Women Officers, Gender Violence and Human Capital: Evidence from Women's Justice Centers in Peru

Guadalupe Kavanaugh, Maria Micaela Sviatschi, Iva Trako

Women Officers, Gender Violence and Human Capital: Evidence from Women's Justice Centers in Peru

Guadalupe Kavanaugh
Maria Micaela Sviatschi
Iva Trako

Women Officers, Gender Violence and Human Capital:

Evidence from Women's Justice Centers in Peru[*]

Guadalupe Kavanaugh[†]   Maria Micaela Sviatschi[‡]   Iva Trako[§]

July 3, 2018

Abstract

Many developing countries have unequal access to justice, especially for women. What are the implications for gender-based violence, intra-household bargaining and investments in children? This paper provides quasi-experimental evidence on all-women's justice centers (WJCs) a community based approach aimed at reducing violence against women in Peru. WJCs are specialized institutions that mostly employ female officers and whose main purpose is to reduce gender-based violence by providing police and legal services. We examine the gradual rollout of these centers and using complaint police data we find that as victims trust women officers more, they increase the reporting of gender-specific crimes by 40%. We also find evidence that this led to the deterrence of gender-based violence: using administrative non-reported data from health providers and district attorney offices, we find a 10% reduction in domestic violence, female deaths due to aggression, femicides and mental health problems with no effects for men and non-gender specific crimes. We argue that these results are driven by an increase in women representation in law and enforcement at the WJCs. Moreover, we find inter-generational effects: WJCs substantially increase human capital investments in children, increasing enrollment, attendance, test scores, while decreasing child labor. These results are consistent with a bargaining model in which the threat point is determined by women representation in law and enforcement. In sum, the evidence in this paper implies that providing access to justice for women is not only important for addressing gender-based violence, but also generates inter-generational benefits.

JEL Classification: J12, J16, I25, K38
Keywords: gender-based violence, access to justice, children, household bargaining

---

[†]Rutgers University, `gekavanaugh@gmail.com`

[‡]Princeton University, Department of Economics, `msviatschi@princeton.edu`

[§]Paris School of Economics and World Bank, `iva.trako@psemail.eu`

1   Introduction

Female representation in politics has been increasing in the last decades and has shown to have positive effects on public goods provision preferred by women and reducing gender gaps (Chattopadhyay and Duflo, 2004; Beaman et al., 2009). However, there are still very few women in male-dominated occupations such as, in law and enforcement which could explain the high rate of under-reporting for gender-based violence and low conviction rates for crimes against women. Women are often unable to seek justice for domestic violence or receive equitable treatment during a divorce (Duflo, 2012; Revilla, 1999). Evidence from India finds that only 3% of women have ever had contact with the police, even though violence is quite high (Banerjee et al., 2012). Women may not trust formal institutions enough to report violence given that police regularly ignore gender-based violence complaints (e.g. Jubb et al., 2010; Boesten, 2012).[1]

At the same time, gender-based violence remains a worldwide social problem, affecting 30% of women each year (WHO, 2013) and having long-term consequences for their children.[2] Research and policy in this area has mainly focused on addressing these issues through economically empowering women, but in some cases this can actually increase gender-based violence (e.g. Bobonis, González-Brenes and Castro, 2013).[3] A potential explanation for this is the fact that deterrence of crimes committed against women may be perceived to be low, allowing perpetrators to threaten violence without repercussions. In other words, when civic participation and access to justice for women are low, women cannot rely on the justice system as a credible threat to prevent violence.

In this paper, we examine whether improving access to justice and representation of women in law enforcement reduce gender-based violence and consequently improves children's outcomes in Peru. We exploit the impact of an innovative form of access to justice and law enforcement: all-women justice centers (WJC). WJC are specialized institutions that mostly employ female officers and whose main purpose is to reduce gender-based violence by providing police, legal

---

[1]For example, in cases of family violence in rural Peruvian communities, women are often assumed to have a certain level of blame in a conflict (Revilla, 1999). In many cases, police ignores domestic violence complaints, saying that "domestic disputes" are not a police matter. Moreover, traditional methods of justice based on local customs also are often discriminatory towards women and rarely impartial (Franco and González, 2009).

[2]Women who suffer from abusive in the household are more likely to report physical, mental, sexual and reproductive health problems (Campbell, 2002). Domestic violence may also limit their ability to take care of children. A growing literature on domestic violence finds that childhood exposure to domestic violence is associated with a number of emotional and behavioral problems (e.g. Pollak, 2004; Carlson, 2000; Huth-Bocks, Levendosky and Semel, 2001; Koenen et al., 2003; Carrell and Hoekstra, 2010).

[3]On the one hand, employment opportunities such as conditional cash transfers or access to welfare services may empower women by increasing their resources within the household; improve their outside options and bargaining status in their relationships; and decrease their exposure to violence (Farmer and Tiefenthaler, 1996; Stevenson and Wolfers, 2006; Aizer, 2010; Hidrobo and Fernald, 2013). On the other hand, an increase in the resources available to women may strengthen the incentives of men to use violence or threats of violence in order to control these newly obtained resources or to regain decision-making power within the household. As a result, women may become more vulnerable to mistreatment (Bobonis, González-Brenes and Castro, 2013; Eswaran and Malhotra, 2011; Bloch, Rao and Desai, 2004).

and medical services. Basically, incoming victims receive a service designed to integrate all steps of the complaint process (e.g. police station, attorney's office and medical doctor) in a single office. Even though WJC centers are one such intervention that has been gaining popularity in developing countries, little attention has been paid to the actual effectiveness of such centers.[4]

How can all-women justice centers change gender-based violence? WJCs may deter gender-based violence via two mechanisms. First, WJCs by improving women bureaucratic representation in law enforcement, they may increase the likelihood that other women approach the police and other government institutions.[5] Second, WJCs are likely to affect the quality of service provision and effectiveness if female officers are better at handling gender-specific crimes. For example, Chattopadhyay and Duflo (2004) find that gender mandates for political representation in India increased spending preferred by women. In the same way, female officers may be more responsive to gender-based violence crimes by being more sensitive with the challenges female victims face when initiating a complaint for gender violence. According to qualitative evidence in the US, women police officers are more likely to be engaged in domestic violence cases (Bureau of Justice, 2000). In addition, women are also known to be less corrupt, less violent, have more pro-social traits and better interpersonal skills (Brollo and Troiano, 2016; Schacht, Rauch and Mulder, 2014; Eckel and Grossman, 2008; Nowell and Tinkler, 1994) which can improve how they handle gender-based violence once in office. These differences in preferences, traits, or in sensitivity toward gender-based violence, can be translated into women's differential behavior as police officers.

This paper asks two questions regarding the relationship between women access to justice, gender-based violence and human capital investments. First, we ask whether all-women justice centers improve the deterrence of gender-based violence. We measure gender-based violence using administrative non-reported data from hospitals and district attorneys on femicides, female injuries due to aggression, and mental health; and self-reported domestic violence from household surveys. Second, we examine the intergenerational effects, focusing on investments in children's human capital. This provides insight into whether household investments in children become more aligned with women's preferences when violence against women declines. In particular, whether these effects are consistent with a bargaining model in which the threat point is determined by access to justice.

To isolate causal channels, we exploit the gradual rollout of WJC across Peru during the period 2006-2014. Violence against women is particularly important in Peru where 72.4% of women are victims, placing the country as the third country in the world with the highest rate of intimate partner violence.[6] As a response to this endemic problem in the country, the

---

[4]This type of intervention has been implemented in Brazil, El Salvador, Argentina, Ghana, India, Mexico, Brazil, Ecuador, Uganda and South Africa.

[5]Female victims may feel more confident to talk to women officers and thus report more. Relatedly, Iyer et al. (2012) find that as women increase their representation in politics victims report crimes against women more.

[6]This rate is well above the global average of 33% and places the country just after Ethiopia and Bangladesh.

Peruvian Ministry for Women and Vulnerable Populations decided to create the WJC in 1999 as part of the National Program against Sexual and Family Violence. During the period of analysis, the number of WJCs has grown from 13 in the first year to 226 by the end of 2014, covering 100% of the 24 regions of Peru and 96% of the provinces.

Given this setting, we use a difference-in-differences strategy which exploits variation created by the differential timing in the opening of the WJCs and spatial variation in the exposure of a school/household to a WJC center, together with province-by-year fixed effects. We geo-match schools and households with detailed data on WJC's locations and founding years in order to construct two different measures of exposure to the WJC center: presence of WJC center within 1 kilometer from the household/school and presence of a WJC center in household's/school's district. This empirical strategy allows us to compare changes in outcomes of households, including women and their children, and schools already residing in the proximity of a WJC center ("treatment households/schools") to those not yet reached by the program ("control households/schools").

To observe these sources of variation, we build a detailed panel using multiple geo-coded datasets during the period 2006-2016: individual and household-level survey data, administrative school level data and administrative data on WJC centers, crimes, femicides, female mortality due to aggression and female hospitalizations for mental health problems which allow us to analyze the effects at a very disaggregated level before and after the opening of the WJCs. Moreover, since large part of our data comes from non-reported administrative records we can disentangle the effects from reporting bias which is usually present in crime data.

Our first finding is that improving access to justice for women reduces domestic violence, femicides, female deaths due to aggression and improves mental and physical health. In particular, we find that after the opening women who reside in the proximity of a WJC center are significantly less likely to suffer from physical and emotional violence by their spouse. At the same time, the presence of a WJC center in the district is associated with 7% reduction in the number of femicides and female deaths due to aggression. Moreover, we find evidence that mental health hospitalizations decline by 10%. We find no effects for men and no effect on non-gender specific crimes such as economic crimes, suggesting that there is no overall improvement in law and enforcement conditions or policy changes other than WJCs driving our results.

We also shed light on the mechanisms behind the reduction on gender violence. We find some evidence that after the WJC opened, women are 40% more likely to utilize formal institutions in cases of violence, suggesting an increase in trust in state institution. Moreover, gender-based violence complaints to the police increase by 35% in the areas where a WJC opened, suggesting that women report more these type of crimes after the introduction of women officers. This is consistent with a 2015 qualitative survey showing that 75% of women who went to a WJC issued a police complaint versus 10% of women who went to traditional police station. Finally,

---

The rate of female homicides committed by the intimate-partner is of 94 homicides per year.

the fact that we find a reduction only on the incidence of violence against women and no effect on the same outcomes for men suggests that WJC may increase the effectiveness on deterring gender-based violence ruling out other mechanisms such as an improvement in police presence in these areas. Overall, these results suggest that easier access to justice for women may generate a credible threat to offenders through greater reporting, criminal penalties or issuing retraining orders on gender-based violence cases.[7]

Our second main finding is that the impact of WJCs is not limited to the direct recipients of gender-based violence. After the opening of a WJC, children living in household's located near a WJC center are significantly more likely to be enroll and attend school, to pass a grade, have better national test scores and less likely to drop out of school. These results are robust to using different datasets measuring schooling outcomes. Consistent with the education results, we also find that young girls are less likely to be working after the opening of the WJC centers.[8]

The next focus of this paper is to examine the mechanisms driving the results on children. Access to justice may allow women to credibly threaten to involve police or decrease the incentive for offenders to use violence given the higher probability of criminal penalties. Several economic theories of household bargaining power suggest that policies aimed at increasing women's outside options when in an abusive relationship may also affect within-household distribution through changes in their relative bargaining positions (Farmer and Tiefenthaler, 1996; McElroy and Horney, 1981; Manser and Brown, 1980). For instance, economic empowerment of women is often considered a major tool in the fight against intimate partner violence. Similarly, women's threat point increases when they have access to justice and when support services are more helpful.

