

Child bereavement and its relation with parental dynamics

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Abstract

Healthy family dynamics are the core of a mentally healthy society, however, these relations are easily frayed due to sudden trauma. This paper aims to analyse the impact of one such common trauma, i.e., child bereavement on the parental dynamics. It is necessary to study this since it is the dynamics between the parents which form the environment in which a child prospers and any conflict existing in this dynamic can have a long term impact on the family as a whole. Thus, by performing a logistic regression on secondary data collected from multiple countries, this paper draws multiple conclusions on how child bereavement degrades the relationship between parents. These conclusions indicate which countries are the most prone to such a shock and which sub-sections of the population are the most effected. This information can be used to form various policies which can help provide support to families who are facing such a trauma and thus improve the mental health of the society as a whole.

Introduction

The relationship between parents and their children is very unique. On one hand, parents are responsible for the proper upbringing of their children and ensuring that they are instilled with the correct values and morals. On the other hand, it is easy to forget that it is not only the parents which effect the child but also vice-versa. Studies show that the mere presence of a child can have a huge impact on the parental relationships as well as marital satisfaction (Tavakol et al., 2019). However, these effects are also not just limited to married couples. A research conducted on individuals from the United States revealed that couples living together were more likely to break up after having a baby. Additionally, the same study indicated that presence of a child led to decline in relationship satisfaction amongst married couples as well (Treter et al., 2020). On the contrary, a study conducted on the population of rural Nepal (Asia) suggested that the probability of dissolution is lower amongst those couples who have a baby compared to those who don't. Along with that, each additional child (up to 3 children) decreased this probability even further (Jennings, 2017). These contrasting findings make it clear that the relationship between children and their parents is very tight-knit and differs from country to country and household to household. But what happens if this relationship is broken? How does child bereavement change parental dynamics? Do the changes differ from country to country as well? Does the moment of bereavement, i.e., prenatal or post-birth matter? These are some of the questions this study aims to answer.

It is necessary to study the effect of such a bereavement because it can have multiple long-term consequences which might evolve from being only personal in nature to affecting the economy as a whole. According to a paper published by the Institute of Labour Economics (IZA), the death of a child can have an impact on the income as well as the employment status of the parents (Van Den Berg et al., 2012). Thus, if the frequency of such bereavements increases on a large scale, it is likely that the work-force population will decline drastically. Along with that, another paper suggests that such a situation leads to significant productivity losses even when the parents actually find the courage to go to work. This also increases the costs incurred by the employers (Fox et al., 2014). Finally, a study which recorded interviews conducted between individuals who faced bereavements and professionals supporting them shows that such individuals face a lot of problems. These problems include feeling guilty about

applying for government provided benefits to compensate for the death of a child and having trouble even arranging the funeral due to lack of resources (Dalton et al., 2022). All these findings make it clear that families facing such an adversity are usually in dire need of support and if this support is not provided, it can cause major problems for the country's economy in the future. Hence, it is necessary to form new policies to ensure that the support needed is provided. This is where this research paper gains its importance because it improves upon the previous research in various ways (listed in the following paragraphs) and the outcomes which will be obtained from this study can aid the process of policy development by indicating which countries are in the most need of help and which sub section of the population suffers the most.

There have already been multiple studies which have analysed the effect of the shock of child bereavement on the remaining family members and have concluded that death of a child in a family can have a severe negative impact on the remaining individuals. (Fletcher et al., 2012; Field and Behrman, 2003). However, these studies limited themselves by mostly focusing on the other surviving sibling(s) or the family as a whole and not on the parents. They also do not take into account the period of the bereavement. This paper aims to improve on the previous research by firstly focusing on the parents rather than on the other children. Concentrating on the parents is imperative because research has shown that often times the development of grief reactions of children are dependent on their primary caregiver's (in this case, the parents) reaction and coping mechanisms due to the death of the child (Alvis et al., 2022).

The second aspect which makes this research novel is the data which will be used. As mentioned above, the impact of having a child on the relationship between the parents differs from country to country. Thus, it is safe to assume that the effect of child bereavement will also differ. In order to take this into account, data from 10-13 different countries from all over the world will be used for the analysis (see data section for more information). This data was collected through the means of a survey conducted with parents directly, ensuring the reliability and validity of the information.

The final improvement this study makes is taking into account the moment of child bereavement. It does so by differentiating between families in which a child died post-birth

(and no children died pre-birth) and families in which at least one prenatal death occurred. Both these families are then compared to those families who have not faced the death of any of their children. It is expected that these two situations will yield different results for various reasons. Firstly, as supported by the previously mentioned studies, families who have faced any child loss are more likely to have strained family dynamics compared to those who have not faced this shock. Secondly, families with a prenatal death are expected to be different than those without one because a prenatal death can put an excess amount of stress on the parents, more specifically, the mother. Such mothers are likely to show signs of anxiety, suicidal risks, sexual health disorders and post-traumatic stress (Kukulskienė & Žemaitienė, 2022). In addition, such a death can also make subsequent pregnancies a lot more stressful (Donegan et al., 2023), thus adding to the strain existing between the parents due to the loss of a child. Based on this reasoning, the two hypotheses being proposed are: -

- 1) Families who have not faced any child bereavement are more likely to have healthier parental dynamics compared to those families that have.
- 2) The difference in the probability of poor parental dynamics between families with no child deaths and those with only post-birth child deaths is smaller than the difference between families with a prenatal death and families with no child-deaths.

The hypotheses will be tested using logit regression analysis. The sample will be distributed into three different treatment groups based on the instance of child death (or no child death in case of control group). After the distribution, each group will be regressed against certain outcome variables which indicate parental dynamics. This will be done for the complete data as well as the country-wise data. Conclusions will be drawn based on the variation in the outcomes of these regressions for the different treatment groups.

Data

About the DHS

The data used for this research was collected by the Demographic and Health Surveys (the DHS programme: Quality information to plan, monitor and improve population, health and nutrition programs.) programme, which has gathered data on population, health, nutrition, and many other topics in over 90 countries through over 400 surveys. The organization collects data from individual families using four main types of surveys out of which this research will use only one: -

Demographic and Health Surveys (DHS): These are conducted on a nationally representative population with a sample size ranging anywhere from 5000 to 30,000 households. From each household, women aged 15-49 years and men aged 15-59 years are allowed to participate. These surveys include three different core questionnaires. The first is the household questionnaire which concentrates on the living conditions of the family. It collects data which is recoded into variables such as number of members in the household, the drinking water facilities, number of rooms in the household, materials used to build the house etc. The second questionnaire is the Women's questionnaire which contains question regarding things such as instances of domestic violence, contraceptive use, care during pregnancy, maternity history etc. The final questionnaire is the Men's questionnaire which contains questions similar to that of the women's questionnaire along with questions about usage of harmful substances such as tobacco or alcohol, questions about sexual intercourse etc. This is the main source of data for this study as it contains multiple questions which pertain to the family dynamics such as questions about instances of domestic violence as well as questions which are recoded into variables which can be used as control variables such as age and gender.

After the surveys have been conducted, the data obtained from these surveys is edited and checked to ensure its quality. Finally, the datasets are recoded. The recoding process involved the DHS program generating a "standard recode" datasets. These datasets contain the same information as the raw datasets, but in a standardized format. The variable names and definitions in the "standard recode" datasets are kept as consistent as possible throughout the surveys. However, since each survey can be a bit different, the standard recode datasets

also contain variables which are configured from questions which are different from the standard survey questions.

This research uses data from these standard recode datasets to ensure the continuity of information whilst comparing between different countries. This is necessary to do because the data used for the research will be from 13 different countries. The final dataset which is used is the combination of the individual datasets for each of the included countries. The countries included are India, Afghanistan, Armenia, Columbia, Tanzania, Timor-Leste, South Africa, Nepal, Myanmar, Mozambique, Malawi, Ethiopia and Zimbabwe. These countries have been chosen since they represent the populations from different parts of the world. 6 of them are located in the Sub-Saharan regions, 5 in the South Asia region, 1 in the central Asia region, and 1 in the Latin America and Caribbean region. Furthermore, all the data used is from the year 2015-2016, i.e., the survey was started in this time period. This is done in order to ensure that the data is as comparable as possible. The total sample size of the data is 101, 499 with India contributing the most data-points (for a detailed breakdown of the individual country sample size, see the description of the 'Country' variable). These data-points contain the following variables: -

Independent variables

Birth history: this variable contains 20 entries to account for all births. Each child born is assigned an individual variable labelled from Child_01 to Child_20. They are ordered in reverse such that the last birth is given the first index number (Child_01) and the first birth is given the last index number. For example, if a mother gave birth to 3 children, the last child will be assigned under Child_01, the second under Child_02 and the first under Child_03. The remaining variables Child_04-Child_20 will be left empty. These variables are dummy variables which indicate if the child is alive (1) or not (0) during the interview. Based on these variables, we can divide our sample into the control and treatment (see methodology section for more information).

Failed_preganancy: This variable indicates whether the female respondent ever had a pregnancy that terminated in miscarriage, abortion or still birth, i.e., did not result in a live birth. This variable represents the situation where a child died pre-birth.

It will also be used to distribute the sample into the control and various treatment groups (see methodology section for more information).

Group: This is a categorical variable which indicates whether the respondent is in the control group (1), Treatment 1 (2) or Treatment 2 (3). (See methodology section for more information)

Control variables

Country: This variable indicates the country in which the household of the respondents exists. It is important to include this variable as control because data from 13 different countries have been included and each country has a different number of datapoints. Along with that, as mentioned in the introduction, the chances that the impact of the treatment is different from country to country is very high. Furthermore, prior research shows that often the various coping mechanisms used by individual to deal with interpersonal problems depend on which culture they belong to. For example, those with more collectivistic contexts are more likely to opt for strategies promoting social harmony compared to those who are from more individualistic contexts who will prefer confrontational strategies (Luong et al., 2020). This shows the need to control for various countries having differing cultures.

Table 1: Descriptive statistics for 'country'

Country	Frequency	Percent	Valid Percent	Cumulative Percent
Afghanistan	9341	9.2	9.2	9.2
Armenia	1374	1.4	1.4	10.6
Columbia	11203	11.0	11.0	21.6
Ethiopia	5525	5.4	5.4	27.1
India	56382	55.6	55.6	82.6
Myanmar	2326	2.3	2.3	84.9
Malawi	3544	3.5	3.5	88.4
Mozambique	2533	2.5	2.5	90.9
Nepal	2175	2.1	2.1	93.1
Timor-Leste	1850	1.8	1.8	94.9
Tanzania	1414	1.4	1.4	96.3
South Africa	578	.6	.6	96.8
Zimbabwe	3204	3.2	3.2	100.0
Total	101449	100.0	100.0	

Note: Frequency distribution table showing the country wise distribution of datapoints.

Table 1 shows the exact number of datapoints obtained for each country included in the analysis. According to the descriptive statistics, India contributes with the most data with 56,382 observations, followed by Columbia with 11,203 observations which is followed by Afghanistan with 9341 observations. These 3 countries combine to make 75.8% of the data used for the analysis.

Type of residence: This variable indicates whether the household exists in an urban or rural setting. The surroundings in which the respondent lives are important because those living in urban areas tend to have access to more facilities compared to those living in rural areas. In this case, respondents in urban areas might find it easier to contact a psychologist or other professional who can help them deal with the trauma of child-loss (Morales et al., 2020). Additionally, access to healthcare can also directly affect whether a family faces the loss of a child or not. Thus, it is necessary to control for the type of residence in order to get an unbiased result.

Table 2: Descriptive statistics for ‘type of residence’

Type of residence	Frequency	Percent	Valid Percent	Cumulative Percent
Rural	67374	66.4	66.4	66.4
Urban	34075	33.6	33.6	100.0
Total	101449	100.0	100.0	

Note: Table showing the proportion of respondents living in rural areas versus those who live in urban areas

Table 2 contains the descriptive statistics of the variable indicating the type of residence the respondents live in. The sample consists of 67,374 people living in the rural areas making up 66.4% of the sample. The remaining 34,075 respondents live in urban areas accounting for 33.6% of the sample.

Education: This is a categorical variable which indicates the highest level of education that the respondent has attained by taking on a numeric value. A member of the household for whom the education related questions are not valid (an individual under the age of 6 in most countries) is categorized in the “No education” category (0). The other categories accounted

for are primary (1), secondary (2) and higher education (3). It is imperative to control for education levels because prior research has indicated that an individual’s coping mechanisms are different based on the level of education they have attained (Schoger, 2023). The research only focuses on stress caused due to work however it is probable that the results can represent those who are stressed due to other reasons. Along with that, the educational background of the parents has been shown to affect the parent-child relationship, with different levels of educational attainment resulting in better/worse relationships between the parents (Li & Zhan, 2023). Thus, with different education levels resulting in varying closeness of the relationship, it is possible that educational levels indirectly influence the parents’ capability to cope with the loss of their child (with parents who had a closer relationship being more likely to face problems). Hence, controlling for education is a necessity.

