong number 6. Issue with the number 7. Phone was powered off 8. Rescheduled 9. Wrong Household

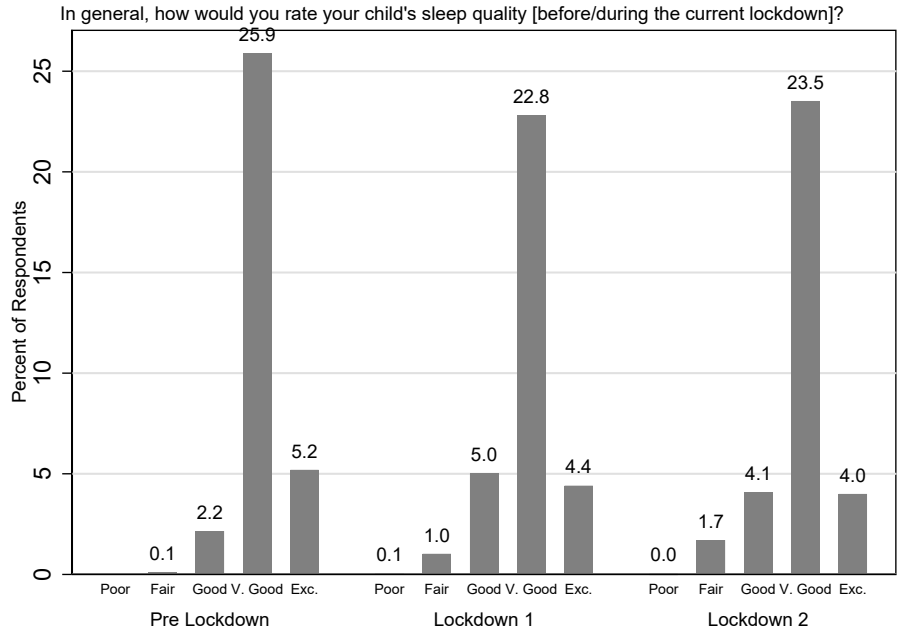
Distribution of Outcome Variables: The main dependent variables are summarized in below figures.