Consistent with this mechanism, we find suggestive evidence of an improvement in the bargaining power of women in the household. In particular, we find that women living near a WJC center are more likely to make joint decisions with their husband. Moreover we find that the main results for children are driven by potential violent households, suggesting that WJC's intervention in households with abuse may change the behavior of offenders and victims by improving the situation of the woman within the household and, consequently, their ability to take care for their children. This mechanism may operate by changing women bargaining power within the household and also by improving their health since now they are exposed to less violence. While we cannot disentangle both effects, we find evidence that both mechanisms may

---

[7]While there could be an incapacitation effect by arresting and punishing offenders, we can't test this mechanisms given that arrest data is not available. Nevertheless, we use administrative incarceration data and we find no effect on the number of people in jail due to gender-based crimes. Given this evidence, it is possible that most of the effects may be driven by deterrence effects.

[8]These results are in line with previous research in developed countries showing that children exposed to domestic violence are associated with a number of health, emotional and behavioural problems and also diminishing academic performance. See Edleson (1999); Wolfe et al. (2003); Pollak (2004); Fantuzzo et al. (1997); Koenen et al. (2003); Holt, Buckley and Whelan (2008); Baldry (2003); Carlson (2000); Currie (2006); Black, Sussman and Unger (2010); Aizer (2011). For evidence on the role of domestic violence on children's health outcomes in Latin America see Agüero (2013).

be important.

The main threat to our identification strategy is time-varying unobservables that are correlated to both the timing of the WJC center introduction and changes in the prevalence of domestic violence and education outcomes. To ensure that our results are not driven by selection or time-varying unobservables, we perform several falsification exercises and robustness checks. First, in order to control for the nonrandom placement of the WJC centers, we also include a province-by-year fixed effect which controls for any characteristics that may vary at the province and year level. By using province-by-year fixed effects, our identification assumption is that treatment schools/households would otherwise have changed similarly, on average, to control schools/households within their same province. Second, we focus our analysis in the middle of the rollout period for which identifying assumptions are likely to hold. In particular, we show that schools/households reached by the WJC centers from 2006 till 2014 had similar pre-program trends. Third, we show that WJC center placement was not anticipated by changes in gender-based violence and schooling.[9] Lastly, we limit the samples to areas most comparable to the those with WJC center presence: urban schools and urban clusters of households, since the WJC centers were more likely to be located in more densely populated areas. We further examine the results by limiting the sample to districts which ever had a WJC center.

To the best of our knowledge, this is the first quantitative analysis that attempts to explore the impact of an unexamined dimension of institutional intervention, which provides better access to justice for women, on the incidence of gender-based violence against women and its spillover effects on children's human capital. This study contributes to the literature on gender, crime and development by providing a new insight on violence against women, women's empowerment in developing countries and its indirect effect on children's educational outcomes.

This paper is related to the literature on minorities representation in politics and public good provision (Chattopadhyay and Duflo, 2004; Pande, 2003; Clots-Figueras, 2012; Brollo and Troiano, 2016; Beaman et al., 2009). We complement this literature by providing evidence on the role of female representation in another sphere: law and enforcement, which may be particularly important to reduce crimes against women. In this regard, this paper is closely related to two contemporaneous working papers exploring the effect of police stations run by women in India and the US (Miller and Segal, 2016; Amaral, Nishith and Bhalotra, 2018). Both papers find that as female representation increases among police officers in an area, violent crimes against women in that area are reported to the police at significantly higher rates. While these papers mainly focus on whether there is change in reporting gender-based violence. We complement this research by also showing that actual violence against women decline using non-reported measures of violence. Moreover, we take step further and provide evidence that children's

---

[9]A central issue in our analysis in the fact that WJC centers are not placed randomly. Conversations with policymakers and WJC center managers suggest they choose where to locate primarily based on population density, the level of infrastructure and proximity to several institutions, but there was no mention of locating based on anticipated increases in violence and schooling or previous years increases.

outcomes improve. Finally, while these papers focus on the effect of the share of women at the police station, we study a more integral approach which increases women representation in law and enforcement in all the stages of a complaint process.[10]

This paper is also related to the economics of crime literature analyzing the role of police deployment to deter crimes. Di Tella and Schargrodsky (2004) and Draca, Machin and Witt (2011) find a reduction on crime when focusing on exogenous increases in the supply of police in specific areas in the wake of terrorist attacks. In the same line, Mello (2016) and Machin and Marie (2011) reach the same conclusion when looking at the effect of extra resources to certain police-force areas. There is also evidence that hot spot police patrolling can deter crime (Blattman et al., 2017). We complement this literature by focusing on gender-based violence where the is very little evidence regarding the role of police management on how to prevent it.

Finally, this paper complements previous literature showing that an increase in women's income appear to benefit children (Bobonis, 2009; Attanasio and Lechene, 2002; Thomas, 1990; Lundberg, Pollak and Wales, 1997).[11] While in this case we do not find a change in women's income or labor force participation, when justice for women increases and thus, gender-based violence decline, women are more likely to invest on children. This is in line with previous evidence in Latin America showing that as violence against women decline children's outcomes improve (Agüero, 2013).

The remainder of this paper is organized as follows. Section 2 presents a brief background on the prevalence of domestic violence in Peru and on the WJC center intervention. Section 3 describes the data. Section 4 presents the empirical strategy. Section 5 presents the main results. Section 6 investigates the channels through which WJC center introduction affects domestic violence and schooling. Section 7 provides supporting evidence consistent with the identification assumptions. Section 8 concludes.

2 Background

2.1 Gender-based violence in Peru

Gender-based violence is currently one of the most pressing social problems in Latin America and the Caribbean. Even though the region has received much attention on conflict, crime, political and economic instability, it is easily overlooked that violence against women is among the most pervasive types of violence in the region (Fregoso and Bejarano, 2009; Heinemann and Verner, 2006; Londoño et al., 2000).

Among the Latin American countries, Peru has gained a considerable amount of attention in recent years, largely due to the high prevalence and severity of gender-based violence in this

---

[10]Having a more integral approach that combines all services in one office can be particularly important given that most victims do not follow up the case after visiting the police.

[11]Most of this literature finds that households in which women's income share is higher spend a larger fraction of their income on children's clothing and food.

country. According to a study carried out in 10 countries by the World Health Organization in 2006, the prevalence of physical violence by a male partner ranges from 13% in Japan's urban regions to 61% in rural areas of Peru and 49% in urban areas of Peru (Garcia-Moreno et al., 2006; Morrison, Orlando and Pizzolitto, 2007). Flake and Forste (2006) study the relationship between household characteristics and the likelihood of experiencing gender-based violence in Colombia, Dominican Republic, Haiti, Nicaragua and Peru. They find that although the prevalence of gender-based violence is high in all five countries, Peru had the highest percentage of instances at 38.9% followed by Nicaragua (26.1%), Dominican Republic (22.6%), Colombia (19%) and then Haiti (15.7%). Data collected by *Instituto Nacional de Estadistica e Informatica* (INEI) through the Demographic Health Surveys have found that although the prevalence of violence (physical and/or sexual) affecting women has declined from 41.2% to 32.6% from 2000 to 2015, it still remains quite high (INEI, 2001, 2015). All this evidence suggests that Peru is very high on the world ranking of registered cases of domestic violence and among the leaders in Latin America in terms of prevalence of violence against women.

While the majority of intimate partner violence is perpetrated within the domestic sphere, Peru's institutions also have a reputation for gender-based violence, including sexual violence. For many decades, women in Peru have been subject to abuse- even by the one entity supposed to protect them: the state. For instance, in the 1990s and early 2000s, Peru witnessed one of the most heinous violations of women's rights in recent history: under the administration of Alberto Fujimori, thousands of women were forcibly sterilized in an attempt to prevent overpopulation and poverty. The state is also complicit in institutional violence against women, ranging from insults to injury in its hospitals, health centers and schools (Boesten, 2012).

Despite legislative progress in identifying and addressing the problem, the legal system has constantly been characterized as ill-equipped to efficiently process complaints. In the early 1990s, Peru was one of the first countries in the region to develop legislation and policy to address violence against women. The Law for Protection from Family Violence was first adopted in 1993 and strengthened in 1997, attempting to codify intimate partner violence as a criminal offence while producing a distinct and expedited procedure for victims to lodge complaints. However, these legal reforms in the area of violence against women lacked a clear legal framework and have done very little to curb its persistence. In short, "many women do not bother to file complaints because the legal system is too slow to act" (UNHCR, 2010). In addition, in rural Peruvian communities, women are often assumed to have a certain level of blame in a conflict (Revilla, 1999). Traditional methods of justice based on local customs also are often discriminatory towards women and rarely impartial (Franco and González, 2009).

2.2   Women's Justice Centers Program

The 1994 Inter-American "Belem do Pará" Convention on "Prevention, Punishment, and Eradication of Violence against Women" significantly expanded Latin America's definition of domestic

and sexual violence. As a consequence, many countries in the region modified or enacted new legislation incorporating those issues into their political agenda. In particular, Peru altered its Police and Justice System's jurisdiction to encompass domestic and sexual violence complaints. This new legal framework paired with the government's awareness of the country's high levels of domestic violence led in 1999 to the creation of the women justice centers (WJCs) –"*Centros de Emergencia para Mujeres*"– by the *Peruvian Ministry for Women and Vulnerable Populations* (MIMP) as part of the National Program against Sexual and Family Violence.[12]

The *women's justice centers (WJC)* are free of charge public centers that aim to strengthen the justice system's capacity to detect, process and assist victims of domestic and sexual violence from an inter-disciplinary approach that includes legal, social and psychological dimensions. Basically, incoming victims receive a service designed to integrate all steps of the complaint process (e.g. police station, attorney's office and medical doctor) in a single office in order to reduce as much as possible the time dedicated to issue the complaint and to follow the legal procedure in the corresponding court of justice. Hence, WJCs are frequently located within a short distance from partner establishments such as police stations, prosecutors' offices and health facilities.[13]

In addition to assisting incoming victims, WJC center's aim is also to undertake a local violence prevention program. The prevention component intends to identify, control and reduce the risk factors. In this regard, the WJC centers have put in practice courses for training justice promoters –"*facilitadoras en accion*" and *"promotores juveniles"*–, which are volunteer women that advocate and execute campaigns, talks, workshops and seminaries to raise awareness about the problem of domestic violence in their region. Lastly, WJCs keep a record of cases that allow for monitoring and evaluation of the persistence of domestic and sexual violence (MIMDES, 2007).[14]

The first women's justice center opened in the District of Lima in 1999. During 1999-2014, the number of centers has grown from 13 in the first year to 226 by the end of 2014, covering 100% of the 24 regions of Peru and 96% of the provinces (188 of 196 provinces). Figure 1 shows the distribution and growth of the opening of the WJC centers over time. Whereas WJCs centers opened gradually throughout the first years of implementation, the program expanded exponentially after 2006. Up to that year, the average opening rate was about 6 WJCs/year; from 2006 to 2014 it augmented to 22 WJCs/year. Such escalation was provoked by a 2006

---

[12]The Peruvian Ministry for Women and Vulnerable Populations, known as *Ministerio de la Mujer y Poblaciones Vulnerables* - (MIMP) used to be called as Ministry for Women and Social Development (*Ministerio de la Mujer y Desarrollo Social - MIMDES*) when the WJC center program was rollout in 1999. http://www.mimp.gob.pe/contigo/contenidos/pncontigo-articulos.php?codigo=14

[13]The service provided in these centers is staffed by representatives of various government institutions such as police officers, prosecutors, counsellors, psychologists and public welfare agents whose objective is to help the victims of domestic abuse (MIMDES, 2007).