Table 3: Descriptive statistics for ‘Education’

Educational attainment	Frequency	Percent	Valid Percent	Cumulative Percent
Higher	12366	12.2	12.2	12.2
No education	20134	19.8	19.8	32.0
Primary	24576	24.2	24.2	56.3
Secondary	44373	43.7	43.7	100.0
Total	101449	100.0	100.0	

Note: The table contains frequency distribution of the respondents according the level of educational attainment

Table 3 contains the descriptive statistics for the variable describing the various levels of educational attainment achieved by the respondent. 20,134 respondents are uneducated, accounting for 32% of the sample. From the remaining respondents, 24.2% have achieved primary education, 43.7% have a secondary education and only 12.2%, i.e., 12366 respondents have a higher education.

Ideal number of children: This variable indicates the number of children that the respondent thinks would be ideal to have in his/her own life. This number does not depend on the current number of children that the respondent has, thus making it possible to use it as a control variable. The respondent is allowed to give answers as a range in which case the midpoint of

the range is inputted as the data. If the range does not have a clear midpoint, half of the entries are rounded up whereas the other half are rounded down to maintain a normal distribution. This variable makes for a good control because findings from previous research has shown that the varying beliefs that adults have about the ideal number of children to have can have an impact on the early family environment including the child’s relationship with parents, happiness in childhood, parental conflicts as well as family structure (Karhunen et al., 2023).

Table 4: Descriptive statistics for ‘Ideal number of children’

Ideal number of children	Frequency	Percent	Valid Percent	Cumulative Percent
0	3151	3.1	3.1	3.1
1	4015	4.0	4.0	7.1
2	41818	41.2	41.2	48.3
3	18009	17.8	17.8	66.0
4 or more	34456	34.0	34.0	100.0
Total	101449	100.0	100.0	

Note: Table showing the frequency of respondents having varying beliefs about the ideal number of children.

Table 4 shows the descriptive statistics of the variable indicating the ideal number of children according to the different respondents. According to the table, only 3151, i.e., 3.1% of the sample wishes to have no children. The maximum number of respondents believe that having 2 children is ideal. These respondents make up for 41.2% of the sample. The second highest percentage of respondents believe that its ideal to have 4 or more children. The proportion of these respondents is 34% of the sample size.

Outcome variables

Partner drinks: It is a dummy variable which indicates whether the respondent responded yes (1) or no (0) when asked if their partner drinks. It is an ideal outcome variable since many studies conducted in the past show that there is a direct relationship between alcohol consumption and degrading family dynamics. An increase in consumption of alcohol often leads to high levels of interpersonal conflicts, domestic violence, parental inadequacy, child abuse and many other problems (Reinaldo & Pillon, 2008). Thus, an increase/decrease in the consumption of alcohol is a good indicator of change in parental dynamics as well.

Table 5: Descriptive statistics for 'partner drinks'

Partner drinks	Frequency	Percent	Valid Percent	Cumulative Percent
No	63804	62.9	62.9	62.9
Yes	37645	37.1	37.1	100.0
Total	101449	100	100.0	
Total	101449	100.0		

Note: Frequency distribution of respondents based on whether they responded yes or no to the question “does your partner drink?”

Table 5 contains the descriptive statistics for the dummy variable 'Partner drinks'. 37,645 respondents indicated that their partner drinks making up 37.1% of the sample. The rest of the respondents indicate that their partner does not drink, making up 62.9% of the sample.

Justified beating wife for any reason: This is a dummy variable which consists of group of variables which represents the likelihood that there will be an instance of domestic violence in the family. It is measured by observing whether the respondents believe it is justifiable for the husband to beat the wife if certain conditions are met. The sub variables are labelled Justified_a-e based on various justifications the respondent gives. These justifications include:

- Justified_a: It is a dummy variable which indicates whether the respondent believes it is justified to beat the wife if she neglects the children.
- Justified_b: It is a dummy variable which indicates whether the respondent believes it is justified to beat the wife if she refuses to have sex
- Justified_c: It is a dummy variable which indicates whether the respondent believes it is justified to beat the wife if she burns the food
- Justified_d: It is a dummy variable which indicates whether the respondent believes it is justified to beat the wife if she argues
- Justified_e: It is a dummy variable which indicates whether the respondent believes it is justified to beat the wife if she goes out to without telling the husband

These variables are clubbed together into one variable termed ‘justified beating wife for any reason’. This is done by observing if the respondent believes it is justified to beat the wife for any one of the above reasons. If so, then the variable is marked as 1 for yes. If the respondent does not believe that it is justified for any of the above reasons, then the variable is marked 0 for no. This makes for a good outcome variable because the more likely an individual is to justify violence against the wife, the more likely it is that the relationship between the husband and wife is strained. The variable thus represents the parental dynamics, or a lack thereof.

Table 6: Descriptive statistics for ‘justified beating wife’

Justified beating wife	Frequency	Percent	Valid Percent	Cumulative Percent
No	59860	59.0	59.0	59.0
Yes	41589	41.0	41.0	100.0
Total	101449	100.0	100.0	

Note: Frequency distribution of the respondents based on whether they believe its justified to beat their wife for any reason or not.

Table 6 showcases the descriptive statistics for the variable indicating whether the respondent believes its justified to beat the wife or not. 59,860 of the respondents believe it’s not justified to beat the wife for any reason. These respondents constitute of 59% of the sample. The remaining 41% respondents believe its justified to beat the wife for any given reason.

Actual domestic violence: This group of variables represent the instances of domestic violence which has occurred in the family. The different variables which are grouped under this variable are as follows:

- Emotional violence: It is a dummy variable which indicates if the respondent has ever experienced emotional violence from their partner.

Table 7: Descriptive statistics for ‘emotional violence’

Emotional violence	Frequency	Percent	Valid Percent	Cumulative Percent
No	66625	65.7	65.7	83.3
Yes	34824	34.3	34.3	100.0
Total	101449	100.0	100.0	

Note: Frequency distribution of respondents according to whether they have faced emotional violence or not.

- Physical violence: It is a dummy variable which indicates if the respondent has ever faced any physical violence. It is a combination of 3 different variables representing various kinds of physical violence and if the value of any one of these is 1 (yes), then 'physical violence' takes the value of 1 as well. The following are the sub-variables: -

- Pushed: It is a dummy variable which indicates if a respondent's partner ever pushed, shook or threw something at the respondent.
- Slapped: It is a dummy variable which indicates whether the respondent's partner ever slapped them
- Hurt partner: It is a dummy variable which indicates whether the respondent ever hurt their partner without the partner hurting the respondent.

Instances of domestic violence makes for a good outcome variable because increase in the number of instances will directly represent the degradation of the relationship between the parents. Along with that, emotional abuse can further increase the chances of mental health problems between the parents leading to a bigger divide between the parents (Qasim & Muzaffar, 2021)

Table 8: Descriptive statistics for 'physical violence'

Physical violence	Frequency	Percent	Valid Percent	Cumulative Percent
No	79954	78.8	78.8	78.8
Yes	21495	21.2	21.2	100.0
Total	101449	100.0	100.0	

Note: Frequency distribution of respondents based on whether they faced any kind of physical violence or not.

Table 8 shows the descriptive statistics of the variable indicating whether a respondent faced physical violence in the past or not. 79954 of the respondents indicated that they had not faced such a predicament, making up 78.8% of the population. The remaining 21495 respondents indicated that they had suffered through physical violence. These respondents make up for 22.2% of the sample.

Methodology

In order to conduct the analysis required, the sample is first restrained to only have families which have had at least one child in the past. These families are then divided into the control and treatment groups. These groups are determined based on the type of bereavement faced by the family. The families in the control group are those who have not yet faced the tragedy of losing a child. They are filtered with the help of the 'birth history' variable which indicates the status of the last 20 children born in the family (check data section for more information). Thus, families in which all children survived act as the control group. The second group of families is called the 'Treatment 1' group which contains families which have faced the tragedy of at least of the children dying post birth. The families in this group are also filtered to ensure that they have not lost a child pre-birth. This is done with the help of the "Pre-birth death" variable (see data section for more information). Finally, the third group is termed "Treatment 2" and it contains families who have lost at least one child before a successful birth. These families can also have a lost a child post-birth.

The main test which is conducted on the data is a Logit regression analysis. A logit regression is used instead of a linear regression for two reasons; firstly, the control variables are categorical in nature and secondly, the outcome variables are binary in nature. Thus, due to a lack of continuous variables, a linear regression would not be the ideal tool for analysis. The outcome of a logit regression is measured as a probability. A logit transformation is applied on the ratio of the probability of success to probability of failure. Based on the data being used in this research, one example of logit regression can be figuring out the odds of a respondent facing emotional violence (where probability of success would be probability of facing emotional violence) given the treatment group to which they belong.

$$\text{Logit}(\text{probability of emotional violence}) = \frac{1}{1 + \exp(-\text{probability of emotional violence})}$$

Equation 1

$$\text{Ln}\left(\frac{P \text{ of emotional violence}}{1-P \text{ of emotional violence}}\right) = \beta_0 + \beta_1(\text{Group}) + \beta_2(\text{Education}) + \beta_3(\text{Country}) + \beta_4(\text{Surroundings}) + \beta_5(\text{Ideal number of children}) + \varepsilon$$

Equation 2

$$\text{Ln}\left(\frac{P \text{ of emotional violence}}{1-P \text{ of emotional violence}}\right) = \beta_0 + \beta_1(\text{Group}) + \beta_2(\text{Education}) + \beta_3(\text{surroundings}) + \beta_4(\text{Ideal number of children}) + \varepsilon$$

Using equation 1, the odds of a respondent facing emotional violence can be obtained with the 'Group' as the treatment and 'Education', 'Country', 'Surroundings' and 'Ideal number of children' as the controls. One advantage of logit regression is that the same equation can be used to see the relation between Education and the probability of a respondent facing emotional violence while making the other variables the controls. This makes it possible to isolate the impact of each of these variables and compare them with the impact of the various treatments under analysis. The remaining analysis will utilize similar equations for the remaining outcome variables mentioned in the data section.

Two different kinds of Logit regression have been executed on the dataset. The first is on all the countries combined. Some countries are missing some of the datapoints. In such a situation, that country is removed from the overall analysis. The main aim of this part of the analysis is to study the relationship between the treatments and the outcomes for the sample as a whole. A second Logit regression is executed on individual countries as well. This is done using equation 2 and the datapoints from individual countries. Such an analysis allows for comparisons of the relationship of the treatment and control variables with the outcome

variables between countries. In the situation where certain variables are unavailable in an individual country's data, that variable has been skipped during the analysis. The main objective of this section of the analysis is to observe the shortcomings of each country as well as if the country-wise analysis follows the same patterns as the overall analysis. This is necessary because it will allow for policymakers to easily identify which country needs the most support. The first analysis will give a more accurate and valid estimation of the deviations in the outcome probabilities due to the large sample size whilst the second part of the analysis will give us a more niche view of the problems at hand.

It is important to note that the results of the Logit regression will only establish a correlation between the variables being tested and not a causal relation. This is because it is not possible to take into account all the variables which might effect the outcome variables. Thus, this will lead to an omitted variable bias making it impossible to establish a causal relationship.

Results

After conducting the Logit regression based on the equation specified in the methodology section, multiple tables have been obtained which shows the results for the test conducted on all countries together (table 9-table 12) as well as individual country analysis (tables attached in appendix).

Overall results

Table 9 contains the results of the Logit regression conducted on all countries between the variables indicating physical violence (pushed, slapped or hurt partner) and the treatment. It indicates that those families which suffered at least one child loss prior to birth are 34.2% more likely to engage in physical violence compared to the families who experienced no child deaths. Similarly, those families who faced the death of a child after birth are 18.1% more likely to engage in physical violence compared to the control. The p-value for both these results is less than 0.01, indicating that this is a statistically significant change. Along with that, the families in Afghanistan have the highest increase in probability of engaging in physical violence compared to the reference of India, followed by Columbia and Timor-Leste. These

are statistically significant findings with a p-value less than 0.01. Additionally those living in urban areas are 10% less likely to commit physical violence compared to those living in rural areas. Instances of physical violence are also less and less likely the more educated the families are. Those with a higher education are 55.4% less likely to conduct physical violence compared to those with no education whilst respondents who have a primary education are only 36.8% less likely. The difference in these probabilities are statistically significant with a p-value less than 0.01. Finally, families for whom the ideal number of children to have is 1 are the most likely to engage in physical violence with an increase of 33.4% in the probability compared to families who wish to have no children. This likelihood decreases as the number of ideal children increases. However, it is important to note that only the outcome for the case of the ideal number of children being 1 is statistically significant with a p-value less than 0.05.