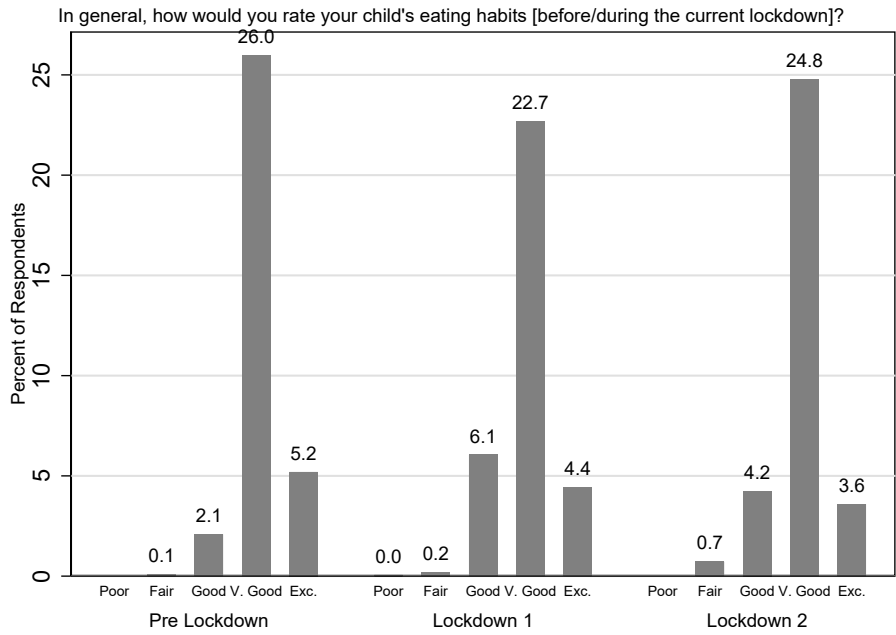
A.8.1: Physical Health



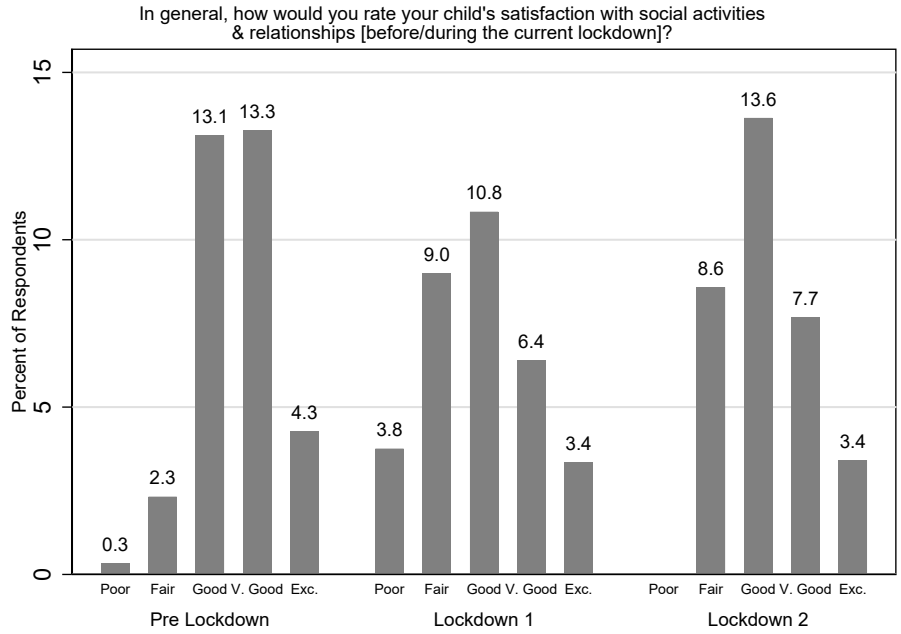
A.8.2: Mental Health



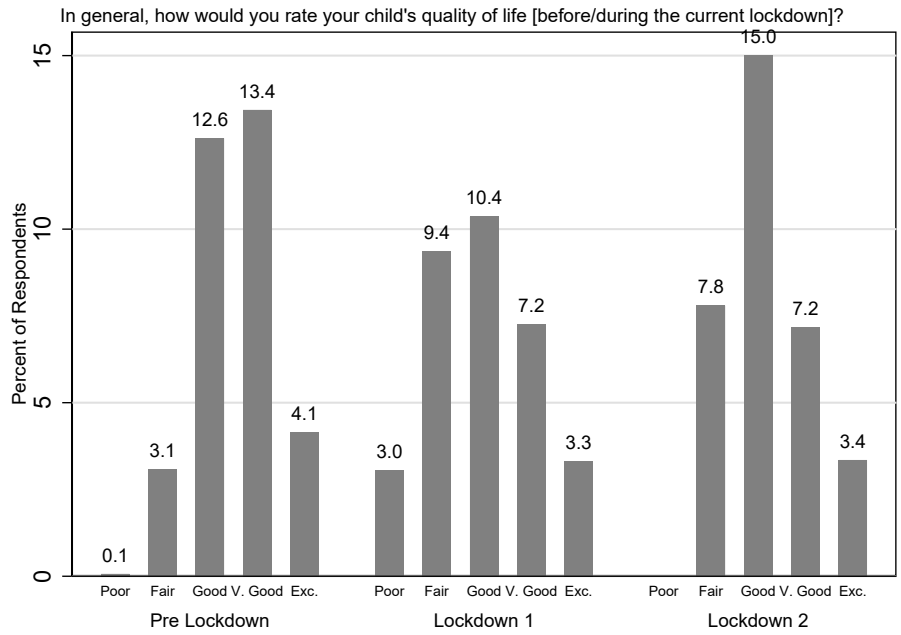
A.8.3: Sleep Quality



A.8.4: Eating Habits



A.8.5: Social Satisfaction



A.8.6: Life Quality

B. Additional Analyses

Challenges in survey design: We overcome several challenges in designing our surveys. First, during the pandemic, as commonly experienced by many researchers, access to subjects was limited or permitted only via telephone. Primarily, these restrictions were put in place to ensure compliance with the standard of operations during the pandemic to combat the spread of the virus. Investigators, therefore, have utilized pre-existing samples of subjects from studies conducted prior to the pandemic. This pathway provides baseline information (before the pandemic) that is otherwise not available. Despite this benefit, two drawbacks are salient: the mode of the survey differs due to COVID-19-related standards of operation in the host country (for example, in-person mode for the baseline and telephone surveys for the pandemic period); and there is also the possibility of attrition in the sample, which can introduce systematic biases in the analysis.

An alternative to using the baseline data from a prior study is to ask individuals to recall information prior to the pandemic and during the pandemic. However, with this approach, recall bias is often cited as a major issue. However, there is evidence in the literature that shorter recall periods for micro data reduce this bias (Kjellsson et al., 2014), and a salient period of reference is an important factor in whether the retrospective accounts are subject to recall decay (Loftus and Marburger, 1983; Smith and Thomas, 2003; Judge and Schechter, 2009). For example, Loftus and Marburger (1983) studies how the accuracy of information acquired using retrospective accounts in surveys improves when the survey uses a salient landmark event, such as the eruption of a volcano. In another context, Smith and Thomas (2003) find that there is less likelihood of recall delay for migrant respondents when the migration event is of greater salience to the respondent. Finally, Judge and Schechter (2009) show that in an agriculture survey from Paraguay, the information collected for crops that represent a larger share of household income is less prone to recall bias. Beegle et al. (2012a) further confirm the reliability of recall in agricultural data for three African countries.

To categorize whether an event is salient or not, Bradburn et al. (2004) identify three factors: “(1) the unusualness of the event, (2) the economic and social cost or benefits of the event, and (3) the continuing consequences of the event”. Relating this concept of salience to the pandemic, it is natural to assume that the pandemic and the associated lockdowns are unusual events with persistent consequences for households and, therefore, make the time reference of the lockdowns salient. Thus, in our case, we ask the parents to recall information for an average month prior to the lockdown and for the periods during the lockdown. We expect recall delay to be small due to the drastic shifts in day-to-day life, school closure, economic downturn, and health concerns during the lockdowns. The credibility of our approach, therefore, rests on two assumptions: (1) the significance of the event such that subjects are well-informed about the time frame in question, an assumption which is justifiable in our case given the significance of the pandemic and

the associated lockdowns around the world; (2) there is minimum systematic bias (such as recall bias) in the reporting of the data, an assumption that is commonly made when using survey data. Under these assumptions, while asking subjects about the health and well-being of their children in the current moment is free from recall bias, gathering the same information for an average month before the COVID-19 lockdown is less likely to be prone to recall bias than asking the same question where time reference is based on some insignificant event. Moreover, in combination, the recall period being less than 7 months and the significance of the event in question both help in minimizing the bias.