[14]Ministerio de la Mujer y Desarrollo Social. 2007. ¿Que son los Centros de Emergencia Mujer?. Available at http://www.mimp.gob.pe/files/programas_nacionales/pncvfs/Centros_Emergencia_Mujer_MIMDES1.pdf

decentralization decree that granted local governments the right to open their own WJCs at the district level.

From a geographical coverage point of view, by 2014 most of the WJCs are concentrated in Metropolitan Lima and Lima Provinces (31 WJCs); in the Callao region there are 4 WJCs; the rest of the coastal region have 46 WJCs; in the sierra region there are 117 WJCs and in the jungle region there are 28 WJCs (Figure 2). Given the before-mentioned strong ties to local justice and health institutions, WJCs are highly located within urban areas.

According to MIMP's statistics, the number of domestic violence cases registered in the WJC centers has increased substantially: from 29,759 in 2002 to more than 60,000 in 2016 (See Figure 3). Whereas 40% of reported cases are from women between 25 and 45 years old, children and teenagers (0-17 years old) constitute the second largest group – 30%. Additionally, a 2006-2008 survey administered by MIMP on 51 WJCs revealed that for the majority of the women (75%) who attended a WJC, domestic violence stopped during and after the program's intervention. However, the remaining 25% indicated a persistence of violence even after having attended a WJC center (MIMDES, 2009).[15]

3   The Data

This paper makes use of three different types of datasets which provide variation across geographical regions and time at different levels of aggregation: individual and household-level data, school level data and administrative data on WJC centers, femicides, female deaths due to aggression and female hospitalizations for mental health problems at the district level.

3.1   Individual and Household Level Data

To study the impact of WJC centers on women's and their children's outcomes, we rely on microdata from the *Peruvian Demographic and Health Survey* (DHS), which is collected over the period 2000-2014.[16] These surveys are cross-sections designed to be representative at the national and regional (second administrative) levels. The DHS employs a stratified random cluster sampling procedure in which the country is divided into several primary sampling units (in this case, districts) and clusters of households are randomly selected.

The *Peruvian DHS* collects primarily demographic and health information from women aged 15 to 49 years that include their fertility, weight, marital status, employment status, household decision making and socio-economic characteristics among others. In addition to this, it also

---

[15]Ministerio de la Mujer y Desarrollo Social. 2009. Investigacion operativa: "Eficacia de la intervencion de los Centros Emergencia Mujer". Available at http://www.mimp.gob.pe/files/programas_nacionales/pncvfs/estadistica/eficacia_intervencion_cem.pdf

[16]The *Encuesta Demografica y de Salud Familiar* (ENDES) is the Peruvian version of the Demographic and Health Surveys (DHS). These surveys are available for the following years: 2000, 2004-2008 and 2009-2014. The *Peruvian DHS* is exceptionally a continuous survey, which means that the data is collected quarterly instead of every five years since 2004.

includes some demographic and socioeconomic characteristics for each of the women's household members (e.g. husband and other children), which we exploit in our analysis.

In addition to the standard survey, the *Peruvian DHS* also includes a domestic violence module which asks eligible women if they have ever experienced physical, sexual or emotional abuse from their current or previous partner in the last 12 months.[17] While all women between the ages of 15 to 49 are asked to participate in the standard survey, only one women in each household, who has ever been married or partnered, is randomly selected to complete the domestic violence module. Women who are never married or never cohabited are excluded from the sample. This selection process is taken by the DHS program in order to minimize underreporting of domestic violence events.[18] The DHS captures four different types of domestic violence: moderate physical violence, severe physical violence, sexual violence and emotional violence. These domestic violence categories are defined by the DHS as ex-post classified questions.[19] Since the last measure is less visible and more difficult to measure, in this study we define exposure to a domestic violence event if the woman has ever experienced any type of moderate, severe physical or sexual violence during the last 12 months.

One advantage of using this household survey is that we can link children's outcomes (e.g. school attendance status, child labor) with their mother's self-reported domestic violence. This information is crucial in order to be able to understand the mechanisms behind the results. Since we do not observe attendance rates with the School Census, we use the *Peruvian DHS* to estimate the share of children in primary and secondary level who are enrolled and attending school.[20] This survey also allows us to measure children's schooling performance (e.g. passed

---

[17]It should be noted that though this is an important measure of domestic violence, it does not report the different forms of gender-based violence that affect women beyond spouses and inter-family relationships.

[18]The domestic violence module of questions is implemented only to a subsample of the women selected for the *Peruvian DHS* sample. There are three security and ethical precautions increasingly mandated by the DHS program for the collection of data on domestic violence. The first requires that the interviewer does not continue with the questions on domestic violence if privacy cannot be ensured. In general, the interviewers are women trained to elicit trust from the respondents. The second requires that only one eligible woman in each selected household is to be administered the module questions. In sample households where more than one woman is eligible for the DHS survey, the domestic violence module is administered to only one randomly selected woman. By interviewing only one woman in each household, possible security breaches, due to other persons in the household knowing that information on domestic violence was given, are minimized. The third requires that the domestic violence questions should be only administered to ever-married or cohabiting women, even though the DHS sample includes all women age 15-49. Only 1% of the eligible women was not interviewed because privacy was not made possible in the household. Despite the selection measures taken by the DHS program, this empirical analysis may still suffer from measurement issues due to underreporting. In order to account for this, we employ several different outcomes to measure violence against women: femicides and female deaths due to aggression

[19]More specifically, the DHS defines *moderate physical violence* if the woman experiences at least one of these acts from their spouse or partner:(a) spouse ever pushed, shook or threw something, (b) spouse ever slapped respondent, (c) spouse ever punched respondent with fist or something harmful, (d) spouse ever kicked or dragged respondent. *Severe physical violence* is defined if the woman experiences at least one of the following acts:(e) spouse ever tried to strangle or burn, (f) spouse ever threatened with knife/gun or other weapon, (g) spouse ever attacked with knife/gun or other weapon. *Sexual violence* is defined if the woman experiences at least one of the following acts: (h) spouse ever physically forced sex when not wanted, (i) spouse ever forced other sexual acts when not wanted (j) spouse ever twisted arm or pulled hair.

[20]For the children's school attendance analysis, we also use the 1996 *Peruvian DHS* in order to assess the

grade, repeated, dropped out) and whether he/she is performing any child labor.

Panel B of Tables 1 and 2 provides summary statistics on women's characteristics and on children's school attendance status during 2006-2014, respectively.[21] According to the *Peruvian DHS*, the data indicate that 39% of ever-partnered Peruvian women declared to have experienced abuse from their spouse during the last 12 months, which is remarkably high. As for children's education outcomes, the school attendance rate in primary level is 97% for both boys and girls, which is almost universal. The school attendance rate in secondary level is also quite high (89%) and very similar between genders. Given that secondary school is not compulsory, the drop-out rate reaches 9% of the students in this educational level.

In addition, the *Peruvian DHS* also records GPS coordinates for every cluster of households in a certain district, which allows us to measure not only presence of WJC center in the district of residence but also proximity to the WJC center. Although this data was collected yearly, in this study we were able to obtain the GPS cluster locations only for the 2000, 2004-2008, 2009-2011 and 2014 *Peruvian DHS* Surveys. Since the DHS does not disclose the name of the villages (*centros poblados*) where the clusters are located, the final sample is a repeated cross-section of individuals (women and children), where the lowest geographical unit we can condition on is the district.

Our concern with this database is linked to the fact that GPS locations of the sampled DHS clusters of households are displaced before public release to preserve confidentiality of respondents. The GPS displacement is randomly carried out so that: urban clusters are uniformly displaced up to 2 kilometers and rural clusters are displaced up to 5 kilometers, with 1% of the rural clusters displaced up to 10 kilometers. In addition, the displacement is restricted so that the points stay within the second administrative level, which is the province. Therefore, the GPS displacement procedure introduces a random error, which can substantively affect the results of the analysis (Burgert et al., 2013).

Nevertheless, Perez-Heydrich et al. (2013) propose several recommendations in order to reduce any distance measurement error. Firstly, they suggest that the amount of measurement error depends on the spatial density of the resource facilities. As the density of the resource facilities decreases, the probability that a DHS cluster is linked to the correct closest WJC center increases for all types of locations (urban and rural). In Peru, there are a total of 226 WJC centers by 2014, which means that the spatial density of the WJC centers is quite low and, thus, the measurement error is quite reduced. Secondly, the authors recommend to study the effect of the service within a reasonable buffer distance, rather than using the closest-distance to the resource facility. For this reason, we are going to measure exposure to the WJC center through different groups of Euclidean distance buffers. Lastly, we are also going to limit the analysis to urban areas because in these locations the range of displacement is less than in rural areas.

---

validily of the identification strategy.

[21]We focus our analysis in the middle of the rollout period, 2006-2014, for which identifying assumptions are likely to hold. We discuss this choice in more detail in Section 7.

3.2   School Level Data

We use two school level datasets: the Peruvian School Census (*Censo Escolar*, CE) and the Census Evaluation of Students (*Evaluacion Censal de Estudiantes*, ECE). The Peruvian School Census is a large panel dataset on primary and secondary school enrollment, which covers the universe of schools in Peru during the period 1998 - 2014. This dataset is collected on a yearly basis by the Peruvian Ministry of Education, with exception of the year 2003 and it contains a rich set of information at the school level.

More specifically, the School Census collects comprehensive data on the total number of enrolled students by age, grade and gender. These data are designed to reflect enrollment (not attendance) statistics corresponding to the months of May-July. The School Census also collects data on school characteristics, such as language of instruction, public or private, urban or rural area and other physical plant characteristics (i.e. electricity, piped water etc). We complement these data with the Census Evaluation of Students, which contains the standardized test scores of a national exam administered every year to all primary school students in second grade during the period 2007-2014. This exam has two portions: math and language (Spanish) skills.

Each school in these datasets is given a unique ID number, which allows us to follow schools over time. In addition, one of the main advantages of these school datasets is that they are geo-coded, which means that we can observe the exact location of the school. The geographic coordinates of the schools allow us to combine these data with the WJC center's locations, in order to see whether the area/district of the school is located near a WJC center and thus affected by the opening of these centers that provide specialized attention to victims of domestic and sexual violence.