Table 10 shows the result of the analysis between emotional violence and the treatment as well as the countries, education, type of residence and ideal number of children. From the table it can be observed that the families which faced a failed pregnancy are the most likely to engage in emotional violence, with the probability being 55.2% higher than those in the control group. The families in treatment 1 are 22.4% more likely to conduct emotional violence compared to the control. The p-values for these results are 0 indicating that they are statistically significant values. The probability of emotional violence is highest in South Africa with the rate being approximately 3 times compared to India (the reference country). South Africa is followed by Afghanistan which is followed by Timor-Leste. When it comes to education, educated people are less likely to engage in emotional violence compared to uneducated people. Those with a higher education show the highest decrease in probability (decreased by 59.4%), followed by secondary educated people (30.1%) who are followed by primary educated respondents (11.6%). These are statistically significant findings with a p-value of 0. Finally, the probability of emotional violence differs based on how many children a family thinks is ideal. Those who believe having 3 or more children is ideal are on average 12% more likely to engage in emotional violence compared to families who wish to have no children. However, families who want only one or two children are approximately 6-8% less likely to commit emotional violence compared to those who want no children. It is important to note that the value obtained for families who consider having a single child ideal is not statistically significant (p-value>0.05).

Table 11 contains the result of the analysis between instances of justification of violence against the wife and the treatment and control variables. The table clearly indicates that those families which have lost a child before its birth are 15.5% more likely to justify violence against the wife compared to the families in the control group. With a p-value of 0, this is a statistically significant result. However, when it comes to families in treatment 1, it is observed that they show no change in the probability of justification of violence against the wife compared to the control group. Along with that, it has a p-value of 0.986 showing that it is statistically insignificant. When it comes to the probability across countries, families in Afghanistan are the most likely to justify violence against the wife, with a probability which is approximately 4 times that of India (the reference country). Afghanistan is followed by Timor-Leste which is followed by Ethiopia. The p-values of all these observations are 0 indicating that they are statistically significant. When it comes to families living in urban areas, they are less likely to give justifications compared to those living in rural areas. The difference in probabilities is 22.8% and, with a significance level of 0, it is statistically significant. Additionally, educated families are less likely to justify violence against the wife compared to uneducated families. Those with a higher education are the least likely families of all, followed by those with a secondary education and finally tailed by those with a primary education who are only 7.2% less likely to justify violence compared to the uneducated. These are statistically significant findings with a p-value of 0. Additionally, those families which believe it is ideal to have children are less likely to give such justifications compared to those who do not wish to have children at all. The probability drops by 26% for those families who want to have only 1 child compared to only 4.5% for those who think having 4 or more children is ideal, i.e., the probability decreases with the decrease in the number of ideal children. These values are not statistically significant due to a p-value greater than 0.05.

Table 12 shows the outcomes of the analysis conducted between the variable indicating the consumption of alcohol and the treatment and control variables. It is clear to see from the table that the families who went through a failed pregnancy are 25.2% more likely to indulge in the consumption of alcohol compared to those families who have not faced the loss of a child. Similarly, the families in Treatment 1 are 14.9% more likely to consume alcohol compared to the control group. With p-values of 0, these results are statistically significant.

The country wise output shows that Armenia is the most likely to drink alcohol with a likelihood of approximately 4 times that of India (the reference country). Armenia is followed by Myanmar which is followed by Nepal. The type of residence the family lives in also has a statistically significant impact where those living in Urban areas are 5.9% less likely to consume alcohol than those living in rural areas ($p\text{-value}<0.05$). Education levels of the family show mixed results with those who have a secondary or higher education drinking less compared to uneducated families and those with a primary education drinking more. Out of these findings, only those for respondents with secondary or higher education are statistically significant with a $p\text{-value}$ of 0. Finally, families who believe that its ideal to have children are more likely to drink compared those families who do not wish to have children. The probability increase differs between the minimum of 26% for families wanting 1 child to the maximum of 42.6% for the families wanting 3 children. The $p\text{-values}$ of all these results are below 0.05 showing that they are statistically significant.

Country-wise analysis results

Tables 9.a-9.L show the result for the individual country wise analysis of the relation between physical violence and the treatment and control variables. An important observation to be made is that most countries including Afghanistan, Columbia and Nepal have a higher difference in the probability of physical violence when treatment group 2 is compared to the control versus when treatment group 1 is compared to the control. However, the countries of Ethiopia and Myanmar show the opposite of these findings. These are contradictory results. However, it is important to note that only the outcome associated with treatment 1 in Ethiopia is statistically significant ($p\text{-value}<0.05$). Secondly, some of the countries show an extreme deviation in the probabilities of physical violence when it comes to the impact of the treatment. For example, Ethiopia, Myanmar, Malawi and Mozambique all show the probability increasing to approximately twice the amount of the control group whilst South Africa shows the probability increasing to 4 times.

Tables 10.a-10.k contain the results for the country analysis between emotional violence and the treatment and control variables. These results show less contradiction compared to the results of country-wise analysis of physical violence because only the country of Armenia

indicates a higher probability of emotional violence for families in treatment 1 versus families in treatment 2 when both these groups are compared to the control. Along with that, only the countries of Armenia and Mozambique show a deviation in probability of over 100% compared to the control group. Another important thing to note in these results is that in the countries of Nepal and Tanzania, the probability of emotional violence in treatment 1 is actually lower than that in the control group. However, both these values are statistically insignificant with a p-value more than 0.05. Out of the countries being analysed, 5 countries face an increase in probability of emotional violence if the families are located in urban areas when compared to those living in rural areas. Finally, the analysis also shows that the deviation of probability between families who find it ideal to not have children and families who want to have children is highest for emotional violence.

Table 11.a-11.m tabulates the results of the country-wise analysis between instances of justification given to beat the wife and the treatment and control variables. The most important finding through this analysis is that the families in treatment 1 in the countries of Afghanistan, Armenia, Ethiopia, Malawi and South Africa all have a probability of justification which is lower than that of the control group. However, out of these, only the value obtained for Afghanistan is statistically significant ($p\text{-value} < 0.05$). None of the countries show a deviation in the probability greater than 100% compared to the control group.

Table 12.a-12.k show the results of the country wise analysis between the instance of consumption of alcohol and the treatment and control variables. The analysis for the countries of Armenia, Myanmar, Tanzania, South Africa and Zimbabwe show that the difference in the probability of consuming alcohol between treatment 1 and the control group is higher than that of treatment 2 and the control group. Out of these countries, only the value obtained for Myanmar is statistically significant ($p\text{-value} < 0.05$). Most of the countries have a probability deviation of below 100% between the treatments except for Afghanistan which has the probability of alcohol consumption for treatment 1 being approximately thrice the times as that for the control group. Education seems to have the least impact on the probability of the family member because in majority of the countries analysed, the probability to drink increases amongst educated families compared to uneducated families.

In 6 countries, families in urban areas have a higher probability of turning to drink compared to families in rural areas.

Table 9: Linear regression results for the relationship between the treatment and control variables and physical violence for 12 countries

	B	Sig.	Exp(B)
Country			
India (ref)		0	
Afghanistan	2.501 (0.057)	0	12.195**
Armenia	-02.009 (0.580)	0.001	0.134**
Columbia	2.019 (0.047)	0	7.531**
Ethiopia	-0.231 (0.143)	0.107	0.794
Myanmar	-0.464 (0.188)	0.013	0.628*
Malawi	0.074 (0.122)	0.546	1.077
Mozambique	0.061 (0.206)	0.768	1.062
Nepal	-0.508 (0.188)	0.007	0.602**
Timor-Leste	0.852 (0.139)	0	2.344**
South Africa	-1.545 (0.71)	0.03	0.213*
Zimbabwe	0.329 (0.122)	0.007	1.39**
Place of residence			
Rural (ref)			
Urban	-0.106 (0.037)	0.004	0.9**
Education			
No education (ref)		0	
Primary	-0.459 (0.053)	0	0.632**
Secondary	-0.427 (0.05)	0	0.653**
Higher	-0.808 (0.074)	0	0.446**
Ideal number children			
No children (ref)		0.03	
1 child	0.288 (0.122)	0.018	1.334*
2 children	0.119 (0.103)	0.249	1.126
3 children	0.105 (0.106)	0.322	1.111
4 or more children	0.025 (0.103)	0.809	1.025
Treatment			
Control		0	
Treatment 1	0.166 (0.047)	0	1.181**
Treatment 2	0.294 (0.038)	0	1.342**
Constant	-3.454 (0.105)	0	0.032**
Sample size	1000035		

Note: This table contains the outcome for the logit regression between the variable 'physical violence' and the treatment and control variables on the whole sample. The Odds ratios of the varying countries, type of residence, educational level, ideal number of children and treatment group are listed along with respective p-values (* $p < 0.05$, ** $p < 0.01$).

Table 10: Linear regression results for the relationship between the treatment and control variables and emotional violence for 11 countries

	B	Sig.	Exp(B)
Country			
India (ref)		0	
Afghanistan	1.006 (0.039)	0	2.735**
Armenia	0.082 (0.103)	0.426	1.086
Columbia	0.461 (0.056)	0	1.586**
Ethiopia	0.096 (0.068)	0.16	1.101
Myanmar	0.793 (0.049)	0	2.209**
Malawi	0.048 (0.094)	0.609	1.049
Mozambique	-0.020 (0.075)	0.794	0.981
Nepal	0.974 (0.07)	0	2.649**
Timor-Leste	0.259 (0.143)	0.07	1.295
South Africa	1.159 (0.05)	0	3.188**
Place of residence			
Rural (Ref)		0	
Urban	0.006 (0.026)	0.822	1.006
Education			
No education (ref)		0	
Primary	-0.123 (0.032)	0	0.884**
Secondary	-0.359 (0.031)	0	0.699**
Higher	-0.902 (0.062)	0	0.406**
Ideal number children			
No children (Ref)		0	
1 child	-0.039 (0.096)	0.681	0.961
2 children	-0.097 (0.07)	0.164	0.907
3 children	0.127 (0.072)	0.076	1.135
4 or more children	0.112 (0.07)	0.109	1.119
Treatment			
Control (ref)		0	
Treatment 1	0.202 (0.031)	0	1.224**
Treatment 2	0.439 (0.028)	0	1.552**

Constant	-1.859 (0.069)	0	0.156**
Sample size	96831		

Note: This table contains the outcome for the logit regression between the variable ‘emotional violence’ and the treatment and control variables for the whole sample. The Odds ratios of the varying countries, type of residence, educational level, ideal number of children and treatment group are listed along with respective p-values (* p<0.05, ** p<0.01).

Table 11: Logit regression results for the relationship between treatment and control variables and 'justified beating wife' for 13 countries

	B	Sig.	Exp(B)
Country			
India (ref)		0	
Afghanistan	1.478 (0.033)	0	4.386**
Armenia	-0.994 (0.075)	0	0.37**
Columbia	-2.571 (0.047)	0	0.076**
Ethiopia	0.526 (0.033)	0	1.692**
Myanmar	0.246 (0.044)	0	1.279**
Malawi	-1.713 (0.051)	0	0.18**
Mozambique	-1.72 (0.061)	0	0.179**
Nepal	-0.672 (0.051)	0	0.511**
Timor-Leste	1.371 (0.058)	0	3.939**
Tanzania	0.329 (0.057)	0	1.389**
South Africa	-2.469 (0.188)	0	0.085**
Zimbabwe	-0.331 (0.041)	0	0.718**
Place of residence			
Rural (ref)		0	
Urban	-0.259 (0.016)	0	0.772**
Education			
No education (ref)		0	
Primary	-0.075 (0.021)	0	0.928**
Secondary	-0.279 (0.019)	0	0.756**
Higher	-0.799 (0.033)	0	0.45**
Ideal number children			
No children (Ref)		0	
1 child	-0.301 (0.055)	0	0.74**
2 children	-0.288 (0.041)	0	0.75**
3 children	-0.14 (0.043)	0.001	0.87**
4 or more children	-0.046 (0.042)	0.279	0.955
Treatment			
Control (ref)		0	
Treatment 1	0.000 (0.021)	0.986	1
Treatment 2	0.106 (0.019)	0	1.112**
Constant	0.144 (0.041)	0	1.155**
Sample size	101449		

Note: This table contains the outcome for the logit regression between the variable 'justified beating wife for any reason' and the treatment and control variables for the whole sample. The Odds ratios of the varying countries, type of residence, educational level, ideal number of children and treatment group are listed along with respective p-values (* p<0.05, ** p<0.01).