Second, to causally identify effects, the ideal methodology would be to estimate a difference-in-differences specification, but this method relies on variation of some children being exposed to the pandemic/lockdown episode and others not being exposed. Indeed, a macroeconomic and global shock, such as the pandemic and nationwide lockdowns, affects every individual, regardless of which geographical location they reside in. Therefore, it is not possible to clearly assign control and treatment status to the subjects by exploiting cross-sectional variation in timing of lockdowns across some spatial dimension. Alternatively, one may be able to leverage a time-series variation, such as a survey conducted at differing times or variation in the schedule of school shutdowns. However, given that in developing countries infection rates increased dramatically, due to the limited capacity of health care systems, stringent nationwide lockdowns were implemented in the early months of the pandemic. These concerns mean it is not possible to exploit time-series and cross-sectional variation in the lockdowns. However, these factors certainly justify our assumption that lockdowns are significant events for recall purposes. As a result the findings in this paper are descriptive but suggestive of the causal mechanisms.

In light of these two challenges and the associated benefits and drawbacks of alternative choices, we use a hybrid of survey design and associated methodology. While maximizing the benefits and minimizing the drawbacks, we utilize the sample of subjects from an existing study, confirm that attrition is not systematic, and then conduct the survey asking subjects to recall information in the month before the lockdown and provide information during the current period. This approach allows us to utilize the contact information from an existing study, overcome concerns relating to the potential systematic attrition and utilize the survey information, which is uniform in terms of the survey mode (telephone only) for the construction of our outcome variables.

Table B.1: The impact of lockdowns on children’s health and well-being (additional controls)

	(1)	(2)	(3)	(4)	(5)	(6)
Panel A	Physical Health	Mental Health	Sleep Quality	Eating Habits	Social Satisfaction	Life Quality
Lockdown 1	-0.08* (0.036)	-0.64*** (0.047)	-0.12*** (0.033)	-0.11*** (0.028)	-0.67*** (0.044)	-0.59*** (0.044)
Lockdown 2	-0.56*** (0.033)	-0.42*** (0.044)	-0.15*** (0.030)	-0.12*** (0.026)	-0.35*** (0.041)	-0.33*** (0.041)
Responder	0.067 (0.044)	0.12* (0.058)	0.030 (0.040)	0.023 (0.035)	0.13* (0.054)	0.15*** (0.054)
Log HH Income per capita	0.00 (0.044)	0.07 (0.059)	0.00 (0.041)	-0.01 (0.035)	0.05 (0.055)	-0.00 (0.055)
Missing Log HH Income per capita	-0.06 (0.071)	-0.05 (0.094)	0.00 (0.065)	-0.01 (0.056)	-0.06 (0.088)	-0.18* (0.087)
Child Labor	-0.46*** (0.031)	-0.34*** (0.042)	-0.05 (0.029)	0.00 (0.025)	-0.37*** (0.039)	-0.32*** (0.039)
Psychological State	-0.06 (0.052)	0.11 (0.069)	0.10* (0.048)	0.11* (0.041)	0.07 (0.064)	0.14* (0.064)
Parent Support	0.02 (0.040)	0.16*** (0.053)	-0.05 (0.037)	-0.04 (0.032)	0.11* (0.050)	0.04 (0.049)
Constant	3.90*** (0.16)	3.82*** (0.21)	4.34*** (0.14)	4.37*** (0.12)	3.70*** (0.19)	3.92*** (0.19)
Panel B	Hypothesis Testing					
<i>Lockdown 2 vs. Lockdown 1</i>	-0.48***	0.22***	-0.03	-0.01	0.33***	0.26***
<i>Test p-value</i>	[0.001]	[0.001]	[0.253]	[0.516]	[0.001]	[0.001]
<i>Total Obs</i>	2925	2925	2925	2925	2925	2925
<i>Total Individuals</i>	975	975	975	975	975	975

Note: Panel A presents estimates from specification 1. Standard errors are in brackets. In Panel B, p-values [in square brackets] are for the null hypothesis that the coefficients of two subsamples (as specified in Panel B) are equal. All numeric values are displayed up to 3 decimal places. Asterisks indicate significance: * $p < 0.050$, ** $p < 0.010$, *** $p < 0.001$.

Table B.2: Economic state (additional controls)