Panel A of Table 3 shows the years of data coverage and the number of schools by rural/urban region. In order to be consistent with the individual level data, for this analysis we also use data which cover the period 2006-2014. In the later years, the dataset covers a larger share of schools. It is important to note that this dataset is not a balanced panel because during the period of study some schools have closed, while others have opened. In addition, as mentioned above, there is no data available for the year 2003, since data for this year was not collected. Although this means we do not have a balanced panel, by including school fixed effects we ensure that we compare the same schools over time. The main analysis, then, draws on a nine-year unbalanced panel dataset of 36.994 primary schools (grades one through six) and 12.811 secondary schools (grades one through five).[22]

Panel C of Table 3 provides some summary statistics on school enrollment and school characteristics. The average primary school in our sample has 95.9 students, while the average secondary school has 175 students. The proportion of primary schools is higher in rural areas, while secondary schools are more likely to be found in urban areas. The majority of primary

---

[22]The primary-school sample covers between 4.1 and 3.5 million students each year, whereas the secondary school sample covers between 2.3 and 2.7 million students.

schools are public and teach in Spanish language, but there is also a small proportion that teach in Quechua and other native languages. In contrast, a large proportion of secondary schools (40%) are private and in almost all of them the language of instruction is Spanish.

A final important issue of the School Census data is that it measures total number of children enrolled, not enrollment/attendance rates. This may lead to the concern that our results reflect changes in population. However, we discuss this issue in greater detail in Section 4. In addition, we also use the *Peruvian DHS* to estimate the share of children who are attending school as a robustness check.

3.3 District Level Data

Information on the rollout of the WJC centers was provided by the *Peruvian Ministry for Women and Vulnerable Populations* (MIMP) and consists of a directory of WJC centers across all over Peru. This directory contains the name of the WJC centers, their founding dates (date-month-year), their administrative locations (district-province-department) and their addresses during the period 1999 to 2014. By using the administrative locations and addresses provided in the directory of the MIMP, we were able to geo-code all the WJC centers, which allows us to have not only the district where they are located but also their exact GPS location.

This data collection project resulted in a dataset of 226 WJC centers from 1999 till 2014. Figure 1 shows a histogram of WJC center founding dates and it also illustrates the evolution of the opening of WJCs since 1999 till 2016, while Figure 2 maps the rollout of the WJC centers at the national level, which allows to visualize the extensiveness and national scope of the program. From both graphs, we can clearly see a substantial growth in the number of centers over time, where 81% of them are founded after the year 2005.

Data on the number of femicides at the district level was obtained from the *Peruvian Crime Observatory at the Ministry of Public Affairs* and it covers the period 2009-2015. In Peru, femicides are classified in two categories: (1) *intimate femicides*, when the homicide is committed by the woman's partner, ex-partner or other family member (2) *non-intimate femicide*, when the homicide is committed by a stranger, neighbor, friend or a client who murders a sex worker (INEI, 2017). This data is recorded by each district attorney office in the country. Unfortunately, this data is only available at the district level and it is not geo-coded. In this analysis, we only consider the cases of intimate femicides in order to be consistent with the DHS data. From 2009 till 2015, 852 women have been murdered in Peru of which 762 (90%) are intimate femicides and 90 (10%) are non-intimate femicides (Figure 6).

We complement this information with data on female deaths due to aggression and female hospitalizations for mental health problems, which were obtained from the *Peruvian Ministry of Health - National Institute of Statistics and Informatics (INEI)*. This database contains the number of registered cases of hospitalizations by type of illness, age and gender. For the purpose of this analysis, we use female hospitalizations for mental health problems. It also records the

number of hospitalizations that resulted in deaths according to different types of causes. The main female cause of mortality that is relevant to this analysis is death due to aggression. This information is recorded by health facilities such as hospitals and is only available at the district level. The number of registered cases in health facilities includes women between the ages of 18 and 59 and covers the period 2006/7-2015. Figure 6 shows the number of female deaths due to aggression and female hospitalizations for mental health problems over time in Peru.

3.4   Measuring Exposure to the WJC Centers

In order to be able to match the data on WJC centers with the the outcomes of interest, we construct two measures of exposure to the program: (i) WJC center within a 1km Euclidean buffer of the DHS cluster/school and (ii) WJC center in the district of the DHS cluster/school.

The first measure uses the GPS coordinates of the DHS clusters/schools in order to measure a 1 kilometer Euclidean distance buffer from every DHS cluster/school location. For this method, the Euclidean buffer of 1km is first centered on each DHS cluster/school and then each DHS cluster/school is linked to a WJC center if the WJC center falls within the buffer, without consideration of district administrative borders. For instance, a DHS cluster/school located within 1km of a WJC center founded in 2008 is coded as having a WJC center within 1km of the DHS cluster/school since 2008. Figure 5 shows a visual representation of the Euclidean buffers for two specific regions in Peru: Lima and Tumbes.

The second measure matches the presence of a WJC center in the district, based on its date of opening and location, with the DHS cluster's/school's district. For instance, a DHS cluster/school in the district of Lima (150101) with a WJC center introduced in 2006 is coded as having a WJC center in the district of Lima since the year 2006.

Our preferred measure is the one that uses the Euclidean buffer since we want to estimate the impact of having a WJC center in the neighborhood of the school/household. The second measure is used as a robustness check because it might not always capture accurately the impact of the WJC centers due to the fact that districts in Peru have very different sizes. Therefore, rather than aggregating WJC center exposure in the district, we measure exposure based on how far the centers are from respective households, such that individuals residing at different points in the same district may have different levels of exposure to the WJC centers. Panel A of Tables 1 and 2 and Panel B of Table 3 show descriptive statistics of exposure to the WJC centers at the individual (women and children) and school level. The main reason for our choice of a 1km distance buffer instead of a larger buffer is not only because we believe that these centers have a very localized effect, but also because the measure of exposure using a 5km Euclidean buffer seems to be very similar to the one that uses presence of WJC center in the district. We present results using both measures of exposure to a WJC center principally for our main outcomes of interest.

14

4   Empirical Strategy

4.1   Placement of WJC centers

A central methodological issue in our analysis is the fact that WJC centers are not placed randomly across the country. Even though our analysis will take advantage of variation over time, which will account for any fixed differences across districts and schools, it still remains important to understand what drives placement since placement decisions may not be orthogonal to other factors that could affect women's and children's outcomes of interest.

We address this concern in a number of ways which lead us to believe that the link between the opening of the WJC centers and the outcomes of interest is casual. First, we had several discussions with the Peruvian policymakers and WJC center managers about the location choices. Since the foundation of the first WJC center in 1999 till the end of 2005, the primary criteria they cited when deciding where to locate were population density and level of infrastructure at the regional level. In this stage, capitals and large cities were prioritized locations to open a WJC center. Starting from 2006, after the decentralization process which transferred the responsibility of the WJC centers to the local governments (districts), the Peruvian policymakers decided to open new WJC centers at the district level and they incorporated additional criteria such as proximity to police stations, district attorney offices (known as *fiscalias*) and health establishments.

Even though program guidelines suggested that priority should be given to poorer districts with sufficient judicial and medical infrastructures, in several occasions, political representatives had certain autonomy in deciding the order in which districts received the program. There is also anecdotal evidence from the authorities that WJC center's placement has been primarily developed taking into account the population density but failed to take into account the rate of incidence of violence against women. This is likely due to the lack of reliable data on domestic violence or femicides for all the districts in Peru prior to the opening of the centers. For instance, official data on femicides in Peru started to be recorded since 2009. Several ministerial reports have documented the fact that WJC centers failed to consider the rate of incidence of violence against women in program placement.[23] Moreover, our conversations with the Peruvian policymakers suggest that educational considerations, and in particular enrollment rates or schooling performance, were never factored into program placement decisions.

Second, we are able to evaluate this endogenous placement statistically using our data. To do this we estimate at the district level: (a) the determinants of having a WJC center by the end of the sample in 2014 and (b) the determinants of adding a WJC center during 2006-2014, which is the period when the program grew substantially. We focus on several variables at the district

---

[23]See, for instance, Ombudsman Office, *Informe Defensorial N 144. Centros de Emergencia Mujer: Supervisión de los servicios especializados en la atención de víctimas de violencia familiar y sexual*, July 2009. Ministerio de la Mujer y Desarrollo Social, *Investigacion operativa: "Eficacia de la intervencion de los Centros Emergencia Mujer"*, August 2009

level cited by the Peruvian policymakers such as: number of justice courts, number of district attorney offices, number of police stations and number of health establishments. We also control for district population at baseline and department fixed-effects. Moreover, in order to verify that education patterns before the program do not predict where the WJC centers are introduced, we also control for pre-program changes in primary and secondary school enrollment at the district level. Unfortunately, we are unable to perform the same test for self-reported domestic violence or femicides due to lack of pre-program data on these variables for all the districts in Peru. However, we control for baseline (self-reported) domestic violence at the district level by using the *2000 Peruvian DHS* which contains a representative sample of 700 districts in Peru.

The results from these regressions are shown in Table 4. In general, the results corroborate the evidence we collected from our conversations with the Peruvian policymakers and WJC center managers. Districts with more police stations, more district attorney offices, more health establishments and more densely populated are more likely to have WJC centers by 2014 and more likely to add them during 2006-2014. Clearly, urban areas with more infrastructure development are more likely to have these specialized centers for women. In addition, pre-program changes in primary and secondary district school enrollment do not seem to have any impact. Neither coefficient is statistically significant and both are very small. Similarly, domestic violence does not have any impact on WJC placement. These findings suggest that WJC center placement between 2006-2014 does not seem to have been based neither on pre-program changes in schooling nor on baseline domestic violence.

Finally, we note two additional concerns that might threaten the validity of our research design. First, one might be worried that another shift (e.g. a government program or policy change) might be rolled out during the same period and in the same places as the WJC centers, which might also have an impact on education outcomes. An obvious candidate is the CCT program *Juntos*, which was launched in September of 2005, right at the time when the WJC centers started to be implemented more intensively.[24] In addition to this, *Juntos* integrates two broad objectives: in the short run, it aims to reduce poverty by providing households with cash transfers; and in the long run, it aims to break the inter-generational transmission of poverty by promoting human capital through improving access to education and health services.

In spite of this, several reasons lead us to believe that *Juntos* is not a confounding factor in our empirical strategy. Districts were selected for program participation based on an index that includes poverty and percentage of villages affected by violence during civil conflict. The aim of *Juntos* was to reach some of the most vulnerable and marginalized segments of the population and focused particularly on rural areas with high poverty rates and limited access to State services.[25] By 2014, about 1142 districts have CCTs and 225 districts have WJC centers.

---

[24]See Figure 7 on the presence of both programs at the district level and Figure 8 on the timing of CCT *Juntos* and WJC centers programme implementation. There are two large expansions of the CCT *Juntos* implementation, first in 2007 and then in 2012.

[25]*Juntos* is targeted to the population living in poverty and extreme poverty: households with children under

However, more than half of the districts with WJC centers (123 districts) are not covered by the CCT *Juntos* program. This evidence clearly suggests that while WJC centers were more likely to be implemented in urban areas, the CCT program was more likely to cover dispersed populations in the poorest rural areas. We test this assumption more directly by analyzing whether the WJC placement at the district level was correlated with the CCT *Juntos* implementation. Columns 2 and 4 in Table 4 indicate that the WJC center placement was not determined by the rollout of the CCT *Juntos* program.[26]

The second concern related to WJC center placement is that if we estimate the impact of the WJC centers on all areas, our results might be identified off of rural areas which are not at risk of having a WJC center and these may not be an accurate comparison for those areas which get a WJC center. Given this, we will focus our analysis on a specification in which we limit the sample to urban areas (urban school and households), which are the ones more "at risk" of opening a WJC center. As a further robustness check, we will also limit our samples to districts which ever have a WJC center during the sample period.