Table 12: Logit regression results for the relationship between treatment and control variables and instances when partner drinks for 11 countries

	B	Sig.	Exp(B)
Country			
India (ref)		0	
Afghanistan	-4.609 (0.167)	0	0.01**
Armenia	1.474 (0.067)	0	4.365**
Ethiopia	-0.414 (0.051)	0	0.661**
Myanmar	0.679 (0.048)	0	1.972**
Malawi	-0.152 (0.044)	0.001	0.859**
Mozambique	0.419 (0.067)	0	1.521**
Nepal	0.668 (0.05)	0	1.951**
Tanzania	-0.209 (0.068)	0.002	0.812**
South Africa	0.492 (0.1)	0	1.636**
Zimbabwe	0.436 (0.044)	0	1.546**
Type of residence			
Rural (ref)		0	
Urban	-0.061 (0.021)	0.003	0.941**
Education			
No education (ref)		0	
Primary	0.016 (0.026)	0.546	1.016
Secondary	-0.214 (0.023)	0	0.808**
Higher	-0.526 (0.041)	0	0.591**
Ideal number children			
No children (ref)		0	
1 child	0.231 (0.073)	0.002	1.26**
2 children	0.236 (0.058)	0	1.267**
3 children	0.355 (0.059)	0	1.426**
4 or more children	0.297 (0.06)	0	1.345**
Treatment			
Control (ref)		0	
Treatment 1	0.139 (0.027)	0	1.149**
Treatment 2	0.225 (0.024)	0	1.252**
Constant	-0.96 (0.058)	0	0.383**
Sample size			88,396

Note: This table contains the outcome for the logit regression between the variable 'partner drinks' and the treatment and control variables for the whole sample. The Odds ratios of the varying countries, type of residence, educational level, ideal number of children and treatment group are listed along with respective p-values (* $p < 0.05$, ** $p < 0.01$).

Discussions

Using the results obtained from the overall and country-wise analysis, many useful conclusions can be drawn. The most important of these is the conclusion on the hypothesis being tested and it is clear to see from the overall analysis that the results obtained support the hypothesis. It can be observed that the probability of negative actions such as domestic violence or consumption of alcohol is highest amongst those families which have faced both pre- and post-birth child bereavement. Along with that, the control group has the lowest probabilities for such outcomes. Thus, it can be concluded that the hypothesis being tested can be accepted after the analysis.

The overall analysis also gives a good representation of which countries require support in which areas. For example, Afghanistan showed a high probability of physical violence, emotional violence and justification of beating the wife. This implies that compared to other countries, Afghanistan needs more support to reign in such situations and ensure safe family dynamics. When it comes to comparing rural and urban areas, urban areas have shown a lower probability of the outcomes occurring, clearly indicating that the rural areas of the majority of the countries are in the most need of need of support. Similarly, education leads to less instances of violence and alcohol consumption. Thus, access to education should be as widespread as possible so that people are aware of the various ways in which they can overcome such a diversity. Finally, the belief of the family regarding the ideal number of children to have also impacts the probabilities of the outcome. Hence, it is necessary that the governments of all countries pay focus to what policy they promote. For example, in India, many states follow the policy of promoting having maximum two children. Whilst this policy may not be aimed to improve family dynamics after child bereavement, it plays a big part in influencing people's expectations and ideals. Thus, using such policies to set the correct expectations can lead to a much better family dynamic if the family happens to face such a situation.

The country-wise analysis delves deeper into the problem and represents the short-comings of each country individually. Firstly, the analysis revealed that in a few countries, the impact of the treatment is opposite to what was anticipated, i.e., the probability of the outcome being tested is lower for treatment 1 versus treatment 2 (when both are being compared to the control group). This observation could be due to a multiple number of factors. If the country of Armenia is taken as an example, research has been conducted indicating that neonatal deaths account for over 75% of infant mortality (Hakobyan & Yepiskoposyan, 2010). Along with that, the healthcare system in Armenia does not have enough funds or facilities to completely control the infant mortality rates. Finally, due to cultural reasons, sex-selected abortions still remain prevalent in many areas of Armenia (Sargsyan et al., 2016). Due to these reasons, it might be the case that Armenian families have been accustomed to high post-birth infant mortality rate and thus are not affected by it as much as families from a first world country might be. The other countries which show contradictory results such as Timor-Leste and Nepal could be considered to be developing countries and may be facing similar problems leading to the obtained results. Secondly, some countries in the individual analysis showed extreme deviations in probability with the value sometimes being over two to three times that of the control. This might also be due to the high infant mortality rates. A United Nations report shows that many countries in Sub-Saharan Africa and South Asia have high child-mortality rates compared to the rest of the world (Hug et al., 2017). It is possible that due to such high mortality rates, the sample obtained from the DHS survey contains very few people in the control group. This skewness in the dataset might have led to the extreme observations. Finally, similar to the overall analysis, the country-wise analysis emphasises the importance of education, especially when it comes to awareness about alcohol consumption. Many studies have already established the negative relationship between educational attainment and alcohol consumption, especially when it comes to binge drinking (Rosoff et al., 2019). The results from this study only support the previous findings.

Limitations and possible improvements

This study suffers from a few drawbacks and limitations due to its niche nature. The first problem is that the variables obtained from the survey are likely to be contaminated with a bias since the questions were asked to the respondents in the proximity of their partner. Whilst the interviewers were sure to note if there were any interruptions in the interview

process, it is possible that the respondents may have given a biased answer just because the questions were personal in nature. Along with that, the analysis would have been much more valid if outcomes regarding the mental health of parents were available. However, it is important to note that datasets with such outcomes are few in number and that the DHS survey and dataset is one of the most reliable datasets which could have been used for such a study.

The second problem encountered was during the distribution of the sample between the three treatment groups (including control). Due to the very specific restrictions on the basis of which the distribution was to be made, it was likely for the sample to be too small. This is especially true for the sample of treatment 2 because there were very few families who have experienced only a pre-natal death. In order to bypass this problem, the treatment 2 group was made to include families who had faced at least one such pre-natal death as well as post-birth deaths. This increased the sample size drastically allowing for a more reliable analysis. However, if an analysis could be conducted where a large enough sample could be obtained of families who have only faced the death of one child post-birth versus families who have faced the death of only one child pre-birth, it would be a more valid and superior analysis.

The third problem faced was during the analysis section. When considering the relationship between child mortality and domestic violence, it is possible that a vicious cycle may be formed. This means that if a parent faces the loss of a child, the probability of them initiating domestic violence might increase. In turn, if the couple have another baby, it is possible that due to the harsh pre-existing parental dynamics, the baby might not grow to his/her full potential. This might lead to loss of life and further increase in instances of domestic violence, thus creating a vicious cycle. This study does not take this effect into account. However, it is possible to correct this mistake using the data already available in DHS datasets. A variable exists which represents the amount of time which has passed since the death of the child in question. If this variable can be controlled for, it will take into account the time which the parents had to adjust to the reality as well as to control their emotions. It will also take into account the time during which the parents engaged in domestic violence. If the outcome shows that a family whose child died a long time ago and who are engaging in domestic violence ever since end up losing their second child sooner compared to another family who

lost a child not too long ago and are less prone to domestic violence, it means that the domestic violence had a negative impact on the child's survival rate. Thus, inclusion of that variable as control will result in the analysis being more accurate and valid.

The final problem encountered was during the individual country analysis. Due to the large proportion of the final dataset being datapoints from India, the other countries are not as well represented. The sample size of these countries in the final dataset is small which lead to multiple insignificant results. With the current dataset, it is not possible to solve this issue, however, if another dataset exists which can provide more datapoints for these countries, the results can be made more valid.

Conclusion

To conclude, this study establishes the relation between death of a child and the change in parental dynamics. The results from the analysis show how this relationship differs based on when the death of the child occurred. The study also shows how the relationship can vary based on the country the family lives in, the level of educational attainment, the type of residence their house is located in as well as the ideal number of children according to the parents. The hypothesis assumed in the beginning of the study are proved true by the results of the analysis and many other inferences are drawn from these results in the discussion section. The findings of this research are aimed to help policy makers as well as individual families in realising how important it is to provide and obtain the best support system to overcome such dire situations. It is necessary that the government provides the right ecosystem for families to flourish and not fall back on undue activities such as consumption of alcohol or domestic violence when such a situation arises.

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Appendix

Table 9.a: Logit regression results for the relationship between treatment and control variables and physical violence for India

	B	Sig.	Exp (B)
Type of residence			
Rural (ref)		0	
Urban	.029 (.071)	.679	1.030
Education			
No education (ref)		.000	
Primary	-.280 (.088)	.002	.756**
Secondary	-.531 (.072)	.000	.588**
Higher	-1.299 (.179)	.000	.273**
Ideal number of children			
No children (ref)		.331	
1 child	.331 (.252)	.189	1.393
2 children	.315 (.199)	.114	1.370
3 children	.408 (.204)	.046	1.504*
4 or more children	.325 (.210)	.121	1.384
Treatment			
Control (ref)		.000	
Treatment 1	.254 (.087)	.003	1.289**
Treatment 2	.399 (.075)	.000	1.490**
Constant	-3.718 (.198)	.000	.024**

Note: This table contains the outcome for the logit regression between the variable 'Physical violence' and the treatment and control variables for the country of India. The Odds ratios of the varying type of residence, educational level, ideal number of children and treatment group are listed along with respective p-values (* p<0.05, ** p<0.01)

Table 9.b: Logit regression results for the relationship between treatment and control variables and physical violence for Afghanistan

	B	Sig.	Exp (B)
Type of residence			
Rural (ref)		0	
Urban	-.577 (.073)	.000	.562**
Education			
No education (ref)		.000	
Primary	-.254 (.119)	.032	.775*
Secondary	-.660 (.141)	.000	.517**
Higher	-1.122 (.388)	.001	.326**
Ideal number of children			
No children (ref)		.000	
1 child	.599 (.697)	.390	1.820
2 children	1.375 (.292)	.000	3.954**
3 children	.933 (.288)	.001	2.542**
4 or more children	.812 (.235)	.001	2.253**
Treatment			
Control (ref)		.128	
Treatment 1	.056 (.071)	.432	1.057
Treatment 2	.137 (.068)	.045	1.147
Constant	-1.593 (.235)	.000	.203

Note: This table contains the outcome for the logit regression between the variable 'Physical violence' and the treatment and control variables for the country of Afghanistan. The Odds ratios of the varying type of residence, educational level, ideal number of children and treatment group are listed along with respective p-values (* p<0.05, ** p<0.01).

Table 9.c: Logit regression results for the relationship between treatment and control variables and physical violence for Armenia

	B	Sig.	Exp (B)
Type of residence			
Rural (ref)		0	
Urban	-15.881 (1.475E3)	.991	.000
Education			
No education (ref)		0	
Primary		.993	
Secondary	16.167 (4.797E3)	.997	1.050E7
Higher	16.019 (4.797E3)	.997	9.056E6
Ideal number of children			
No children (ref)		1.000	
1 child	-15.899 (4.150E4)	1.000	.000
2 children	-15.155 (4.025E4)	1.000	.000
3 children	.396 (4.022E4)	1.000	1.485
4 or more children	.457 (4.022E4)	1.000	1.579
Treatment			
Control (ref)		.827	
Treatment 1	-16.105 (8.907E3)	.999	.000
Treatment 2	-.762 (1.237)	.538	.467
Constant	-20.579 (4.050E4)	1.000	.000

Table 1.c: This table contains the outcome for the logit regression between the variable 'Physical violence' and the treatment and control variables for the country of Armenia. The Odds ratios of the varying type of residence, educational level, ideal number of children and treatment group are listed along with respective p-values (* p<0.05, ** p<0.01).

Table 9.d: Logit regression results for the relationship between treatment and control variables and physical violence for Columbia.