	(1)	(2)	(3)	(4)	(5)	(6)
Panel A	Physical Health	Mental Health	Sleep Quality	Eating Habits	Social Satisfaction	Life Quality
Lockdown 1	-0.08 (0.062)	-0.53*** (0.082)	-0.13* (0.059)	-0.15** (0.050)	-0.50*** (0.077)	-0.44*** (0.077)
Lockdown 2	-0.70*** (0.066)	-0.23** (0.088)	-0.21*** (0.063)	-0.26*** (0.054)	-0.16* (0.082)	-0.17* (0.082)
Economic State	-0.03 (0.057)	0.16* (0.075)	-0.01 (0.054)	-0.08 (0.046)	0.23*** (0.070)	0.18* (0.070)
Economic State X Lockdown 1	-0.04 (0.10)	-0.10 (0.13)	-0.01 (0.096)	0.06 (0.081)	-0.20 (0.12)	-0.12 (0.12)
Economic State X Lockdown 2	0.33*** (0.092)	-0.27* (0.12)	0.12 (0.088)	0.25*** (0.075)	-0.27* (0.11)	-0.22 (0.11)
Responder	0.06 (0.049)	0.13* (0.065)	0.06 (0.047)	0.01 (0.039)	0.10 (0.060)	0.10 (0.060)
Child Labor	-0.40*** (0.035)	-0.36*** (0.047)	-0.06 (0.034)	0.02 (0.029)	-0.35*** (0.044)	-0.31*** (0.044)
Psychological State	-0.01 (0.059)	0.12 (0.079)	0.11* (0.057)	0.11* (0.048)	0.03 (0.074)	0.10 (0.073)
Support	0.00 (0.044)	0.16** (0.059)	-0.07 (0.043)	-0.07 (0.036)	0.09 (0.055)	0.06 (0.055)
Constant	4.07*** (0.16)	3.85*** (0.22)	4.38*** (0.16)	4.43*** (0.13)	3.52*** (0.20)	3.72*** (0.20)
Panel B	Hypothesis Testing					
Prelockdown						
Good Economic State vs. Bad	-0.03	0.16**	-0.01	-0.08	0.23***	0.18*
<i>p-value</i>	[0.579]	[0.030]	[0.842]	[0.076]	[0.001]	[0.011]
Lockdown 1						
Good Economic State vs. Bad	-0.07	0.06	-0.03	-0.02	0.04	0.06
<i>p-value</i>	[0.237]	[0.461]	[0.663]	[0.721]	[0.641]	[0.437]
Lockdown 2						
Good Economic State vs. Bad	0.30***	-0.11	0.11*	0.17***	-0.04	-0.04
<i>p-value</i>	[0.001]	[0.124]	[0.030]	[0.001]	[0.578]	[0.543]
Bad Economic State						
Lockdown 1 vs. Prelockdown	-0.08	-0.53***	-0.13*	-0.15**	-0.50***	-0.44***
<i>p-value</i>	[0.223]	[0.001]	[0.030]	[0.004]	[0.001]	[0.001]
Good Economic State						
Lockdown 1 vs. Prelockdown	-0.12	-0.64***	-0.14*	-0.08	-0.70***	-0.56***
<i>p-value</i>	[0.092]	[0.001]	[0.029]	[0.147]	[0.001]	[0.001]
Bad Economic State						
Lockdown 2 vs. Prelockdown	-0.70***	-0.23**	-0.21***	-0.26***	-0.16*	-0.17*
<i>p-value</i>	[0.001]	[0.009]	[0.001]	[0.001]	[0.048]	[0.037]
Good Economic State						
Lockdown 2 vs. Prelockdown	-0.37***	-0.50***	-0.09	-0.01	-0.43***	-0.39***
<i>p-value</i>	[0.001]	[0.001]	[0.060]	[0.752]	[0.001]	[0.001]
<i>Total Obs</i>	2259	2259	2259	2259	2259	2259
<i>Total Individuals</i>	753	753	753	753	753	753

Note: Panel A presents estimates from specification 2. Standard errors are in brackets. In Panel B, p-values [in square brackets] are for the null hypothesis that the coefficients of two subsamples (as specified in the first column of Panel B) are equal. All numeric values are displayed up to 3 decimal places. Asterisks indicate significance: * $p < 0.050$, ** $p < 0.010$, *** $p < 0.001$.

Table B.3: Economics state (Sample Split)

Sample 1: Poor Households = 0						
Panel A	(1) Physical Health	(2) Mental Health	(3) Sleep Quality	(4) Eating Habits	(5) Social Satisfaction	(6) Life Quality
1st Lockdown	-0.08 (0.047)	-0.67*** (0.057)	-0.17*** (0.039)	-0.15*** (0.032)	-0.66*** (0.054)	-0.58*** (0.052)
2nd Lockdown	-0.61*** (0.047)	-0.42*** (0.057)	-0.19*** (0.039)	-0.13*** (0.032)	-0.39*** (0.054)	-0.40*** (0.052)
constant	4.03*** (0.033)	3.64*** (0.040)	4.10*** (0.028)	4.08*** (0.022)	3.57*** (0.038)	3.56*** (0.036)
Panel B	Hypothesis Testing					
<i>Lockdown 2 - Lockdown 1</i>	-0.53***	0.25***	-0.02	0.02	0.25***	0.18***
<i>Test p-value</i>	[0.000]	[0.000]	[0.600]	[0.517]	[0.000]	[0.001]
<i>Total Obs</i>	873	873	873	873	873	873
<i>Total Individuals</i>	291	291	291	291	291	291
Sample 2: Poor Households = 1						
Panel A	(1) Physical Health	(2) Mental Health	(3) Sleep Quality	(4) Eating Habits	(5) Social Satisfaction	(6) Life Quality
1st Lockdown	-0.07* (0.034)	-0.56*** (0.045)	-0.19*** (0.032)	-0.15*** (0.028)	-0.60*** (0.042)	-0.54*** (0.042)
2nd Lockdown	-0.59*** (0.034)	-0.41*** (0.045)	-0.21*** (0.032)	-0.19*** (0.028)	-0.35*** (0.042)	-0.33*** (0.042)
constant	4.05*** (0.024)	3.67*** (0.032)	4.10*** (0.023)	4.12*** (0.020)	3.61*** (0.030)	3.59*** (0.030)
Panel B	Hypothesis Testing					
<i>Lockdown 2 - Lockdown 1</i>	-0.51***	0.16***	-0.02	-0.04	0.26***	0.21***
<i>Test p-value</i>	[0.000]	[0.000]	[0.587]	[0.186]	[0.000]	[0.000]
<i>Total Obs</i>	1386	1386	1386	1386	1386	1386
<i>Total Individuals</i>	462	462	462	462	462	462