4.2 Individual Level Specification

We use a difference-in-difference empirical strategy to estimate the impact of WJC centers on women's and children's outcomes. We exploit the variation created by the differential timing in the opening of the WJC centers and also the spatial variation in the exposure of a woman/child to a WJC center. In order to estimate the impact of WJC centers on women's and children's outcomes, the following specification is used:

$$y_{idt} = \gamma_0 + \gamma_1 WJC_{idt} + \alpha_d + \lambda_{pt} + \delta X'_{idt} + \varepsilon_{it} \tag{1}$$

where (y_{idt}) represents the outcome of interest of woman i (or the child of woman i) at year t who resides in district d, (WJC_{idt}) is an indicator variable that takes the value of one if there is a WJC center within 1km of the women's/child's household or in the district of residence of women/child i in year t, (α_d) is a district fixed-effect, (λ_{pt}) is a province-by-year fixed-effect, (X'_{idt}) is a vector individual-level characteristics for women/child i depending on the sample of interest and (ε_{idt}) is a random error term. Standard errors are clustered at the district level and we also include district-specific time trends. The inclusion of districts fixed-

---

14, pregnant women, widowed parents and/or older adults. It is particularly focused on getting children out of poverty, improving their education, health and nutrition. This programme is also explicitly seen as a way to tackle the special vulnerability of populations who were most affected by the political violence that was prevalent in Peru between 1980-2000. Most of the victims of this conflict were poor populations living in rural areas and Quechua speakers.

[26]We also construct a panel database at the district level on WJC center and CCT *Juntos* placement from 2005 till 2014, which allows us to better analyze whether program implementations where correlated over space and time. By using a fixed-effects model, we can control for any time-invariant locality factors at the district level and also year dummies. The results in Table A-1 corroborate the idea that the CCT *Juntos* is not a confounding factor in our research design.

effects account for possible time-invariant unobserved characteristics at the district level, such as cultural differences or attitudes towards the role of women/children. However, this does not account for any differential trends in women's/children's outcomes associated with WJC center placement. To address this, we allow the year fixed-effects to differ by province. Province-by-year fixed effects rule out the concern that our results are driven by changes that vary by province and year such as an increase in political corruption or a decrease in provincial resources.

There are two main measures of domestic violence to be used as dependent variables for women's specification. The first is a measure of physical domestic violence which is defined as a binary indicator that takes value 1 if the woman reports any moderate, severe or sexual abuse from the intimate partner during the previous year. The second measure is a binary indicator for emotional violence, which is based on three questions referred to behaviors or situations that are considered as strong indicators of mistreatment by experts. We also use a set of outcomes for women's health/nutritional status such as anemia status, weight, body mass index etc. The vector X'_{idt} includes a set of control variables for woman's age, age at first marriage, number of children, years of education, number of household members, number of families in the dwelling, marital status and rural-urban residence.

Since our school level data contain number of students enrolled, but not enrollment rates, we use the *Peruvian DHS* to estimate the impact of WJC centers on children's school attendance status. The main child outcome variable is a dummy variable indicating whether the child is attending school during the year of the survey. We also use additional schooling performance outcomes, which are defined as a changes in school attendance status between one year and the next, conditional on the child being enrolled at school. Therefore, the dependent variable can be classified as: (a) currently attending school, (b) passed grade (c) repeated grade (d) dropped out and (e) left school more than 2 years ago. For the children's specification, we also include a set of control variables such as age, gender, household's head years of education, number of children in the household aged 0-18, number of children in the household aged 0-5, number of female adults, number of male adults and rural-urban residence.

The coefficient of interest is (γ_1), which captures the average change in outcomes of women/ children that are located near the WJC centers or in districts with WJC center, to the average change in outcomes of women/children that are not reached by a WJC center. The identification assumption is that in the absence of the WJC centers, treatment households (women and children) would otherwise have changed similarly, on average, to control households within their same province. Note that in this specification we cannot control for individual fixed-effects because the *Peruvian DHS* databases of women and children are repeated cross-sections.

4.3   District Level Specification

We then estimate the following equation to capture the impact of WJC centers on femicides, female deaths due to aggression and female hospitalizations for mental health problems at the

district level:

$$y_{dt} = \gamma_0 + \gamma_1 WJC_{dt} + \alpha_d + \lambda_{pt} + \delta X'_{dt} + \varepsilon_{dt} \tag{2}$$

where (y_{dt}) refers to alternative domestic violence metrics (e.g. femicides by intimate partner, female deaths due to aggression) and hospitalizations for mental health problems aggregated at the district level in year t, (WJC_{dt}) is an indicator variable that takes the value of one starting in the first year in which district d offers a WJC center, (α_d) is a district fixed-effect, (λ_{pt}) is a province-by-year fixed-effect, (X'_{dt}) represents time-varying district level covariates (e.g. district population), and (ε_{dt}) is a random error term. In this case, we are unable to use exposure to a WJC center within a 1km Euclidean buffer as treatment since the outcome variables are only available at the district level and they are not geo-coded. For this specification, the dependent variables are defined using the logarithm (instead of the level).

This is a standard fixed-effects model, where identification is derived from changes in domestic violence/mental health outcomes correlated to changes in the introduction of WJC centers in the district. This empirical strategy allows us to account for both time-invariant characteristics of districts, and time-varying characteristics common between treatment and control districts. Therefore, the identification assumption is that any unobserved time-varying covariates that affect domestic violence/mental health outcomes are uncorrelated with the rollout of the WJC centers within their same province.

4.4 School Level Specification

Lastly, using the same identification strategy, we study the overall effect of WJC centers on education outcomes at the school level by using the following regression equation:

$$Y_{st} = \beta_0 + \beta_1 WJC_{st} + \alpha_s + \lambda_{pt} + \gamma_t X'_s + \varepsilon_{st} \tag{3}$$

where (Y_{st}) is the education outcome (i.e. total number of children enrolled, standardized test scores) in school s at year t, (WJC_{st}) is an indicator variable that takes the value of one if the school has a WJC center within 1km/in the district of the school, (α_s) is a school fixed-effect, (λ_{pt}) is a province-by-year fixed-effect, $(\gamma_t X'_s)$ is a year-interacted vector of school's initial characteristics (including initial school enrollment, presence of electricity, presence of piped water, school language (Spanish), urbanization and public school dummy) and (ε_{st}) is a random error term. The inclusion of school fixed-effects accounts for any time-invariant characteristics at the school level. We also allow the year fixed-effects to differ by province and by measures of school's baseline enrollment and baseline infrastructure. Since initially-different schools might be more likely to change differently, this empirical specification focuses on comparing changes in treatment and control schools with similar initial characteristics that might drive WJC center placement.

The coefficient of interest is (β_1), which captures the average change in enrollment in schools

19

that are located near the WJC centers or in districts with WJC center, to the average change in enrollment in schools that did not have a WJC center. The identification assumption is that treatment schools located in the proximity of a WJC center/in districts with WJC center would otherwise have changed similarly, on average, to those controls schools that are not exposed to the services of a WJC center. In practice, by controlling for province-by-year fixed-effects (λ_{pt}) and by variables that drive WJC center placement, the identification assumption is that treatment schools would otherwise have changed similarly, on average, to control schools within their same province and with similar initial characteristics. Throughout this analysis, we cluster our standard errors at the school level. We also estimate this regression including district-specific time trends.

Nevertheless, we are concerned about the possibility that the results are driven by time-varying variables which might influence both the opening of the WJC centers and school enrollment. A related issue is the possibility that WJC center managers consciously decide to introduce centers where school enrollment is increasing. To address both of these issues, we use the panel nature of the school data in order to construct a placebo treatment based on the timing of the WJC centers introduction. We estimate whether *future* WJC centers predict current enrollment using equation 4 below:

$$Y_{st} = \beta_0 + \beta_1 WJC_{st} + \beta_2 WJC_{st+1} + \beta_3 WJC_{st+2} + \beta_4 WJC_{st+3} + \alpha_s + \lambda_{pt} + \gamma_t X'_s + \varepsilon_{st} \quad (4)$$

where (WJC_{st+1}), (WJC_{st+2}) and (WJC_{st+3}) are indicator variables that takes the value of one if the school has a WJC center within 1km/in the district of the school starting from the year $t+1$, $t+2$ and $t+3$. If $\beta_2 > 0$, $\beta_3 > 0$ and $\beta_4 > 0$ are positive and significant, this would indicate that WJC centers are being introduced in areas where schooling is increasing more rapidly. While, if $\beta_2 = \beta_3 = \beta_4 = 0$ this would indicate that WJC centers are introduced in areas in which school enrollment is growing for other reasons.[27] Therefore, the coefficients β_2, β_3 and β_4 effectively capture the effect of future openings for areas that are not covered by the WJC centers in t. Our hypothesis for the placebo regression is that total enrollment in schools that do not have a WJC center within 1km/in the district should *not* be affected by the fact that a WJC center may open in the future in the proximity of these schools.

5   Results

5.1   Impact of WJC Centers on Gender-Based Violence

We begin by investigation the impact of WJC center's introduction on the incidence of gender-based violence against women. From estimating equation 1 for the sample of women, Table

---

[27]This technique has already been used to address this concern by La Ferrara, Chong and Duryea (2012) and Oster and Steinberg (2013).

5 presents the results of regressing the likelihood of experiencing domestic violence (by the intimate partner) in the last 12 months against the presence of a WJC center within 1km/in the district after controlling for several covariates, district fixed-effects, district-specific time trends and province-by-year fixed effects.

Panel A of Table 5 shows our domestic violence estimates when exposure to the program is measured through the presence of a WJC center within a 1km Euclidean buffer. Column 1 presents our results using the entire sample of women.[28] Introducing a WJC center within 1km of the women's residence decreases domestic violence by 2.2 percentage points, which represents a 5.6% decrease in domestic violence. Column 2 shows this regression after including district-specific trends to address the concern that districts that have a WJC center are trending differently than those that do not. This coefficient is slightly smaller (1.8 percentage points) but still significant. Our preferred specification is shown in Columns 3, in which we limit the sample to just urban clusters, which means that control areas are most comparable to those which are affected by the introduction of a WJC center. Even though this reduces the sample significantly, the coefficient is a bit higher in magnitude to the overall sample (2.9 percentage points) and highly significant. Lastly, Column 4 limits further to areas that ever have a WJC center (including those that change and those that always have a center). The coefficient in this case is still negative and similar in magnitude but not statistically significant, which may be due to the sample size restriction.

In Panel B of Table 5 we explore the impact of WJC centers on domestic violence by using the alternative measure of exposure, presence of a WJC center in the district. We use this alternative explanatory variable as a robustness check and also to explore whether the opening of a WJC center matters in broader surroundings. These findings also show that women living in a district with a WJC center are significantly less likely to suffer from physical violence by their spouse compared to those living in districts that do not have this type of institution. The magnitude of the coefficients is relatively similar to the ones of Panel A. These results are robust to including district specific trends and to limiting the sample to urban clusters and districts which ever have a WJC center. In Table A-4 of the Appendix, we also show that these results are driven by older and more educated women, which are the ones that are more likely to have better outside options.