	B	Sig.	Exp (B)
Type of residence			
Rural (ref)		0	
Urban	.085 (.064)	.183	1.089
Education			
No education (ref)		.000	
Primary	-.282 (.159)	.077	.754
Secondary	-.030 (.159)	.851	.970
Higher	-.401 (.169)	.018	.669*
Ideal number of children			
No children (ref)		.001	
1 child	-.146 (.163)	.371	.864
2 children	-.392 (.147)	.007	.675**
3 children	-.474 (.152)	.002	.622**
4 or more children	-.429 (.157)	.006	.651**
Treatment			
Control (ref)		.000	
Treatment 1	.160 (.120)	.181	1.174
Treatment 2	.320 (.063)	.000	1.377**
Constant	-1.394 (.207)	.000	.248**

Note: This table contains the outcome for the logit regression between the variable 'Physical violence' and the treatment and control variables for the country of Columbia. The Odds ratios of the varying type of residence, educational level, ideal number of children and treatment group are listed along with respective p-values (* p<0.05, ** p<0.01).

Table 9.d: Logit regression results for the relationship between treatment and control variables and physical violence for Ethiopia.

	B	Sig.	Exp (B)
Type of residence			
Rural (ref)		0	
Urban	-.199 (.473)	.674	.819
Education			
No education (ref)		.838	
Primary	-.172 (.338)	.611	.842
Secondary	-.668 (.784)	.394	.513
Higher	-17.183 (4.385E3)	.997	.000
Ideal number of children			
No children (ref)		.161	
1 child	-16.861 (1.004E4)	.999	.000
2 children	-16.928 (4.321E3)	.997	.000
3 children	1.291 (.732)	.078	3.635
4 or more children	.133 (.606)	.827	1.142
Treatment			
Control (ref)		.017	
Treatment 1	.820 (.294)	.005	2.271**
Treatment 2	.094 (.496)	.850	1.098
Constant	-4.074 (.602)	.000	.017**

Note: This table contains the outcome for the logit regression between the variable 'Physical violence' and the treatment and control variables for the country of Ethiopia. The Odds ratios of the varying type of residence, educational level, ideal number of children and treatment group are listed along with respective p-values (* p<0.05, ** p<0.01).

Table 9.e: Logit regression results for the relationship between treatment and control variables and physical violence for Myanmar.

	B	Sig.	Exp (B)
Type of residence			
Rural (ref)		0	
Urban	.239 (.463)	.606	1.270
Education			
No education (ref)		.689	
Primary	.772 (.639)	.227	2.165
Secondary	.645 (.713)	.365	1.907
Higher	-16.507 (3.554E3)	.996	.000
Ideal number of children			
No children (ref)		.156	
1 child	-.994 (.943)	.292	.370
2 children	-1.165 (.703)	.098	.312
3 children	-1.770 (.713)	.013	.170*
4 or more children	-1.435 (.686)	.037	.238*
Treatment			
Control (ref)		.199	
Treatment 1	.821 (.457)	.073	2.274
Treatment 2	.274 (.522)	.600	1.315
Constant	-3.634 (.833)	.000	.026**

Note: This table contains the outcome for the logit regression between the variable 'Physical violence' and the treatment and control variables for the country of Myanmar. The Odds ratios of the varying type of residence, educational level, ideal number of children and treatment group are listed along with respective p-values (* p<0.05, ** p<0.01).

Table 9.f: Logit regression results for the relationship between treatment and control variables and physical violence for Malawi.

	B	Sig.	Exp (B)
Type of residence			
Rural (ref)		0	
Urban	.296 (.302)	.327	1.345
Education			
No education (ref)		.496	
Primary	.216 (.368)	.556	1.242
Secondary	-.273 (.463)	.555	.761
Higher	-17.824 (5.423E3)	.997	.000
Ideal number of children			
No children (ref)		.109	
1 child	-18.239 (7.10E30)	.998	.000
2 children	-.151 (.658)	.819	.860
3 children	-.754 (.655)	.250	.471
4 or more children	-.917 (.617)	.137	.400
Treatment			
Control (ref)		.006	
Treatment 1	.171 (.314)	.585	1.187
Treatment 2	.898 (.281)	.001	2.455**
Constant	-3.225 (.680)	.000	.040**

Note: This table contains the outcome for the logit regression between the variable 'Physical violence' and the treatment and control variables for the country of Malawi. The Odds ratios of the varying type of residence, educational level, ideal number of children and treatment group are listed along with respective p-values (* p<0.05, ** p<0.01).

Table 9.g: Logit regression results for the relationship between treatment and control variables and physical violence for Mozambique.

	B	Sig.	Exp (B)
Type of residence			
Rural (ref)		0	
Urban	-.097 (.453)	.830	.907
Education			
No education (ref)		.392	
Primary	.945 (.567)	.096	2.572
Secondary	1.075 (.738)	.145	2.930
Higher	-16.682 (1.115E4)	.999	.000
Treatment			
Control (ref)		0	
Treatment 1	.880 (.765)	.250	2.411
Constant	-4.431 (.509)	.000	.012**

Note : This table contains the outcome for the logit regression between the variable 'Physical violence' and the treatment and control variables for the country of Mozambique. The Odds ratios of the varying type of residence, educational level, ideal number of children and treatment group are listed along with respective p-values (* p<0.05, ** p<0.01).

Table 9.h: Logit regression results for the relationship between treatment and control variables and physical violence for Nepal.

	B	Sig.	Exp (B)
Type of residence			
Rural (ref)		0	
Urban	.472 (.408)	.248	1.603
Education			
No education (ref)		.062	
Primary	-.475 (.480)	.322	.622
Secondary	-1.720 (.643)	.007	.179**
Higher	-17.867 (2.982E3)	.995	.000
Ideal number of children			
No children (ref)		.740	
1 child	18.049 (9.25E3)	.998	6.893E7
2 children	17.382 (9.25E3)	.999	3.540E7
3 children	16.978 (9.25E3)	.999	2.363E7
4 or more children	17.140 (9.25E3)	.999	2.778E7
Treatment			
Control (ref)		.443	
Treatment 1	.051 (.586)	.930	1.053
Treatment 2	.495 (.402)	.219	1.640
Constant	-21.323 (9.253E3)	.998	.000

Note: This table contains the outcome for the logit regression between the variable 'Physical violence' and the treatment and control variables for the country of Nepal. The Odds ratios of the varying type of residence, educational level, ideal number of children and treatment group are listed along with respective p-values (* p<0.05, ** p<0.01).

Table 9.i: Logit regression results for the relationship between treatment and control variables and physical violence for Tanzania.

	B	Sig.	Exp (B)
Type of residence			
Rural (ref)		0	
Urban	-.246 (.334)	.461	.782
Education			
No education (ref)		.344	
Primary	-.285 (.315)	.366	.752
Secondary	-1.072 (.590)	.069	.342
Higher	-18.414 (1.591E4)	.999	.000
Ideal number of children			
No children (ref)		1.000	
1 child	-18.363 (2.001E4)	.999	.000
2 children	-18.151 (7.712E3)	.998	.000
3 children	-.089 (1.128)	.937	.915
4 or more children	-.002 (1.052)	.999	.998
Treatment			
Control (ref)		.314	
Treatment 1	.358 (.322)	.265	1.431
Treatment 2	.439 (.327)	.179	1.551
Constant	-2.627 (1.084)	.015	.072*

Note: This table contains the outcome for the logit regression between the variable 'Physical violence' and the treatment and control variables for the country of Tanzania. The Odds ratios of the varying type of residence, educational level, ideal number of children and treatment group are listed along with respective p-values (* p<0.05, ** p<0.01).

Table 9.j: Logit regression results for the relationship between treatment and control variables and physical violence for South Africa.

	B	Sig.	Exp (B)
Type of residence			
Rural (ref)		0	
Urban	-15.990 (2.236E3)	.994	.000
Education			
No education (ref)		.859	
Primary	16.927 (9.120E3)	.999	2.245E7
Secondary	15.582 (9.120E3)	.999	5.848E6
Higher	.767 (1.002E4)	1.000	2.153
Ideal number of children			
No children (ref)		1.000	
1 child	.514 (1.125E4)	1.000	1.672
2 children	15.382 (8.646E3)	.999	4.788E6
3 children	-.129 (9.281E3)	1.000	.879
4 or more children	15.361 (8.646E3)	.999	4.691E6
Treatment			
Control (ref)		.599	
Treatment 1	-15.002 (4.828E3)	.998	.000
Treatment 2	1.560 (1.542)	.311	4.761
Constant	-35.770 (1.257E4)	.998	.000

Note: This table contains the outcome for the logit regression between the variable 'Physical violence' and the treatment and control variables for the country of South Africa. The Odds ratios of the varying type of residence, educational level, ideal number of children and treatment group are listed along with respective p-values (* p<0.05, ** p<0.01).

Table 9.k: Logit regression results for the relationship between treatment and control variables and physical violence for Zimbabwe.

	B	Sig.	Exp (B)
Type of residence			
Rural (ref)		0	
Urban	-.388 (.262)	.138	.678
Education			
No education (ref)		.558	
Primary	-.233 (1.043)	.823	.792
Secondary	-.155 (1.037)	.881	.857
Higher	-1.186 (1.262)	.347	.305
Ideal number of children			
No children (ref)		.406	
1 child	-.927 (1.451)	.523	.396
2 children	-.251 (1.079)	.816	.778
3 children	-.444 (1.067)	.678	.642
4 or more children	-.810 (1.046)	.439	.445
Treatment			
Control (ref)		.134	
Treatment 1	-.901 (.473)	.057	.406
Treatment 2	.110 (.296)	.711	1.116
Constant	-2.396 (1.461)	.101	.091

Note: This table contains the outcome for the logit regression between the variable 'Physical violence' and the treatment and control variables for the country of Zimbabwe. The Odds ratios of the varying type of residence, educational level, ideal number of children and treatment group are listed along with respective p-values (* p<0.05, ** p<0.01).

Table 10.a: Logit regression results for the relationship between treatment and control variables and emotional violence for India.

	B	Sig.	Exp(B)
Type of residence			
Rural (ref)		0	
Urban	-0.003 (0.035)	0.929	0.997
Education			
No education (ref)		0	
Primary	-0.111 (0.044)	0.011	0.895*
Secondary	-0.393 (0.036)	0	0.675**
Higher	-0.979 (0.079)	0	0.376**
Ideal number children			
No children (Ref)		0	
1 child	-0.315 (0.113)	0.005	0.73**
2 children	-0.283 (0.081)	0.001	0.753**
3 children	-0.012 (0.084)	0.889	0.988
4 or more children	-0.073 (0.087)	0.401	0.929
Treatment			
Control (ref)		0	
Treatment 1	0.196 (0.045)	0	1.217**
Treatment 2	0.5 (0.037)	0	1.648**
Constant	-1.684 (0.081)	0	0.186**

Note: This table contains the outcome for the logit regression between the variable 'Emotional violence' and the treatment and control variables for the country of India. The Odds ratios of the varying type of residence, educational level, ideal number of children and treatment group are listed along with respective p-values (* p<0.05, ** p<0.01).

Table 10.b: Logit regression results for the relationship between treatment and control variables and emotional violence for Afghanistan.

	B	Sig.	Exp(B)
Type of residence			
Rural (ref)		0	
Urban	-0.185 (0.065)	0.004	0.831**
Education			
No education (ref)		0	
Primary	-0.325 (0.122)	0.004	0.723**
Secondary	-0.402 (0.121)	0.001	0.669**
Higher	-0.698 (0.254)	0.006	0.497**
Ideal number of children			
No children (ref)		0	
1 child	0.376 (0.686)	0.583	1.457
2 children	1.024 (0.238)	0	2.784**
3 children	1.167 (0.271)	0	3.212**
4 or more children	0.929 (0.223)	0	2.533**
Treatment			
Control (ref)		0	
Treatment 1	0.205 (0.067)	0.002	1.227**
Treatment 2	0.37 (0.064)	0	1.448**
Constant	-1.601 (0.223)	0	0.202**

Table 2.b: This table contains the outcome for the logit regression between the variable 'Emotional violence' and the treatment and control variables for the country of Afghanistan. The Odds ratios of the varying type of residence, educational level, ideal number of children and treatment group are listed along with respective p-values (* p<0.05, ** p<0.01).

Table 10.c: Logit regression results for the relationship between treatment and control variables and physical violence for Armenia.

	B	Sig.	Exp(B)
Type of residence			
Rural (ref)			
Urban	-0.539 (0.214)	0.012	0.584*
Educational level			
No education (ref)		0.558	
Primary	0.36 (0.46)	0.434	1.433
Secondary	0.172 (0.474)	0.716	1.188
Ideal number of children			
No children (ref)		0.001	
1 child	20.942 (40190)	1	1.2E+09
2 children	18.769 (40190)	1	1.4E+08
3 children	18.753 (40190)	1	1.4E+08
4 or more children	19.344 (40190)	1	2.5E+08
Treatment			
Control (ref)		0.122	
Treatment 1	0.724 (0.669)	0.279	2.062
Treatment 2	0.393 (0.206)	0.057	1.481
Constant	-21.23 (40190)	1	0

Note: This table contains the outcome for the logit regression between the variable 'Emotional violence' and the treatment and control variables for the country of Armenia. The Odds ratios of the varying type of residence, educational level, ideal number of children and treatment group are listed along with respective p-values (* p<0.05, ** p<0.01).