Note: Panel A presents estimates from specification 1. Standard errors are in brackets. In Panel B, p-values [in square brackets] are for the null-hypothesis that the coefficients of two sub-samples (as specified in the first column of Panel B) are equal. All numeric values are displayed up to 3 decimal places. Stars indicate significance: * $p < 0.050$, ** $p < 0.010$, *** $p < 0.001$.

Table B.4: Child Labor (additional controls)

	(1)	(2)	(3)	(4)	(5)	(6)
Panel A	Physical Health	Mental Health	Sleep Quality	Eating Habits	Social Satisfaction	Life Quality
1st Lockdown	-0.16*** (0.032)	-0.47*** (0.050)	-0.10** (0.036)	-0.13*** (0.030)	-0.53*** (0.047)	-0.44*** (0.047)
2nd Lockdown	-0.22*** (0.032)	-0.39*** (0.049)	-0.15*** (0.035)	-0.08** (0.030)	-0.31*** (0.046)	-0.29*** (0.046)
Child Labor	-0.06 (0.046)	-0.01 (0.072)	-0.02 (0.051)	0.02 (0.044)	-0.05 (0.067)	-0.01 (0.067)
Child Labor X Lockdown 1	0.13* (0.062)	-0.81*** (0.097)	-0.11 (0.068)	0.10 (0.059)	-0.72*** (0.090)	-0.69*** (0.090)
Child Labor X Lockdown 2	-1.08*** (0.059)	-0.27** (0.092)	-0.02 (0.065)	-0.10 (0.056)	-0.29*** (0.086)	-0.29*** (0.086)
Responder	0.01 (0.037)	0.12* (0.057)	0.03 (0.040)	0.02 (0.035)	0.12* (0.053)	0.14** (0.053)
Log HH Income per capita	-0.01 (0.037)	0.07 (0.058)	0.00 (0.041)	-0.02 (0.035)	0.05 (0.054)	-0.00 (0.054)
Missing Log HH Income per capita	-0.04 (0.060)	-0.06 (0.092)	-0.00 (0.065)	-0.00 (0.056)	-0.07 (0.087)	-0.19* (0.086)
Psychological State	-0.12*** (0.044)	0.08 (0.068)	0.10* (0.048)	0.10* (0.041)	0.04 (0.063)	0.11 (0.063)
Parent Support	0.03 (0.034)	0.13* (0.052)	-0.05 (0.037)	-0.04 (0.032)	0.08 (0.049)	0.02 (0.049)
Constant	3.74*** (0.13)	3.69*** (0.21)	4.33*** (0.15)	4.36*** (0.12)	3.57*** (0.19)	3.80*** (0.19)
Panel B	Hypothesis Testing					
Prelockdown						
Child Labor vs. Not	-0.06	-0.01	-0.02	0.02	-0.05	-0.01
<i>p-value</i>	[0.196]	[0.913]	[0.770]	[0.709]	[0.455]	[0.908]
Lockdown 1						
Child Labor vs. Not	0.07	-0.82***	-0.12**	0.12**	-0.77***	-0.70***
<i>p-value</i>	[0.086]	[0.001]	[0.008]	[0.003]	[0.001]	[0.001]
Lockdown 2						
Child Labor vs. Not	-1.14***	-0.28***	-0.04	-0.08*	-0.34***	-0.30***
<i>p-value</i>	[0.001]	[0.001]	[0.374]	[0.016]	[0.001]	[0.001]
No Child Labor						
Lockdown 1 vs. Prelockdown	-0.16***	-0.47***	-0.10**	-0.13***	-0.53***	-0.44***
<i>p-value</i>	[0.001]	[0.001]	[0.005]	[0.001]	[0.001]	[0.001]
Child Labor						
Lockdown 1 vs. Prelockdown	-0.03	-1.28***	-0.21***	-0.03	-1.24***	-1.13***
<i>p-value</i>	[0.607]	[0.001]	[0.001]	[0.540]	[0.001]	[0.001]
No Child Labor						
Lockdown 2 vs. Prelockdown	-0.22***	-0.39***	-0.15***	-0.08**	-0.31***	-0.29***
<i>p-value</i>	[0.001]	[0.001]	[0.001]	[0.006]	[0.001]	[0.001]
Child Labor						
Lockdown 2 vs. Prelockdown	-1.30***	-0.66***	-0.17**	-0.18***	-0.60***	-0.58***
<i>p-value</i>	[0.001]	[0.001]	[0.003]	[0.001]	[0.001]	[0.001]
<i>Total Obs</i>	2925	2925	2925	2925	2925	2925
<i>Total Individuals</i>	975	975	975	975	975	975

Note: Panel A presents estimates from specification 2. Standard errors are in brackets. In Panel B, p-values [in square brackets] are for the null hypothesis that the coefficients of two subsamples (as specified in Panel B) are equal. All numeric values are displayed up to 3 decimal places. Asterisks indicate significance: * $p < 0.050$, ** $p < 0.010$, *** $p < 0.001$.