Moreover, in Table 6 we present the impact of the WJC centers on different types of emotional violence. In general, we find a negative but not statistically significant effect except for one mistreatment emotional behaviour outcome. For instance, we find that proximity to a WJC center can be associated to less likely threats of taking the children from the spouse.

One limitation of the *Peruvian DHS* data collected on domestic violence is that it is self-

---

[28]The full sample of women in the *Peruvian DHS* surveys consists of 210.847 respondents aged 15 to 49 over the period 2000-2014. However, this sample is reduced to 121.404 eligible women since we only include partnered women who are eligible for the domestic violence module. When we run estimations using the geo-coded cluster locations during the period 2006-2014, this sample is reduced even further to 64.366 observations of women.

reported by women respondents and, therefore, subject to recall bias, cultural values and willingness to report domestic violence. Since empirical work on gender-based violence generally suffers from measurement issues, in order to corroborate our results, we also use administrative district level data on femicides and female deaths due to aggression as alternative outcomes of violence against women. Tables 7 and 9 present the results of regressing the logarithm of femicides and female deaths due to aggression against the number of WJC centers in the district, respectively (equation 2). These findings provide suggestive evidence of a reduction in femicides and female mortality due to aggression. More precisely, the coefficients indicate that the opening of a WJC center in the district can be associated with a statistically significant reduction in femicides and female hospitalizations for assault. The largest effect is found for women aged 20 to 39 years old, which is reassuring in terms of the results found with the self-reported domestic violence data.

We also explore whether an improvement in access to justice for women has an impact on their health. Table 11 shows the effect of introducing a WJC center in the proximity of the residence on a set of women's health outcomes. In particular, women living within 1km of the WJC center experience an increase in their weight compared to those living further away. Finally, Table 12 shows the effects on female hospitalizations due to mental health problems using district and year variation in the openings. We find that after the opening of a WJC in the district, women mental health problems decline by 10% over the period of analysis. Moreover, we do not find these effects for men. These results show some suggestive evidence of an improvement in women's health.

5.2 Impact of WJC Centers on Children's School Attendance

Given the reduction on gender-based violence, in this section we analyze whether there are positive spillover effects on children's outcomes. We start by analyzing the impact of WJC centers on children's school attendance rate and their attendance status since a downside of our school-level data is that we observe number of students enrolled, not enrollment rates. Tables 13 and 14 summarize the estimated impacts of WJC centers on children's school attendance in primary and secondary level, respectively, from estimating equation 1 for the sample of children. While, Table 15 presents the results for children's attendance status (e.g. passed grade, repeated, dropped-out).

First, Panel A of Table 13 indicates that children in primary school living in household's located near a WJC center are significantly more likely to attend school. More specifically, living in the proximity of a WJC center increases children's school attendance by approximately 2 percentage points. Focusing on our preferred specifications in Columns 3 and 4, we find a positive and statistically significant effect on children's primary school attendance after the opening of a WJC center in the proximity of the household and also in the district of residence. These results are robust to using the different measures of exposure to the program. The

magnitude of the findings in Table 13 could be considered very large given the primary school attendance rate of 97%. In order to better interpret these results, in Table A-5 of the Appendix we analyze domestic violence in the household by children's primary level school attendance status. Effectively, we find that domestic abuse is higher among the 3% of households who do not send their children to primary school and this difference is driven by urban areas. In addition, we also analyze the impact of WJC centers by the distribution of the primary school attendance. Information on primary school attendance is used to assign children into four distinct school attendance quintiles. Results in Table A-6 of the Appendix indicate that the effect of opening a WJC center within 1km of a child's residence on primary school attendance is only statistically significant for those children located in areas with the lowest school attendance rates.

Second, in Table 14 we also find a positive and statistically significant impact of WJC centers on secondary school attendance for those children living within 1km of the center. These estimates range between 2 to 3 percentage points. However, this effect is no longer significant when we use presence of a WJC center in the district as a measure of exposure. Due to the GPS displacement issue in the Peruvian DHS data, we also estimate the impact of WJC centers using two additional Euclidean buffers: 3km and 5km. Results in Tables A-7 and A-8 show that when we analyze the effect of the WJC in broader surroundings we do not find a significant impact for both primary and secondary school attendance rates.

Lastly, the impact of WJC centers on school attendance status - grade advancement conditional on staying in school, repeating grade, recent drop-out and old drop-out is also estimated using the same method as reported for school attendance. Results in Table 15 show that children located near a WJC center are significantly more likely to pass a grade and they are also significantly less likely to drop out of school. However, we do not find an effect on grade repetition nor on having left school more than two years before the opening of the centers. These results are robust to using different samples of children (i.e. children of the women selected for the domestic violence module).

What we find, overall, is that investments in children's human capital, especially those in primary level, are affected positively by the introduction of the WJC centers.

5.3 Impact of WJC Centers on School Enrollment

The evidence above suggests that overall primary school attendance increases in response to WJC center introduction. This section analyzes our estimates of the impact of the WJC centers on education outcomes at the school level as an additional robustness check. From estimating equation 3, Tables 16 and 17 present estimated impacts of WJC centers on average enrollment in primary schools and secondary schools, respectively. While, Table 18 presents the impact of WJC centers on standardized test scores for second grade students in primary level.

Panel A of Table 16 shows our primary school enrollment estimates when exposure to the program is measured through the presence of a WJC center within a 1km Euclidean buffer. The

coefficient on WJC center within 1km in Column 1 is positive and statistically significant. This result indicates that the introduction of a WJC center within 1km of a school is associated with an increase of 2.8% in the number of children enrolled in primary school in the year after the center was opened. The coefficient in Column 2, after controlling for district-specific trends, is almost unchanged (2.7%) and still highly significant. In Column 3, we include district population as a time-varying control in order to rule out the concern that our results might be driven by mechanical changes in population, especially due to the fact that our school data measure number of students enrolled, not enrollment rates. After controlling for district population, the impact of WJC centers on primary school enrollment is even larger (3.3%) and statistically significant. Our preferred specifications are shown in Columns 4 and 5, in which we limit the sample to just urban schools and districts that ever have a WJC center. Although this restricts the sample significantly, the coefficient for urban schools in Column 4 is also larger in magnitude to the overall sample (3.2%) and highly significant. Lastly, the impact for districts that ever have a WJC center is a bit smaller in magnitude (2.4%) and significant, despite the fact that we restrict the sample size even further.

In Panel B of Table 16 we explore the impact of WJC centers on primary school enrollment by using the alternative measure of exposure, presence of a WJC center in the district. Panel B shows that introducing a WJC center in the district also has a positive and significant effect, but the coefficient is a bit lower (1%), indicating that the effect probably decreases with distance. Focusing on our preferred specifications in Columns 4 and 5, we find that adding a WJC center in the district increases the total number of children in primary school between 1.2% and 1.9%. These results are also similar in magnitude to the results found with the individual-level data, which is reassuring.

Table 17 shows the impact of WJC centers on secondary school enrollment, using the different measures of exposure to the program. We also find a positive impact on the number of children enrolled in secondary school (2.9%) when we use the entire sample, but the effect is not robust to controlling for district specific trends and to limiting the sample to districts which ever have WJC center. The specification with urban schools is the only one that yields a positive and significant coefficient of 3.4% for secondary school enrollment.

Lastly, consistent with these results, we also find some suggestive evidence of a positive effect on standardized test scores for primary school children located in schools near a WJC center. Table 18 shows that test scores of children in schools located in the proximity of a WJC center are 0.02 - 0.05 standard deviations higher. Even though these results are not robust to all the different specifications, they are positive and highly significant for urban schools.

All these findings suggest a strong connection between the presence of WJC centers and total number of children in primary school. They also indicate that these findings are localized to within few kilometers and they are mostly driven by urban areas. In Table A-3 of the Appendix, we also show these effects broken down by gender and grade. We find that these

effects are similar for boys and girls, even though they seem to be driven mostly by girls. We also find that the impact is equally distributed among the different grades.

5.3.1 Placebo regression: *Future* WJC centers

As mentioned earlier, one of the main threats to this identification strategy is the possibility that WJC centers were rolled out in response to changes in enrollment, rather than causing them. This is strongly linked to the issue of endogenous WJC center placement. Even though, we account for characteristics which are constant over time through school fixed-effects, one concern that remains is the possibility that WJC centers are placed in areas where enrollment is increasing more rapidly since center managers or policymakers are targeting more densely populated areas. Another concern is posed by time-varying unobservables correlated to both the timing of the WJC centers and school enrollment. For example, it could be that areas reached by the WJC centers are also hit by a positive economic shock or there are improvements in public welfare programs at the time they are opening the WJC centers. We already account for this by controlling for province-by-year fixed effects.

However, another way to address the concern that WJC centers are located in areas that are changing in other ways that we do not observe is by constructing a placebo treatment based on the timing of the WJC center openings. We estimate analogous regressions to the ones in Tables 16 and 17 (our baseline school-level specification), but instead of only looking at the effects of opening a WJC center on current enrollment, we also look at the effects of *future* openings. The idea is that if *future* WJC center openings predict current enrollment, this would suggest that WJC center placement anticipates changes in schooling, rather than causing them. Table A-10 and A-11 show the results for this falsification exercise for primary and secondary school enrollment, respectively. We find that the effect of future WJC centers is virtually zero and not statistically precise, suggesting no strong evidence of pre-trends. In addition, the inclusion of future WJC centers does not affect our estimate of the impact of current WJC center on school enrollment.

6   Discussion: Mechanisms

In this section we provide some evidence on the mechanisms that might potentially drive the findings in this study. In the context of Peru, the presence of the WJC centers can reduce domestic violence either by improving women's intra-household bargaining power, or by increasing women's trust in the institutional system.

Firstly, we argue that the presence of a WJC center in proximity of the household may allow women to send a signal to their husbands regarding their outside options. The availability of easier access to justice thus may generate a more credible threat to the potential offenders through greater chances of demanding police involvement and criminal penalties. Sev-

eral economic theories of household bargaining power suggest that policies aimed at affecting spouse's outside option from an abusive relationship may also affect within-household distribution through changes in their relative bargaining positions (Farmer and Tiefenthaler, 1996; McElroy and Horney, 1981; Manser and Brown, 1980). In other words, women's threat point increases when they have alternatives and when support services are more helpful.

Central to this analysis is the relationship between household decision-making or bargaining power in the household and the WJC center introduction. In order to test this, we use the *Peruvian DHS* which records who has the final say on a variety of household decisions. For example, a woman is asked *"who makes the final decision on large household purchases?"* or *"who makes the final decision on money husband earns?"*. Responses include: respondent only, jointly with partner and partner only. For these categories, we construct three measure of equal decision-making. The first one is a score that ranges from 0 to 6 and counts the number of times the respondent makes decision jointly with partner. The second one is also a score that ranges from 0 to 1 and counts the share of decisions made jointly with partner. The third one is a dummy that takes the value of 1 when at least one decision is made jointly with the partner. In addition to decision-making, we also estimate the effect of WJC centers on women's earnings relative to their husbands.