Table 10.d: Logit regression results for the relationship between treatment and control variables and emotional violence for Ethiopia.

	B	Sig.	Exp(B)
Type of residence			
Rural (ref)			
Urban	-0.1 (0.152)	0.51	0.905
Education			
No education (ref)		0.406	
Primary	0.098 (0.117)	0.406	1.103
Secondary	-0.213 (0.23)	0.355	0.808
Higher	-0.301 (0.342)	0.378	0.74
Ideal number of children			
No children (ref)		0.491	
1 child	-0.234 (0.794)	0.768	0.791
2 children	0.237 (0.351)	0.501	1.267
3 children	0.52 (0.305)	0.088	1.682
4 or more children	0.196 (0.221)	0.376	1.216
Treatment			
Control (ref)		0	
Treatment 1	0.316 (0.117)	0.007	1.371**
Treatment 2	0.534 (0.152)	0	1.706**
Constant	-1.607 (0.218)	0	0.2**

Note: This table contains the outcome for the logit regression between the variable 'Emotional violence' and the treatment and control variables for the country of Ethiopia. The Odds ratios of the varying type of residence, educational level, ideal number of children and treatment group are listed along with respective p-values (* p<0.05, ** p<0.01)

Table 10.e: Logit regression results for the relationship between treatment and control variables and emotional violence for Myanmar.

	B	Sig.	Exp(B)
Type of residence			
Rural (ref)		0	
Urban	0.156 (0.17)	0.359	1.168
Education			
No education (ref)		0.875	
Primary	-0.05 (0.189)	0.79	0.951
Secondary	-0.086 (0.216)	0.69	0.917
Higher	-0.289 (0.352)	0.413	0.749
Ideal number of children			
No children (ref)		0.031	
1 child	0.582 (0.479)	0.224	1.79
2 child	-0.128 (0.432)	0.767	0.88
3 children	-0.02 (0.422)	0.962	0.98
4 or more children	0.309 (0.42)	0.462	1.362
Treatment			
Control (ref)		0.01	
Treatment 1	0.058 (0.191)	0.76	1.06
Treatment 2	0.493 (0.165)	0.003	1.638**
Constant	-1.974 (0.434)	0	0.139**

Note: This table contains the outcome for the logit regression between the variable 'Emotional violence' and the treatment and control variables for the country of Myanmar. The Odds ratios of the varying type of residence, educational level, ideal number of children and treatment group are listed along with respective p-values (* p<0.05, ** p<0.01).

Table 10.f: Logit regression results for the relationship between treatment and control variables and emotional violence for Malawi.

	B	Sig.	Exp(B)
Type of residence			
Rural (ref)		0	
Urban	0.222 (0.112)	0.048	1.249*
Education			
No education (ref)		0.01	
Primary	0.137 (0.127)	0.281	1.147
Secondary	-0.029 (0.157)	0.855	0.972
Higher	-1.467 (0.541)	0.007	0.231**
Ideal number of children			
No children (ref)		0.404	
1 child	0.535 (0.58)	0.356	1.708
2 children	0.68 (0.405)	0.093	1.974
3 children	0.761 (0.396)	0.055	2.14
4 or more children	0.729 (.388)	0.06	2.073
Treatment			
Control (ref)		0	
Treatment 1	0.337 (0.105)	0.001	1.4**
Treatment 2	0.416 (0.121)	0.001	1.516**
Constant	-1.989 (0.401)	0	0.137**

Note: This table contains the outcome for the logit regression between the variable 'Emotional violence' and the treatment and control variables for the country of Malawi. The Odds ratios of the varying type of residence, educational level, ideal number of children and treatment group are listed along with respective p-values (* p<0.05, ** p<0.01).

Table 10.g: Logit regression results for the relationship between treatment and control variables and emotional violence for Mozambique.

	B	Sig.	Exp(B)
Type of residence			
Rural (ref)		0	
Urban	0.274 (0.201)	0.174	1.315
Education			
No education (ref)		0.095	
Primary	0.418 (0.225)	0.064	1.519
Secondary	0.719 (0.301)	0.017	2.052**
Higher	0.873 (0.7)	0.212	2.395
Treatment			
Control (ref)		0	
Treatment 1	1.049 (0.395)	0.008	2.856**
Constant	-2.331 (0.191)	0	0.097**

Note: This table contains the outcome for the logit regression between the variable 'Emotional violence' and the treatment and control variables for the country of Mozambique. The Odds ratios of the varying type of residence, educational level, ideal number of children and treatment group are listed along with respective p-values (* p<0.05, ** p<0.01).

Table 10.h: Logit regression results for the relationship between treatment and control variables and emotional violence for Nepal.

	B	Sig.	Exp(B)
Type of residence			
Rural (ref)			
Urban	0.143 (0.154)	0.352	1.154
Education			
No education		0	
Primary	-0.01 (0.189)	0.957	0.99
Secondary	-0.718 (0.201)	0	0.488
Higher	-1.103 (0.336)	0.001	0.332**
Ideal number of children			
No children (ref)		0.683	
1 child	-0.348 (0.631)	0.582	0.706
2 children	-0.57 (0.581)	0.326	0.566
3 children	-0.71 (0.6)	0.237	0.492
4 or more children	-0.564 (0.64)	0.379	0.569
Treatment			
Control (ref)		0.069	
Treatment 1	-0.234 (0.25)	0.35	0.792
Treatment 2	0.286 (0.16)	0.074	1.331
Constant	-1.252 (0.596)	0.036	0.286*

Note: This table contains the outcome for the logit regression between the variable 'Emotional violence' and the treatment and control variables for the country of Nepal. The Odds ratios of the varying type of residence, educational level, ideal number of children and treatment group are listed along with respective p-values (* $p < 0.05$, ** $p < 0.01$).

Table 10.i: Logit regression results for the relationship between treatment and control variables and emotional violence for Tanzania.

	B	Sig.	Exp(B)
Type of residence			
Rural (Ref)			
Urban	-0.005 (0.153)	0.973	0.995
Education			
No education (ref)		0.009	
Primary	-0.278 (0.168)	0.099	0.758
Secondary	-0.809 (0.246)	0.001	0.445**
Higher	-1.274 (0.141)	0.264	0.28
Ideal number of children			
No children (ref)		0.12	
1 child	-21.12 (20050)	0.999	0
2 children	-1.179 (0.707)	0.095	0.308
3 children	-1.062 (0.541)	0.05	0.346*
4 or more children	-0.59 (0.504)	0.242	0.554
Treatment			
Control (ref)		0.101	
Treatment 1	-0.037 (0.169)	0.828	0.964
Treatment 2	0.334 (0.167)	0.045	1.396*
Constant	0.106 (0.523)	0.839	1.112

Note: This table contains the outcome for the logit regression between the variable 'Emotional violence' and the treatment and control variables for the country of Tanzania. The Odds ratios of the varying type of residence, educational level, ideal number of children and treatment group are listed along with respective p-values (* p<0.05, ** p<0.01).

Table 10.j: Logit regression results for the relationship between treatment and control variables and emotional violence for South Africa.

	B	Sig.	Exp(B)
Type of residence			
Rural (ref)			
Urban	-0.168 (0.294)	0.568	0.845
Education			
No education (ref)		0.672	
Primary	0.351 (0.865)	0.684	1.421
Secondary	0.04 (0.799)	0.96	1.041
Higher	-0.373 (0.895)	0.677	0.689
Ideal number of children			
No children (ref)		0.285	
1 child	-0.262 (0.902)	0.771	0.769
2 children	-0.089 (0.688)	0.897	0.915
3 children	-0.873 (.738)	0.237	0.418
4 or more children	-0.645 (0.692)	0.351	0.524
Treatment			
Control (ref)		0.277	
Treatment 1	0.436 (0.435)	0.316	1.547
Treatment 2	0.543 (0.386)	0.16	1.721
Constant	-1.461 (0.995)	0.142	0.232

Note: This table contains the outcome for the logit regression between the variable 'Emotional violence' and the treatment and control variables for the country of South Africa. The Odds ratios of the varying type of residence, educational level, ideal number of children and treatment group are listed along with respective p-values (* p<0.05, ** p<0.01).

Table 10.k: Logit regression results for the relationship between treatment and control variables and emotional violence for Zimbabwe.

	B	Sig.	Exp(B)
Type of residence			
Rural (ref)			
Urban	0.147 (0.095)	0.122	1.158
Education			
No education (ref)		0.003	
Primary	-0.116 (0.384)	0.763	0.891
Secondary	-0.228 (0.383)	0.551	0.796
Higher	-0.907 (0.428)	0.034	0.404*
Ideal number of children			
No children (ref)		0.526	
1 child	0.636 (0.65)	0.328	1.889
2 children	0.182 (0.594)	0.76	1.199
3 children	0.186 (0.589)	0.753	1.204
4 or more children	0.299 (0.582)	0.608	1.348
Treatment			
Control (ref)		0.062	
Treatment 1	0.14 (0.122)	0.25	1.15
Treatment 2	0.257 (0.114)	0.024	1.292*
Constant	-0.982 (0.693)	0.157	0.375

Note: This table contains the outcome for the logit regression between the variable ‘Emotional violence’ and the treatment and control variables for the country of Zimbabwe. The Odds ratios of the varying type of residence, educational level, ideal number of children and treatment group are listed along with respective p-values (* p<0.05, ** p<0.01).

Table 11.a: Logit regression results for the relationship between treatment and control variables and justified beating wife for India.

	B	Sig.	Exp (B)
Type of residence			
Rural (ref)		0	
Urban	-0.191 (0.02)	0	0.826**
Education			
No education (ref)		0	
Primary	-0.123 (0.026)	0	0.884**
Secondary	-0.234 (0.021)	0	0.792**
Higher	-0.691 (0.038)	0	0.501**
Ideal Number of Children			
No children (ref)		0	
1 child	-0.476 (0.063)	0	0.621**
2 children	-0.406 (0.047)	0	0.666**
3 children	-0.232 (0.05)	0	0.793**
4 or more children	-0.171 (0.051)	0.001	0.843**
Treatment			
Control (ref)		0	
Treatment 1	0.029 (0.027)	0.278	1.03
Treatment 2	0.107 (0.023)	0	1.113**
Constant	0.214 (0.048)	0	1.239**

Note: This table contains the outcome for the logit regression between the variable 'justified beating wife for any reason' and the treatment and control variables for the country of India. The Odds ratios of the varying type of residence, educational level, ideal number of children and treatment group are listed along with respective p-values (* p<0.05, ** p<0.01).

Table 11.b: Logit regression results for the relationship between treatment and control variables and justified beating wife for Afghanistan.

	B	Sig.	Exp (B)
Type of residence			
Rural (ref)		0	
Urban	-0.212 (0.065)	0.001	0.809**
Education			
No education (ref)		0	
Primary	-0.027 (0.112)	0.811	0.974
Secondary	-0.302 (0.112)	0.007	0.739**
Higher	-0.942 (0.196)	0	0.39**
Ideal number of children			
No children (ref)		0.003	
1 child	0.417 (0.594)	0.482	1.518
2 children	0.107 (0.238)	0.652	1.113
3 children	0.677 (0.242)	0.005	1.968**
4 or more children	0.526 (0.172)	0.002	1.691**
Treatment			
Control (ref)		0	
Treatment 1	-0.222 (0.07)	0.001	0.801**
Treatment 2	0.219 (0.074)	0.003	1.245**
Constant	1.072 (0.173)	0	2.922**

Note: This table contains the outcome for the logit regression between the variable 'justified beating wife for any reason' and the treatment and control variables for the country of Afghanistan. The Odds ratios of the varying type of residence, educational level, ideal number of children and treatment group are listed along with respective p-values (* p<0.05, ** p<0.01).

Table 11.c: Logit regression results for the relationship between treatment and control variables and justified beating wife for Armenia.