Table B.5: Child Labor (Male Sample)

	(1)	(2)	(3)	(4)	(5)	(6)
Panel A	Physical Health	Mental Health	Sleep Quality	Eating Habits	Social Satisfaction	Life Quality
Lockdown 1	-0.11*** (0.031)	-0.41*** (0.052)	-0.13*** (0.034)	-0.21*** (0.030)	-0.50*** (0.049)	-0.49*** (0.048)
Lockdown 2	-0.08* (0.035)	-0.23*** (0.058)	-0.10** (0.038)	-0.08* (0.034)	-0.19*** (0.055)	-0.19*** (0.054)
Child Labor	-0.06 (0.060)	-0.09 (0.10)	0.05 (0.065)	0.10 (0.058)	-0.06 (0.094)	-0.02 (0.093)
Child Labor X Lockdown 1	0.13 (0.078)	-0.81*** (0.13)	-0.11 (0.084)	0.06 (0.075)	-0.73*** (0.12)	-0.67*** (0.12)
Child Labor X Lockdown 2	-1.20*** (0.076)	-0.38** (0.13)	-0.21* (0.082)	-0.24** (0.073)	-0.41*** (0.12)	-0.45*** (0.12)
Constant	3.97*** (0.020)	3.47*** (0.033)	4.03*** (0.022)	4.02*** (0.019)	3.41*** (0.031)	3.41*** (0.031)
Panel B	Hypothesis Testing					
Pre Lockdown Child Labor vs. Not	-0.06	-0.09	0.05	0.10*	-0.06	-0.02
<i>p-value</i>	[0.339]	[0.356]	[0.436]	[0.096]	[0.495]	[0.801]
Lockdown 1 Child Labor vs. Not	0.07	-0.90***	-0.06	0.15***	-0.80***	-0.69***
<i>p-value</i>	[0.153]	[0.000]	[0.289]	[0.001]	[0.000]	[0.000]
Lockdown 2 Child Labor vs. Not	-1.26***	-0.47***	-0.16***	-0.14***	-0.46***	-0.47***
<i>p-value</i>	[0.000]	[0.000]	[0.002]	[0.001]	[0.000]	[0.000]
No Child Labor Lockdown 1 vs. Pre Lockdown	-0.11***	-0.41***	-0.13***	-0.21***	-0.50***	-0.49***
<i>p-value</i>	[0.001]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
Child Labor Lockdown 1 vs. Pre Lockdown	0.02	-1.22***	-0.24***	-0.15**	-1.24***	-1.16***
<i>p-value</i>	[0.783]	[0.000]	[0.001]	[0.017]	[0.000]	[0.000]
No Child Labor Lockdown 2 vs. Pre Lockdown	-0.08**	-0.23***	-0.10***	-0.08**	-0.19***	-0.19***
<i>p-value</i>	[0.022]	[0.000]	[0.008]	[0.024]	[0.000]	[0.000]
Child Labor Lockdown 2 vs. Pre Lockdown	-1.28***	-0.61***	-0.31***	-0.32***	-0.61***	-0.64***
<i>p-value</i>	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
<i>Total Obs</i>	1650	1650	1650	1650	1650	1650
<i>Total Individuals</i>	550	550	550	550	550	550

Note: Panel A presents estimates from specification 2. Standard errors are in brackets. In Panel B, p-values [in square brackets] are for the null hypothesis that the coefficients of two subsamples (as specified in Panel B) are equal. All numeric values are displayed up to 3 decimal places. Asterisks indicate significance: * $p < 0.050$, ** $p < 0.010$, *** $p < 0.001$.

Table B.6: Child Labor (Female Sample)