Table 19 provides the estimates of the impact of WJC centers on decision-making and bargaining power. We find suggestive evidence of an improvement in the bargaining power of women in the household. In particular, we find that women living near a WJC center are more likely to make joint decision-making with their husband. They are also less likely to earn less than their husband and more likely to earn as much as their husband. We also analyze whether the WJC centers have an effect on women's labor force participation. Results in Table 20 indicate that women's labor supply does not seem to be affected by the opening of these centers.[29] This result may seem a bit puzzling but one possible interpretation is that WJC centers might allow women to be more productive in their jobs by supplying more hours and therefore increasing their income.

Alternatively, the introduction of WJC centers may have contributed to break the silence regarding violence against women and to turn it into a public issue. The different awareness campaigns by the "justice promoters" may have contributed to convert these centers into a trustworthy public service that ensures protection and support to women. By increasing women's trust in the institutional system, these specialized institutions may be changing the discriminatory social values and power structures that underlie violence against women in Peru.

For this purpose, we analyze patterns of institutional trust in case of a domestic violence event. We focus on relating proximity to a WJC center to the type of institutional help sought by women in case of having suffered from domestic violence abuse. More specifically, we analyze

---

[29]In addition, we find that WJC center have no effect on civil status and fertility outcomes, suggesting that there is no selection into the domestic violence module (results upon request).

nine institutional trust variables: whether women sought help in a police station, justice court, district attorney office, DEMUNA (Defence center for children and adolescents), WJC center, ombudsman office, health facility, NGO and other institution. Results in Table 21 indicate that married or cohabiting women living within 1km of a WJC center are less likely to seek help in a regular police police station, but instead they are significantly more likely to put their trust in the women's justice centers. In particular, when we analyze the impact of WJC centers on the overall help sought for the entire sample of women, we find that women in the proximity of a WJC center are significantly less likely to seek help. However, when we analyze the same effect conditional on the occurrence of a domestic violence event, the effect is still negative but not significant. This negative effect could reflect the drop in domestic violence in Peru during the period studied and thus the drop in institutional help sought by women. Despite this, we also find that proximity to a WJC center has a positive and statistically significant effect on women's trust to seek help in a WJC center for the conditional sample. This result suggests that institutional trust is reinforced in the area close to the WJC center, which might trigger a potential female empowerment. This finding has important implications for state capacity, since it may enhance government's ability to fight the problem of domestic violence.

Both mechanisms lead to the conclusion that WJC center's intervention in households with abuse may change the behavior of offenders and victims. In other words, the opening of WJC centers might be a powerful tool to reduce the incentives of the spouse to choose domestic violence through an improvement of the bargaining power of women in the household or/and an increase in institutional trust which, in turn, might also improve women's health and their ability to take care of their children.

Furthermore, our paper shows that the impact of WJC centers is not limited to the direct recipients of domestic abuse. We find strong evidence of positive externalities in terms of their children's human capital investment. In the context of Peru, empowering and supporting women through the presence of WJC centers can contribute to children's education outcomes by basically improving women's welfare. Previous research has shown that women affected by domestic violence may be limited in their ability to take care of their children. Children growing up in households where there is violence among intimate partners can suffer from behavioural and emotional problems, which may lead them to drop out of school and even engage in child labor.

In the context of Peru, if a woman suffers from domestic violence and thus probably from health problems, the burden of household chores falls automatically on their daughters since sons are not expected to get involved in such activities. To better understand why empowering women would help promote school attendance in the context of Peru, we analyze the impact of WJC center on child labor. Table 22 reports regression results of the impact of WJC centers on child labor for children aged 6 to 14 years old. These findings show that proximity to a WJC center is associated with a statistically significant reduction in child labor, especially for young girls.

To shed light on the mechanisms behind the schooling effects on children we divide the sample between households where the grandmother was subject to domestic violence by the grandfather. Previous literature suggests that having a mother subject to violence make women more prone to be subject to violence in their own household. We find that most of the effects are driven by these type of households showing that the effect is having an effect on children by affecting most vulnerable households that would be subject to violence (see Table A-9 in the Appendix).

Finally, having shown the inter-generational benefits of improving access to justice through the WJC centers, we also analyze how other government programs in Peru could interact with WJC centers by changing parental incentives in the affected areas. For this purpose, we exploit the gradual rollout of the conditional cash transfer program (CCT *Juntos*), which provides monetary transfers to parents with the condition that children attend school on a daily basis. In particular, we examine how the presence of CCTs in the district interacts with the presence of a WJC center within 1km of the school/child's residence.

Tables 23 and 24 present analogous versions of Equations 1 and 3 for children and schools of primary level including the interaction with CCT_{dt} and a dummy indicating whether district d has CCT in year t, respectively. Using the *Peruvian DHS*, we do not find any synergies between better access to justice and CCTs. This result is probably due to the lack of variation in CCT rollout in the Peruvian DHS since we are only analyzing the 2006-2014 period. We even find a negative correlation between CCT in the district and primary school attendance when we further limit the sample to districts which ever have a WJC center. In this case, the CCT rollout is most likely representing the most marginalized districts of Peru in terms of access to education and not necessarily the CCT program. However, using the school census data which covers the universe of schools in Peru, we find that conditional cash transfers can enhance the positive effect of WJC centers on primary school enrollment. We find that the effects of CCTs are larger once a WJC opens in the district.

7 Robustness Checks

7.1 Assessing the Internal Validity of the Research Design

In this section we present several robustness checks that support the validity of the identification assumption of the paper. Identification using the difference-in-difference approach relies on the assumption that the path of the outcome variables for the treatment and control households/schools should not be systematically different in the absence of the WJC centers. More precisely, this means that the introduction of WJC centers should be the only factor that drives the treatment group to experience a change in an outcome variable, such as a relative reduction in domestic violence.

However, the main threat to this identification strategy is the correlation between the order

of the opening of the WJC centers and the trends in domestic violence and education patterns before the rollout of the program. Basically, the average effect of the WJC centers would be biased if the timing of WJC centers creation was correlated with pre-program changes in domestic violence and education outcomes. To address this concern, we first argue that pre-program changes in domestic violence and education patterns are uncorrelated to the timing of future WJC centers introduction. Second, we conduct an event study to show that pre-program trends are not driving our results. We also use this analysis to provide a sense of the dynamic effect of WJC centers.

In order to test this, we begin by estimating a regression of pre-program changes in school enrollment on indicators for the year the WJC center was introduced within a 1km radius of the school:

$$\Delta Log(Y_{st}) = Log(Y_{st-1}) - Log(Y_{st}) = \gamma + \alpha_t + \sum_{k \geq t} \delta_k I(WJCyear_{<1km,s} = k) + \varepsilon_{st} \quad (5)$$

The dependent variable is ΔY_{st} is the change in education outcomes at the school level from year $t-1$ to year t (e.g change in the log of primary/secondary total school enrollment, change in school test scores). The set of dummy variables ($WJCyear_{<1km} = k$) take the value of 1 in the year in which a WJC center was opened within 1km of the school. Year fixed-effects are denoted as α_t. The data for this test is derived exclusively from the School Census (CE) panel database and the sample is restricted to those schools that were reached by the program between 2006 and 2014. The reference group is the opening of a WJC center in 2006. If ($WJCyear$) effects are jointly significant it would indicate that year of WJC center creation within 1km of the school was correlated with pre-program changes in total school enrollment.

Unfortunately, we cannot perform exactly the same test with the *Peruvian DHS* since we do not observe the same clusters of households over time. This means that we cannot exploit the variation generated by proximity to the WJC center through Euclidean buffers. However, we can still check whether the timing of WJC center introduction in the district is correlated with changes in women's domestic violence and children's school attendance rates in the district. For this case, we regress pre-program changes in the outcomes of interest for women and children at the district level (e.g. domestic violence, primary school attendance rate, secondary school attendance rate) on yearly indicators of WJC center introduction in the district:

$$\Delta y_{dt} = y_{dt-1} - y_{dt} = \gamma + \alpha_t + \sum_{k \geq t} \delta_k I(WJCyear_d = k) + \varepsilon_{dt} \quad (6)$$

In Tables A-12 and A-13 of the Appendix, we report the results of estimating Equation (5) and (6) on three different windows of pre-program changes in education outcomes at the school and district level, respectively. These findings show that pre-program changes in education at the beginning of the rollout might be correlated with the timing of the WJC center introduction.

29

While, the other two windows of pre-program education results indicate that the rollout year is not correlated with pre-program changes in education outcomes. For this reason, we decide to focus our analysis in the middle of the rollout, that is, from 2006 till 2014, for which identifying assumptions are likely to hold.

We do not find evidence that pre-program trends in education patterns are correlated with the order of the WJC center implementation during the period 2006-2014. In particular, results in Table A-12 indicate that opening a WJC center within 1km of the school does not significantly explain pre-program changes in primary and secondary school enrollment between 1998-2005. Similarly, results in Table A-13 show that the opening of a WJC center in the district is not correlated to pre-program changes in district school attendance rates between 1996-2005. Results in Table A-14 also indicates that pre-program changes in standardized test scores at the school level are not correlated with WJC center introduction. In all cases, we are unable to reject the null hypothesis of the joint test. These findings strongly suggest that pre-program time trends for the education outcomes of interest are not correlated with the introduction of the WJC centers between 2006-2014.

Moreover, Table A-15 reports the results of estimating Equation 6 using women's self-reported domestic violence as an outcome variable. Column 1 shows that the timing of WJC centers in the district is not significantly correlated with pre-program changes in district level domestic violence and the p-value for the joint test is 0.416. The lack of a significant correlation between the year of WJC center introduction in the district and changes in district level domestic violence for different windows provides evidence that pre-program time trends in domestic violence were not correlated with introduction of WJC centers in the district.[30]

In conclusion, we have presented evidence that pre-program changes in domestic violence and education patterns are uncorrelated to the timing of future WJC centers introduction in the district/within 1km. The pre-program patterns for each relevant outcome of interest are also depicted by Figure 9.

7.2 Accounting for the dynamic impact of WJC centers

Next, we exploit the fact that we have information prior to the introduction of the WJC, since the rollout was done gradually each year, in order to conduct an additional formal test of whether pre-trends in the outcomes of interest are correlated with the opening of the WJCs in Peru. This test also allows us to better understand the dynamics of the WJC center introduction and to disentangle the effect over time. For instance, how quickly school enrollment or attendance rates increase after the opening of a WJC and whether this impact accelerates, stabilizes or mean reverts. To explore these dynamics, we conduct an event study analysis, where we analyze

---

[30]Unfortunately, we are unable to perform this test for other women's outcomes due to data unavailability for the pre-program period. For instance, official data on femicides in Peru started to be recorded since 2009 and female hospitalizations since 2006/7.

the impact of leads and lags of the WJC introduction. Formally, we estimate the following regressions at the individual and school level, respectively:

$$y_{idt} = \gamma_0 + \sum_{i=-3}^{4} WJC_d * \beta_i I(\tau_{dt} = i) + \alpha_d + \lambda_{pt} + \delta X'_{it} + \varepsilon_{idt} \qquad (7)$$

$$Y_{st} = \beta_0 + \sum_{i=-3}^{4} WJC_s * \beta_i I(\tau_{st} = i) + \alpha_s + \lambda_{pt} + \gamma X'_{st} + \varepsilon_{st} \qquad (8)$$

where τ_t denotes the event year, defined so that $\tau = 0$ for the year the WJC was introduced within 1km/in the district of the household i/school s, $\tau = 1$ for one year after the WJC centers began to operate, and so on. For $\tau \leq -1$, school and households were untreated by the WJC introduction. The coefficients are measured relative to the omitted coefficient $\tau = -1$. In other words, we add indicator variables for up to 3 years before implementation and 0 - 4 years after implementation.[31] For each outcome, we expect that coefficients on dummies for years -3 and -2 (the years prior to the WJC centers) should not be significant, because if this was the case, the validity of the parallel trends assumption would be violated.