	B	Sig.	Exp (B)
Type of residence			
Rural (ref)		0	
Urban	-0.252 (0.153)	0.1	0.777
Education			
No education (ref)		0.006	
Primary	0.222 (0.316)	0.483	1.248
Secondary	-0.283 (.392)	0.39	0.753
Ideal number of children			
No children (ref)		0.356	
1 child	-22.993 (40150)	1	0
2 children	-23.328 (40150)	1	0
3 children	-23.007 (40150)	1	0
4 or more children	-23.014 (40150)	1	0
Treatment			
Control (ref)		0	
Treatment 1	-0.55 (0.761)	0.47	0.577
Treatment 2	0.124 (0.148)	0.404	1.132
Constant	21.614 (40150)	1	2437000000

Table 3.c: This table contains the outcome for the logit regression between the variable ‘justified beating wife for any reason’ and the treatment and control variables for the country of Armenia. The Odds ratios of the varying type of residence, educational level, ideal number of children and treatment group are listed along with respective p-values (* p<0.05, ** p<0.01).

Table 11.d: Logit regression results for the relationship between treatment and control variables and justified beating wife for Columbia.

	B	Sig.	Exp (B)
Type of residence			
Rural (ref)		0	
Urban	-0.666 (0.102)	0	0.514**
Education			
No education (ref)		0	
Primary	-0.74 (0.166)	0	0.477**
Secondary	-1.239 (0.179)	0	0.29**
Higher	-1.811 (0.227)	0	0.163**
Ideal number of children			
No children (ref)		0.219	
1 child	-0.148 (0.316)	0.64	0.863
2 children	-0.116 (0.278)	0.677	0.891
3 children	-0.013 (0.283)	0.962	0.987
4 or more children	0.16 (0.283)	0.572	1.173
Treatment			
Control (ref)		0.934	
Treatment 1	0.05 (0.172)	0.771	1.051
Treatment 2	0.03 (0.111)	0.785	1.031
Constant	-1.602 (0.307)	0	0.202**

Note: This table contains the outcome for the logit regression between the variable 'justified beating wife for any reason' and the treatment and control variables for the country of Columbia. The Odds ratios of the varying type of residence, educational level, ideal number of children and treatment group are listed along with respective p-values (* p<0.05, ** p<0.01).

Table 11.e: Logit regression results for the relationship between treatment and control variables and justified beating wife for Ethiopia.

	B	Sig.	Exp(B)
Type of residence			
Rural (ref)		0	
Urban	-0.906 (0.08)	0	0.404**
Education			
No education (ref)		0	
Primary	-0.151 (0.068)	0.027	0.86*
Secondary	-1.015 (0.127)	0	0.362**
Higher	-1.537 (0.187)	0	0.215**
Ideal number of children			
No children (ref)		0.083	
1 child	-0.932 (0.431)	0.031	0.394*
2 children	-0.358 (0.187)	0.056	0.699
3 children	-0.24 (0.181)	0.183	0.786
4 or more children	-0.113 (0.124)	0.36	0.893
Treatment			
Control (ref)		0.371	
Treatment 1	-0.063 (0.07)	0.367	0.939
Treatment 2	0.084 (0.097)	0.382	1.088
Constant	0.996 (0.123)	0	2.708**

Note: This table contains the outcome for the logit regression between the variable 'justified beating wife for any reason' and the treatment and control variables for the country of Ethiopia. The Odds ratios of the varying type of residence, educational level, ideal number of children and treatment group are listed along with respective p-values (* p<0.05, ** p<0.01).

Table 11.f: Logit regression results for the relationship between treatment and control variables and justified beating wife for Myanmar.

	B	Sig.	Exp (B)
Type of residence			
Rural (ref)		0	
Urban	-0.149 (0.107)	0.162	0.861
Education			
No education (ref)		0.001	
Primary	0.077 (0.125)	0.54	1.08
Secondary	-0.113 (0.14)	0.421	0.893
Higher	-0.672 (0.216)	0.002	0.511**
Ideal number of children			
No children (ref)		0.018	
1 child	0.639 (0.322)	0.047	1.894*
2 children	0.236 (0.271)	0.384	1.266
3 children	0.541 (0.267)	0.043	1.717*
4 or more children	0.355 (0.267)	0.184	1.426
Treatment			
Control (ref)		0.686	
Treatment 1	0.058 (0.123)	0.636	1.06
Treatment 2	0.096 (0.118)	0.417	1.101
Constant	-0.316 (0.275)	0.251	0.729

Note: This table contains the outcome for the logit regression between the variable 'justified beating wife for any reason' and the treatment and control variables for the country of Myanmar. The Odds ratios of the varying type of residence, educational level, ideal number of children and treatment group are listed along with respective p-values (* p<0.05, ** p<0.01).

Table 11.g: Logit regression results for the relationship between treatment and control variables and justified beating wife for Mozambique.

	B	Sig.	Exp (B)
Type of residence			
Rural (ref)		0	
Urban	0.268 (0.127)	0.034	1.307*
Education			
No education (ref)		0	
Primary	-0.233 (0.127)	0.067	0.792
Secondary	-0.909 (0.216)	0	0.403**
Higher	-2.189 (1.022)	0.032	0.112*
Treatment			
Control (ref)		0	
Treatment 1	0.375 (0.286)	0.189	1.455
Constant	-1.658 (0.102)	0	0.19**

Note: This table contains the outcome for the logit regression between the variable 'justified beating wife for any reason' and the treatment and control variables for the country of Mozambique. The Odds ratios of the varying type of residence, educational level, ideal number of children and treatment group are listed along with respective p-values (* p<0.05, ** p<0.01).

Table 11.h: Logit regression results for the relationship between treatment and control variables and justified beating wife for Malawi.

	B	Sig.	Exp (B)
Type of residence			
Rural (ref)		0	
Urban	-0.492 (0.155)	0.001	0.611**
Education			
No education (ref)		0.003	
Primary	0.123 (0.144)	0.392	1.131
Secondary	-0.305 (0.189)	0.107	0.737
Higher	-2.154 (1.022)	0.035	0.116*
Ideal number of children			
No children (ref)		0.737	
1 child	-0.306 (0.718)	0.67	0.736
2 children	0.218 (0.41)	0.595	1.244
3 children	0.026 (0.4)	0.949	1.026
4 or more children	0.161 (0.386)	0.677	1.174
Treatment			
Control (ref)		0.419	
Treatment 1	-0.162 (0.127)	0.204	0.851
Treatment 2	0.016 (0.148)	0.915	1.016
Constant	-1.845 (0.402)	0	0.158**

Note: This table contains the outcome for the logit regression between the variable 'justified beating wife for any reason' and the treatment and control variables for the country of Malawi. The Odds ratios of the varying type of residence, educational level, ideal number of children and treatment group are listed along with respective p-values (* p<0.05, ** p<0.01).

Table 11.i: Logit regression results for the relationship between treatment and control variables and justified beating wife for Nepal.

	B	Sig.	Exp (B)
Type of residence			
Rural (ref)		0	
Urban	0.034 (0.104)	0.743	1.035
Education			
No education (ref)		0.001	
Primary	0.213 (0.134)	0.113	1.237
Secondary	0.032 (0.128)	0.8	1.033
Higher	-0.664 (0.207)	0.001	0.515**
Ideal number of children			
No children (ref)		0.013	
1 child	-0.385 (0.467)	0.41	0.681
2 children	-0.646 (0.44)	0.142	0.524
3 children	-0.906 (0.452)	0.045	0.404*
4 or more children	-0.304 (0.473)	0.52	0.738
Treatment			
Control (ref)		0.875	
Treatment 1	-0.006 (0.16)	0.971	0.994
Treatment 2	0.055 (0.113)	0.624	1.057
Constant	-0.444 (0.448)	0.322	0.641

Note: This table contains the outcome for the logit regression between the variable 'justified beating wife for any reason' and the treatment and control variables for the country of Nepal. The Odds ratios of the varying type of residence, educational level, ideal number of children and treatment group are listed along with respective p-values (* p<0.05, ** p<0.01).

Table 11.j: Logit regression results for the relationship between treatment and control variables and justified beating wife for Timor-Leste.

	B	Sig.	Exp (B)
Type of residence			
Rural (ref)		0	
Urban	-0.144 (0.131)	0.271	0.866
Education			
No education (ref)		0.126	
Primary	-0.2 (0.155)	0.198	0.819
Secondary	0.158 (0.135)	0.242	1.171
Higher	0.104 (0.259)	0.688	1.11
Ideal number of children			
No children (ref)		0	
1 child	0.144 (0.477)	0.763	1.155
2 children	0.909 (0.29)	0.002	2.481**
3 children	1.041 (0.35)	0.003	2.831**
4 or more children	1.013 (0.168)	0	2.754**
Treatment			
Control (ref)		0.629	
Treatment 1	-0.027 (0.155)	0.86	0.973
Treatment 2	0.319 (0.342)	0.351	1.376
Constant	0.302 (0.18)	0.093	1.353

Note: This table contains the outcome for the logit regression between the variable 'justified beating wife for any reason' and the treatment and control variables for the country of Timor-Leste. The Odds ratios of the varying type of residence, educational level, ideal number of children and treatment group are listed along with respective p-values (* p<0.05, ** p<0.01).

Table 11.k: Logit regression results for the relationship between treatment and control variables and justified beating wife for Tanzania.

	B	Sig.	Exp (B)
Type of residence			
Rural (ref)		0	
Urban	-0.194 (0.129)	0.134	0.823
Education			
No education (ref)		0	
Primary	-0.082 (0.151)	0.587	0.921
Secondary	-1.131 (0.206)	0	0.323**
Higher	-21.657 (12100)	0.999	0
Ideal number of children			
No children (ref)		0.901	
1 child	0.449 (1.273)	0.725	1.566
2 children	-0.019 (0.648)	0.977	0.981
3 children	-0.301 (0.558)	0.589	0.74
4 or more children	-0.246 (0.535)	0.646	0.782
Treatment			
Control (ref)		0.646	
Treatment 1	0.129 (0.146)	0.378	1.137
Treatment 2	0.076 (0.147)	0.605	1.079
Constant	0.764 (0.55)	0.165	2.147

Note: This table contains the outcome for the logit regression between the variable 'justified beating wife for any reason' and the treatment and control variables for the country of Tanzania. The Odds ratios of the varying type of residence, educational level, ideal number of children and treatment group are listed along with respective p-values (* p<0.05, ** p<0.01).

Table 11.I: Logit regression results for the relationship between treatment and control variables and justified beating wife for South Africa.

	B	Sig.	Exp (B)
Type of residence			
Rural (ref)		0	
Urban	-0.22 (0.401)	0.583	0.802
Education			
No education (ref)		0.046	
Primary	-0.739 (0.705)	0.294	0.477
Secondary	-1.598 (0.63)	0.011	0.202*
Higher	- 19.681 (4591)	0.997	0
Ideal number of children			
No children (ref)		0.602	
1 child	0.17 (1.473)	0.908	1.186
2 children	0.02 (1.12)	0.986	1.02
3 children	-0.097 (1.168)	0.934	0.907
4 or more children	0.643 (1.076)	0.55	1.901
Treatment			
Control (ref)		0.374	
Treatment 1	-0.968 (0.768)	0.208	0.38
Treatment 2	-0.469 (0.641)	0.465	0.626
Constant	-1.46 (1.168)	0.211	0.232

Note: This table contains the outcome for the logit regression between the variable 'justified beating wife for any reason' and the treatment and control variables for the country of South Africa. The Odds ratios of the varying type of residence, educational level, ideal number of children and treatment group are listed along with respective p-values (* p<0.05, ** p<0.01).

Table 11.m: Logit regression results for the relationship between treatment and control variables and justified beating wife for Zimbabwe.

	B	Sig.	Exp (B)
Type of residence			
Rural (ref)		0	
Urban	-0.473 (0.088)	0	0.623**
Education			
No education (ref)		0	
Primary	-0.905 (0.367)	0.014	0.405*
Secondary	-1.44 (0.366)	0	0.237**
Higher	-3.163 (0.45)	0	0.042**
Ideal number of children			
No children (ref)		0.958	
1 child	0.212 (0.517)	0.682	1.236
2 children	-0.029 (0.451)	0.95	0.972
3 children	-0.012 (0.445)	0.979	0.988
4 or more children	0.002 (0.437)	0.997	1.002
Treatment			
Control (ref)		0.951	
Treatment 1	0 (0.112)	0.998	1
Treatment 2	0.033 (0.106)	0.755	1.034
Constant	0.896 (0.567)	0.114	2.449

Note: This table contains the outcome for the logit regression between the variable 'justified beating wife for any reason' and the treatment and control variables for the country of Zimbabwe. The Odds ratios of the varying type of residence, educational level, ideal number of children and treatment group are listed along with respective p-values (* p<0.05, ** p<0.01).

Table 12.a: Logit regression results for the relationship between treatment and control variables and instances when partner drinks for India.