	(1)	(2)	(3)	(4)	(5)	(6)
Panel A	Physical Health	Mental Health	Sleep Quality	Eating Habits	Social Satisfaction	Life Quality
Lockdown 1	-0.10** (0.035)	-0.42*** (0.050)	-0.15*** (0.038)	-0.15*** (0.032)	-0.44*** (0.046)	-0.34*** (0.047)
Lockdown 2	-0.26*** (0.038)	-0.37*** (0.054)	-0.25*** (0.041)	-0.15*** (0.034)	-0.27*** (0.050)	-0.26*** (0.050)
Child Labor	-0.07 (0.071)	0.09 (0.10)	-0.09 (0.079)	-0.07 (0.065)	-0.03 (0.095)	0.04 (0.096)
Child Labor X Lockdown 1	0.18 (0.11)	-0.89*** (0.15)	-0.27* (0.12)	0.13 (0.097)	-0.73*** (0.14)	-0.75*** (0.14)
Child Labor X Lockdown 2	-0.92*** (0.094)	-0.24 (0.13)	0.20 (0.10)	0.06 (0.085)	-0.23 (0.13)	-0.17 (0.13)
Constant	4.13*** (0.025)	3.84*** (0.035)	4.16*** (0.027)	4.17*** (0.023)	3.78*** (0.033)	3.73*** (0.033)
Panel B	Hypothesis Testing					
Pre Lockdown Child Labor vs. Not	-0.07	0.09	-0.09	-0.07	-0.03	0.04
<i>p-value</i>	[0.328]	[0.405]	[0.279]	[0.309]	[0.759]	[0.670]
Lockdown 1 Child Labor vs. Not	0.11	-0.80***	-0.35***	0.06	-0.76***	-0.71***
<i>p-value</i>	[0.164]	[0.000]	[0.000]	[0.391]	[0.000]	[0.000]
Lockdown 2 Child Labor vs. Not	-0.99***	-0.16*	0.12*	-0.01	-0.26***	-0.13
<i>p-value</i>	[0.000]	[0.070]	[0.083]	[0.851]	[0.002]	[0.120]
No Child Labor Lockdown 1 vs. Pre Lockdown	-0.10***	-0.42***	-0.15***	-0.15***	-0.44***	-0.34***
<i>p-value</i>	[0.005]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
Child Labor Lockdown 1 vs. Pre Lockdown	0.08	-1.30***	-0.42***	-0.02	-1.18***	-1.10***
<i>p-value</i>	[0.382]	[0.000]	[0.000]	[0.833]	[0.000]	[0.000]
No Child Labor Lockdown 2 vs. Pre Lockdown	-0.26***	-0.37***	-0.25***	-0.15***	-0.27***	-0.26***
<i>p-value</i>	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
Child Labor Lockdown 2 vs. Pre Lockdown	-1.18***	-0.66***	-0.05	-0.09	-0.50***	-0.43***
<i>p-value</i>	[0.000]	[0.000]	[0.573]	[0.207]	[0.000]	[0.000]
<i>Total Obs</i>	1275	1275	1275	1275	1275	1275
<i>Total Individuals</i>	425	425	425	425	425	425

Note: Panel A presents estimates from specification 2. Standard errors are in brackets. In Panel B, p-values [in square brackets] are for the null hypothesis that the coefficients of two subsamples (as specified in Panel B) are equal. All numeric values are displayed up to 3 decimal places. Asterisks indicate significance: * $p < 0.050$, ** $p < 0.010$, *** $p < 0.001$.

Table B.7: Psychological state (additional controls)

	(1)	(2)	(3)	(4)	(5)	(6)
Panel A	Physical Health	Mental Health	Sleep Quality	Eating Habits	Social Satisfaction	Life Quality
Lockdown 1	-0.07 (0.12)	-0.89*** (0.16)	-0.27* (0.11)	-0.16 (0.098)	-0.88*** (0.15)	-0.62*** (0.15)
Lockdown 2	-0.98*** (0.12)	-0.25 (0.16)	-0.23 (0.12)	-0.22* (0.10)	-0.21 (0.15)	0.025 (0.15)
Psychological State	-0.17 (0.12)	0.04 (0.16)	-0.07 (0.11)	-0.01 (0.097)	0.03 (0.15)	0.28 (0.15)
Psychological State X Lockdown 1	-0.14 (0.12)	0.45** (0.16)	0.16 (0.12)	0.01 (0.10)	0.38* (0.15)	0.21 (0.15)
Psychological State X Lockdown 2	0.53*** (0.13)	-0.23 (0.17)	0.06 (0.12)	0.10 (0.10)	-0.18 (0.16)	-0.43** (0.16)
Responder	0.07 (0.042)	0.10 (0.057)	0.03 (0.040)	0.02 (0.035)	0.11* (0.053)	0.13* (0.052)
Log HH Income per capita	0.01 (0.043)	0.06 (0.057)	0.00 (0.041)	-0.01 (0.035)	0.04 (0.054)	-0.01 (0.053)
Missing Log HH Income per capita	-0.06 (0.068)	-0.05 (0.092)	0.00 (0.065)	-0.00 (0.056)	-0.06 (0.086)	-0.18* (0.085)
Child Labor	-0.40*** (0.031)	-0.38*** (0.041)	-0.06* (0.029)	0.01 (0.025)	-0.39*** (0.039)	-0.34*** (0.038)
Parent Support	0.03 (0.039)	0.14** (0.052)	-0.05 (0.037)	-0.04 (0.032)	0.08 (0.049)	0.02 (0.048)
Constant	4.22*** (0.14)	3.53*** (0.18)	4.14*** (0.13)	4.10*** (0.11)	3.50*** (0.17)	3.32*** (0.17)
Panel B						
	Hypothesis Testing					
Prelockdown						
Good Psychological State vs. Bad	-0.17	0.04	-0.07	-0.01	0.03	0.28*
<i>p-value</i>	[0.159]	[0.823]	[0.557]	[0.910]	[0.833]	[0.060]
Lockdown 1						
Good Psychological State vs. Bad	-0.31***	0.49***	0.10	0.00	0.41***	0.48***
<i>p-value</i>	[0.001]	[0.001]	[0.011]	[0.976]	[0.001]	[0.001]
Lockdown 2						
Good Psychological State vs. Bad	0.36***	-0.19***	-0.01	0.08*	-0.15**	-0.15**
<i>p-value</i>	[0.001]	[0.001]	[0.803]	[0.019]	[0.006]	[0.006]
Bad Psychological State						
Lockdown 1 vs. Prelockdown	-0.07	-0.89***	-0.27*	-0.16	-0.88***	-0.62***
<i>p-value</i>	[0.582]	[0.001]	[0.016]	[0.106]	[0.001]	[0.001]
Good Psychological State						
Lockdown 1 vs. Prelockdown	-0.21***	-0.44***	-0.11***	-0.15***	-0.50***	-0.41***
<i>p-value</i>	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]
Bad Psychological State						
Lockdown 2 vs. Prelockdown	-0.98***	-0.26	-0.23*	-0.22*	-0.22	0.03
<i>p-value</i>	[0.001]	[0.121]	[0.050]	[0.030]	[0.163]	[0.871]
Good Psychological State						
Lockdown 2 vs. Prelockdown	-0.45***	-0.48***	-0.17***	-0.12***	-0.40***	-0.40***
<i>p-value</i>	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]
<i>Total Obs</i>	2925	2925	2925	2925	2925	2925
<i>Total Individuals</i>	975	975	975	975	975	975

Note: Panel A presents estimates from specification 2. Standard errors are in brackets. In Panel B, p-values [in square brackets] are for the null hypothesis that the coefficients of two subsamples (as specified in the first column of Panel B) are equal. All numeric values are displayed up to 3 decimal places. Asterisks indicate significance: * $p < 0.050$, ** $p < 0.010$, *** $p < 0.001$.

Table B.8: Parental support (additional controls)

	(1)	(2)	(3)	(4)	(5)	(6)
Panel A	Physical Health	Mental Health	Sleep Quality	Eating Habits	Social Satisfaction	Life Quality
Lockdown 1	0.00 (0.036)	-0.71*** (0.049)	-0.13*** (0.034)	-0.10*** (0.030)	-0.72*** (0.046)	-0.63*** (0.046)
Lockdown 2	-0.63*** (0.034)	-0.36*** (0.046)	-0.12*** (0.032)	-0.11*** (0.028)	-0.29*** (0.043)	-0.28*** (0.043)
Support	0.21 (0.16)	0.08 (0.21)	0.15 (0.15)	0.08 (0.13)	0.27 (0.20)	0.15 (0.19)
Support X Lockdown 1	-0.43** (0.16)	0.29 (0.22)	-0.15 (0.15)	-0.13 (0.13)	-0.02 (0.20)	0.02 (0.20)
Support X Lockdown 2	0.05 (0.16)	-0.12 (0.22)	-0.28 (0.15)	-0.13 (0.13)	-0.35 (0.20)	-0.27 (0.20)
Responder	0.07 (0.043)	0.12* (0.058)	0.03 (0.040)	0.02 (0.035)	0.13* (0.054)	0.15** (0.054)
Log HH Income per capita	0.00 (0.043)	0.07 (0.058)	0.00 (0.041)	-0.01 (0.035)	0.05 (0.055)	0.00 (0.054)
Missing Log HH Income per capita	-0.05 (0.069)	-0.06 (0.094)	0.00 (0.065)	-0.01 (0.056)	-0.07 (0.088)	-0.19* (0.087)
Child Labor	-0.44*** (0.031)	-0.35*** (0.041)	-0.06* (0.029)	0.00 (0.025)	-0.38*** (0.039)	-0.33*** (0.038)
Psychological State	-0.06 (0.051)	0.10 (0.068)	0.11* (0.048)	0.11** (0.041)	0.07 (0.064)	0.14* (0.064)
Constant	3.92*** (0.15)	3.81*** (0.21)	4.35*** (0.14)	4.38*** (0.12)	3.70*** (0.19)	3.93*** (0.19)
Panel B	Hypothesis Testing					
Prelockdown Support vs. No Support	0.21	0.08	0.15	0.08	0.27	0.15
<i>p-value</i>	[0.173]	[0.721]	[0.303]	[0.530]	[0.166]	[0.428]
Lockdown 1 Support vs. No Support	-0.22***	0.36***	0.00	-0.05	0.25***	0.17**
<i>p-value</i>	[0.001]	[0.001]	[0.950]	[0.161]	[0.001]	[0.003]
Lockdown 2 Support vs. No Support	0.26***	-0.05	-0.13**	-0.05	-0.08	-0.11
<i>p-value</i>	[0.001]	[0.494]	[0.004]	[0.194]	[0.210]	[0.061]
No Support Lockdown 1 vs. Prelockdown	0.00	-0.71***	-0.13***	-0.10***	-0.72***	-0.63***
<i>p-value</i>	[0.997]	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]
Support Lockdown 1 vs. Prelockdown	-0.43**	-0.42*	-0.28	-0.23	-0.74***	-0.61**
<i>p-value</i>	[0.006]	[0.048]	[0.058]	[0.068]	[0.001]	[0.002]
No Support Lockdown 2 vs. Prelockdown	-0.63***	-0.36***	-0.12***	-0.11***	-0.29***	-0.28***
<i>p-value</i>	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]
Support Lockdown 2 vs. Prelockdown	-0.58***	-0.48*	-0.40**	-0.24	-0.64***	-0.55**
<i>p-value</i>	[0.001]	[0.025]	[0.007]	[0.056]	[0.001]	[0.006]
<i>Total Obs</i>	2925	2925	2925	2925	2925	2925
<i>Total Individuals</i>	975	975	975	975	975	975

Note: Panel A presents estimates from specification 2. Standard errors are in brackets. In Panel B, p-values [in square brackets] are for the null hypothesis that the coefficients of two subsamples (as specified in the first column of Panel B) are equal. All numeric values are displayed up to 3 decimal places. Asterisks indicate significance: * $p < 0.050$, ** $p < 0.010$, *** $p < 0.001$.