	B	Sig.	Exp(B)
Type of residence			
Rural (ref)		0	
Urban	-0.137 (0.025)	0	0.872**
Education			
No education (ref)		0	
Primary	0.037 (0.032)	0.247	1.037
Secondary	-0.233 (0.026)	0	0.793**
Higher	-0.571 (0.047)	0	0.565**
Ideal number of children			
No children		0	
1 child	0.222 (0.081)	0.006	1.248*8
2 children	0.228 (0.064)	0	1.256**
3 children	0.338 (0.067)	0	1.402**
4 or more children	0.349 (0.069)	0	1.418**
Treatment			
Control (ref)		0	
Treatment 1	0.127 (0.033)	0	1.135**
Treatment 2	0.245 (0.028)	0	1.278**
Constant	-0.931 (0.064)	0	0.394**

Note: This table contains the outcome for the logit regression between the variable 'Partner drinks' and the treatment and control variables for the country of India. The Odds ratios of the varying type of residence, educational level, ideal number of children and treatment group are listed along with respective p-values (* p<0.05, ** p<0.01).

Table 12.b: Logit regression results for the relationship between treatment and control variables and instances when partner drinks for Afghanistan.

	B	Sig.	Exp(B)
Type of residence			
Rural (ref)		0	
Urban	0.335 (0.374)	0.371	1.398
Education			
No education (ref)		0.149	
Primary	0.933 (0.499)	0.062	2.542
Secondary	0.918 (0.553)	0.097	2.504
Higher	-15.793 (3862)	0.997	0
Ideal number of children			
No children (ref)		1	
1 child	-16.083 (9845)	0.999	0
2 children	-16.047 (3213)	0.996	0
3 children	-0.051 (1.427)	0.971	0.95
4 or more children	-0.094 (1.022)	0.927	0.911
Treatment			
Control (ref)		0.007	
Treatment 1	0.864 (0.432)	0.045	2.371*
Treatment 2	1.185 (0.382)	0.002	3.269**
Constant	-5.875 (1.053)	0	0.003**

Note: This table contains the outcome for the logit regression between the variable 'Partner drinks' and the treatment and control variables for the country of Afghanistan. The Odds ratios of the varying type of residence, educational level, ideal number of children and treatment group are listed along with respective p-values (* p<0.05, ** p<0.01).

Table 12.c: Logit regression results for the relationship between treatment and control variables and instances when partner drinks for Armenia.

	B	Sig.	Exp(B)
Type of residence			
Rural (ref)		0	
Urban	-0.163 (0.136)	0.232	0.85
Education			
No education (ref)		0.795	
Primary	-0.16 (0.299)	0.593	0.852
Secondary	-0.091 (0.303)	0.765	0.913
Ideal number of children			
No children (Ref)		0.777	
1 child	-20.122 (40240)	1	0
2 children	-20.593 (40240)	1	0
3 children	-20.431 (40240)	1	0
4 or more children	-20.551 (40240)	1	0
Treatment			
Control (ref)		0.008	
Treatment 1	0.432 (0.548)	0.431	1.54
Treatment 2	0.402 (0.13)	0.002	1.495**
Constant	21.055 (40240)	1	1.393E+09

Note: This table contains the outcome for the logit regression between the variable 'Partner drinks' and the treatment and control variables for the country of Armenia. The Odds ratios of the varying type of residence, educational level, ideal number of children and treatment group are listed along with respective p-values (* p<0.05, ** p<0.01).

Table 12.d: Logit regression results for the relationship between treatment and control variables and instances when partner drinks for Ethiopia.

	B	Sig.	Exp(B)
Type of residence			
Rural (ref)		0	
Urban	0.162 (0.137)	0.235	1.176
Education			
No education (ref)		0.014	
Primary	0.109 (0.113)	0.333	1.115
Secondary	0.153 (0.198)	0.44	1.166
Higher	0.843 (0.259)	0.001	2.322**
Ideal number of children			
No children (ref)		0.009	
1 child	0.856 (0.577)	0.138	2.353
2 children	0.17 (0.338)	0.614	1.186
3 children	0.939 (0.287)	0.001	2.558**
4 or more children	0.334 (0.218)	0.124	1.397
Treatment			
Control (ref)		0.32	
Treatment 1	-0.041 (0.116)	0.722	0.96
Treatment 2	0.203 (0.15)	0.176	1.225
Constant	-1.536 (0.215)	0	0.215**

Note: This table contains the outcome for the logit regression between the variable 'Partner drinks' and the treatment and control variables for the country of Ethiopia. The Odds ratios of the varying type of residence, educational level, ideal number of children and treatment group are listed along with respective p-values (* p<0.05, ** p<0.01).

Table 12.e: Logit regression results for the relationship between treatment and control variables and instances when partner drinks for Myanmar.

	B	Sig.	Exp(B)
Type of residence			
Rural (ref)		0	
Urban	0.031 (0.121)	0.798	1.031
Education			
No education (ref)		0.01	
Primary	0.067 (0.138)	0.625	1.069
Secondary	-0.27 (0.155)	0.082	0.763
Higher	-0.412 (0.237)	0.082	0.662
Ideal number of children			
No children (ref)		0.297	
1 child	-0.222 (0.342)	0.517	0.801
2 children	-0.08 (0.286)	0.779	0.923
3 children	0.049 (0.281)	0.861	1.05
4 or more children	0.155 (0.282)	0.583	1.167
Treatment			
Control (ref)		0.019	
Treatment 1	0.371 (0.134)	0.006	1.449**
Treatment 2	0.14 (0.128)	0.274	1.15
Constant	-0.089 (0.292)	0.762	0.915

Note: This table contains the outcome for the logit regression between the variable 'Partner drinks' and the treatment and control variables for the country of Myanmar. The Odds ratios of the varying type of residence, educational level, ideal number of children and treatment group are listed along with respective p-values (* p<0.05, ** p<0.01).

Table 12.f: Logit regression results for the relationship between treatment and control variables and instances when partner drinks for Malawi.

	B	Sig.	Exp(B)
Type of residence			
Rural (ref)		0	
Urban	0.211 (0.106)	0.046	1.2358
Education			
No education (ref)		0.142	
Primary	0.233 (0.124)	0.061	1.262
Secondary	0.247 (0.149)	0.098	1.28
Higher	-0.211 (0.35)	0.547	0.81
Ideal number of children			
No children		0.36	
1 child	0.146 (0.529)	0.782	1.157
2 children	0.454 (0.35)	0.195	1.574
3 children	0.551 (0.341)	0.106	1.735
4 or more children	0.406 (0.333)	0.224	1.5
Treatment			
Control (ref)		0	
Treatment 1	0.243 (0.102)	0.017	1.276*
Treatment 2	0.415 (0.116)	0	1.514**
Constant	-1.581 (0.347)	0	0.206**

Table 4.f: This table contains the outcome for the logit regression between the variable 'Partner drinks' and the treatment and control variables for the country of Malawi. The Odds ratios of the varying type of residence, educational level, ideal number of children and treatment group are listed along with respective p-values (* p<0.05, ** p<0.01).

Table 12.g: Logit regression results for the relationship between treatment and control variables and instances when partner drinks for Mozambique.

	B	Sig.	Exp(B)
Type of residence			
Rural (ref)		0	
Urban	0.263 (0.143)	0.067	1.3
Education			
No education (ref)		0.082	
Primary	-0.054 (0.143)	0.708	0.948
Secondary	0.428 (0.216)	0.047	1.534*
Higher	-0.287 (0.591)	0.627	0.75
Treatment			
Control (ref)			
group(1)	0.18 (0.358)	0.616	1.197
Constant	-0.426 (0.114)	0	0.653**

Note: This table contains the outcome for the logit regression between the variable 'Partner drinks' and the treatment and control variables for the country of Mozambique. The Odds ratios of the varying type of residence, educational level, ideal number of children and treatment group are listed along with respective p-values (* p<0.05, ** p<0.01).

Table 12.h: Logit regression results for the relationship between treatment and control variables and instances when partner drinks for Nepal.

	B	Sig.	Exp(B)
Type of residence			
Rural (ref)		0	
Urban	-0.046 (0.102)	0.65	0.955
Education			
No education (ref)		0	
Primary	-0.055 (0.138)	0.692	0.947
Secondary	-0.378 (0.126)	0.003	0.685**
Higher	-0.939 (0.184)	0	0.391**
Ideal number of children			
No children		0.002	
1 child	1.293 (0.596)	0.03	3.643*
2 children	1.375 (0.572)	0.016	3.954*
3 children	1.078 (0.581)	0.064	2.937
4 children	0.732 (0.605)	0.226	2.079
Treatment			
Control (ref)		0.975	
Treatment 1	0.036 (0.161)	0.823	1.037
Treatment 2	0.005 (0.112)	0.967	1.005
Constant	-1.134 (0.579)	0.05	0.322*

Note: This table contains the outcome for the logit regression between the variable 'Partner drinks' and the treatment and control variables for the country of Nepal. The Odds ratios of the varying type of residence, educational level, ideal number of children and treatment group are listed along with respective p-values (* p<0.05, ** p<0.01).

Table 12.i: Logit regression results for the relationship between treatment and control variables and instances when partner drinks for Tanzania.

	B	Sig.	Exp(B)
Type of residence			
Rural (ref)		0	
Urban	-0.041 (0.156)	0.793	0.96
Education			
No education		0	
Primary	-0.07 (0.172)	0.685	0.933
Secondary	-1.131 (0.275)	0	0.323**
Higher	-20.617 (16210)	0.999	0
Ideal number of children			
No children (ref)		0.372	
1 child	0.453 (1.134)	0.689	1.574
2 children	-0.947 (0.766)	0.217	0.388
3 children	-0.051 (0.563)	0.928	0.951
4 or more children	-0.338 (0.534)	0.527	0.714
Treatment			
Control (ref)		0.106	
Treatment 1	0.297 (0.166)	0.073	1.346
Treatment 2	0.266 (0.17)	0.118	1.304
Constant	-0.44 (0.552)	0.426	0.644

Note: This table contains the outcome for the logit regression between the variable 'Partner drinks' and the treatment and control variables for the country of Tanzania. The Odds ratios of the varying type of residence, educational level, ideal number of children and treatment group are listed along with respective p-values (* p<0.05, ** p<0.01).

Table 12.j: Logit regression results for the relationship between treatment and control variables and instances when partner drinks for South Africa.

	B	Sig.	Exp(B)
Type of residence			
Rural (ref)			
Urban	-0.005 (0.209)	0.98	0.995
Education			
No education (Ref)		0.456	
Primary	0.413 (0.647)	0.524	1.511
Secondary	0.148 (0.587)	0.8	1.16
Higher	-0.229 (0.637)	0.719	0.795
Ideal number of children			
No children (Ref)		0.004	
1 child	0.099 (0.679)	0.884	1.104
2 children	0.002 (0.539)	0.998	1.002
3 children	0.396 (0.548)	0.47	1.486
4 or more children	-0.618 (0.537)	0.25	0.539
Treatment			
Control (ref)		0.66	
Treatment 1	0.278 (0.328)	0.397	1.32
Treatment 2	-0.066 (0.302)	0.827	0.936
Constant	-0.416 (0.754)	0.581	0.659

Note: This table contains the outcome for the logit regression between the variable 'Partner drinks' and the treatment and control variables for the country of South Africa. The Odds ratios of the varying type of residence, educational level, ideal number of children and treatment group are listed along with respective p-values (* p<0.05, ** p<0.01).

Table 12.k: Logit regression results for the relationship between treatment and control variables and instances when partner drinks for Zimbabwe.

	B	Sig.	Exp(B)
Type of residence			
Rural (Ref)			
Urban	0.105 (0.089)	0.237	1.111
Education			
No education (ref)		0.005	
Primary	-0.683 (0.372)	0.066	0.505
Secondary	-0.708 (0.37)	0.056	0.493
Higher	-1.212 (0.405)	0.003	0.298**
Ideal number of children			
No children (ref)		0.163	
1 child	0.995 (0.611)	0.103	2.704
2 children	0.533 (0.553)	0.335	1.704
3 children	0.377 (0.549)	0.492	1.458
4 or more children	0.372 (0.543)	0.492	1.451
Treatment			
Control (ref)		0.607	
Treatment 1	0.114 (0.115)	0.322	1.121
Treatment 2	0.006 (0.11)	0.954	1.006
Constant	-0.096 (0.654)	0.883	0.908

Note: This table contains the outcome for the logit regression between the variable 'Partner drinks' and the treatment and control variables for the country of Zimbabwe. The Odds ratios of the varying type of residence, educational level, ideal number of children and treatment group are listed along with respective p-values (* p<0.05, ** p<0.01).