Figures 10 and 11 plot the coefficient of the interaction for the years leading up to the opening of the WJC centers and the years after the introduction of the WJC centers from estimating Equation 7 for each of the women's and children's outcomes, respectively. Similarly, Figure 12 plots the coefficient of the interaction for the leads and lags of the WJC center introduction from estimating Equation 8 for the education outcomes at the school level.

For women's outcomes (e.g. domestic violence, emotional violence, female deaths due to aggression, joint decision-making and labor supply), the coefficients on the years leading up to the opening of the WJC centers are close to zero and not significant, showing no evidence of an anticipatory response within district about to introduce the WJC centers. In particular, we find that women located in districts with a WJC center present lower propensity to experience domestic violence since the year of the opening of the WJC center. This declining pattern reaches its largest impact 2 years after the opening of the center. A similar pattern is found for mental health, one year after hospital entries related to mental health problems decline by 20%.

For primary school enrollment and attendance, we find that the treated schools and households did exhibit a rising trend (relative to the control group) prior to the WJC implementation but this difference is not statistically significant. In particular, primary school attendance increases by 2 percentage points two years after the opening of a WJC in the district. This increase reaches its peak in the third year of WJC introduction, which is also accompanied by a significant improvement in schooling performance and by a decrease in drop-out rates in the

---

[31]Of these seven indicator variables, note that $\tau = -3$ is a dummy that takes the value one for more than 3 years before the WJC center was introduced. The next five dummies are equal to one only in the relevant year of WJC center opening, while the final variable $\tau = 4$ is equal to one in each year starting with the fourth year of adoption.

same year.

Similarly, in the year of the opening, primary school enrollment increases substantially by 1.8% for schools located within 1km of the WJC, after which this increment fluctuates around 2% over the subsequent 3 years. For standardized test scores, there is also no difference in pre-program trends between school located near a WJC center and those further away. Indeed, the graphs show an absence of a strong pre-trend and evidence of a trend break after the WJC opened within 1km and in the district. For secondary school enrollment, we find that schools exposed to a WJC center have a lower enrollment and attendance prior to the opening of the WJC. However, this decline is opposite to the direction we observe after the WJC introduction and it is not statistically significant.

Overall, for school and households located in districts with a WJC presence, the greatest impact on primary school enrollment, primary school attendance and standardized test scores is found 2 years after the opening of the centers, which coincides with the negative impact on women's self-reported domestic violence. The similar timing of the effects on education and domestic violence provides further evidence that improving access to justice for women might be an important mechanism for allowing women to take better care of their children (i.e. investing in their human capital) by increasing their threat point in the intra-household bargaining power, their trust in the institutional system and also by improving their health.

8   Conclusion

In this paper we argue that the opening of WJC centers in Peru has a positive impact on women's status and their children's human capital investment, and that these impacts are concentrated in the very local areas around the WJC center. To the best of our knowledge, this is the first quantitative analysis that attempts to explore the impact of an unexamined dimension of institutional intervention that provides better access to justice for women, namely the WJC centers, on the prevalence of gender-based violence and education outcomes.

We deal with the potential endogeneity in the WJC center placement by exploiting the variation generated by the rollout of the women's justice centers in Peru. Basically, in order to ensure that our results are not driven by selection or time-varying unobservables, we use a difference in-differences strategy, which exploits variation created by the differential timing in the opening of the WJC centers and also the spatial variation in the exposure of a school/household to a WJC center, together with province-by-year fixed effects. We provide evidence in support of the identifying assumptions, and account for two key time-varying confounders: the fact that WJC center introduction might anticipate changes in schooling and unobservable changes in variables that might affect both the timing of the WJC centers and the education outcomes.

Our main finding is that women's status and investments in children's human capital are affected positively by the introduction of the WJC centers. In particular, our results first reveal

that providing better access to justice for women can reduce domestic violence, femicides and female deaths due to aggression and consequently improve their mental health. Then we find that children in primary school living in household's located near a WJC center are significantly more likely to attend school, to pass a grade and they are also significantly less likely to drop out of school. We also show that introducing a WJC center within 1km of a school causes an increase of 3% in the total number of children enrolled in primary schools, which reinforces our previous results. Moreover, primary school second graders have better test scores in reading and mathematics. Consistent with the results on education, we also find that young girls are less likely to be working after the opening of the WJC centers. Most of these effects are localized within a few kilometers and they are mostly driven by urban areas.

Lastly, we analyze which are the potential mechanisms that might be driving this pattern of results. First, we provide evidence that these improvements might be driven by an increase in the bargaining power of women inside the household. Next, we also find some evidence that after these centers opened women resort more to formal institutions in case of violence suggesting an increase in trust on state institutions which might also lead to an improvement in women's intra-household bargaining power. From a public policy standpoint, our analysis implies that providing better access to justice for women can be a powerful tool to reduce gender-based violence and increase human capital investment of children, suggesting a positive inter-generational benefit of the program.

References

Agüero, Jorge. 2013. "Causal estimates of the intangible costs of violence against women in Latin America and the Caribbean." Inter American Development Bank Working Paper No. IDB-WP 414.

Aizer, Anna. 2010. "The gender wage gap and domestic violence." *The American Economic Review*, 100(4): 1847.

Aizer, Anna. 2011. "Poverty, violence, and health the impact of domestic violence during pregracy on newborn health." *Journal of Human Resources*, 46(3): 518–538.

Amaral, Sofia, Prakash Nishith, and Sonia Bhalotra. 2018. "Gender, Crime and Punishment: Evidence from Women Police Stations in India." *MIMEO*, 104: 123–135.

Attanasio, Orazio, and Valerie Lechene. 2002. "Tests of income pooling in household decisions." *Review of economic dynamics*, 5(4): 720–748.

Baldry, Anna C. 2003. "Bullying in schools and exposure to domestic violence." *Child abuse & neglect*, 27(7): 713–732.

Banerjee, Abhijit, Raghabendra Chattopadhyay, Esther Duflo, Daniel Keniston, and Nina Singh. 2012. "Improving police performance in Rajasthan, India: Experimental evidence on incentives, managerial autonomy and training." National Bureau of Economic Research.

Beaman, Lori, Raghabendra Chattopadhyay, Esther Duflo, Rohini Pande, and Petia Topalova. 2009. "Powerful women: does exposure reduce bias?" *The Quarterly journal of economics*, 124(4): 1497–1540.

Black, David S, Steve Sussman, and Jennifer B Unger. 2010. "A further look at the intergenerational transmission of violence: Witnessing interparental violence in emerging adulthood." *Journal of Interpersonal Violence*, 25(6): 1022–1042.

Blattman, Christopher, Donald Green, Daniel Ortega, and Santiago Tobón. 2017. "Pushing crime around the corner? Estimating experimental impacts of large-scale security interventions." National Bureau of Economic Research.

Bloch, Francis, Vijayendra Rao, and Sonalde Desai. 2004. "Wedding celebrations as conspicuous consumption signaling social status in rural India." *Journal of Human Resources*, 39(3): 675–695.

Bobonis, Gustavo J. 2009. "Is the allocation of resources within the household efficient? New evidence from a randomized experiment." *Journal of political Economy*, 117(3): 453–503.

Bobonis, Gustavo J, Melissa González-Brenes, and Roberto Castro. 2013. "Public transfers and domestic violence: The roles of private information and spousal control." *American Economic Journal: Economic Policy*, 5(1): 179–205.

Boesten, Jelke. 2012. "The state and violence against women in Peru: intersecting inequalities and patriarchal rule." *Social Politics: International Studies in Gender, State & Society*, 19(3): 361–382.

Brollo, Fernanda, and Ugo Troiano. 2016. "What happens when a woman wins an election? Evidence from close races in Brazil." *Journal of Development Economics*, 122: 28–45.

Bureau of Justice, Assistance National Center for Women & Policing. 2000. "Recruiting & Retaining Women: A Self-Assessment Guide for Law Enforcement."

Burgert, Clara R, Josh Colston, Thea Roy, and Blake Zachary. 2013. "Geographic displacement procedure and georeferenced data release policy for the Demographic and Health Surveys." Calverton Maryland ICF International.

Campbell, Jacquelyn C. 2002. "Health Consequences of Intimate Partner Violence." *The Lancet*, 359(9314): 1331–1336.

Carlson, Bonnie E. 2000. "Children exposed to intimate partner violence research findings and implications for intervention." *Trauma, Violence, & Abuse*, 1(4): 321–342.

Carrell, Scott E, and Mark L Hoekstra. 2010. "Externalities in the classroom: How children exposed to domestic violence affect everyone's kids." *American Economic Journal: Applied Economics*, 2(1): 211–228.

Chattopadhyay, Raghabendra, and Esther Duflo. 2004. "Women as policy makers: Evidence from a randomized policy experiment in India." *Econometrica*, 72(5): 1409–1443.

Clots-Figueras, Irma. 2012. "Are female leaders good for education? Evidence from India." *American Economic Journal: Applied Economics*, 4(1): 212–44.

Currie, Cheryl L. 2006. "Animal cruelty by children exposed to domestic violence." *Child abuse & neglect*, 30(4): 425–435.

Di Tella, Rafael, and Ernesto Schargrodsky. 2004. "Do police reduce crime? Estimates using the allocation of police forces after a terrorist attack." *American Economic Review*, 94(1): 115–133.

Draca, Mirko, Stephen Machin, and Robert Witt. 2011. "Panic on the streets of london: Police, crime, and the july 2005 terror attacks." *American Economic Review*, 101(5): 2157–81.

Duflo, Esther. 2012. "Women empowerment and economic development." *Journal of Economic Literature*, 50(4): 1051–1079.

Eckel, Catherine C, and Philip J Grossman. 2008. "Men, women and risk aversion: Experimental evidence." *Handbook of experimental economics results*, 1: 1061–1073.

Edleson, Jeffrey L. 1999. "Children's witnessing of adult domestic violence." *Journal of interpersonal Violence*, 14(8): 839–870.

Eswaran, Mukesh, and Nisha Malhotra. 2011. "Domestic violence and women's autonomy in developing countries: theory and evidence." *Canadian Journal of Economics/Revue canadienne d'économique*, 44(4): 122–1263.

Fantuzzo, John, Robert Boruch, Abdullahi Beriama, Marc Atkins, and Susan Marcus. 1997. "Domestic violence and children: Prevalence and risk in five major US cities." *Journal of the American Academy of child & Adolescent psychiatry*, 36(1): 116–122.

Farmer, Amy, and Jill Tiefenthaler. 1996. "Domestic violence: the value of services as signals." *The American Economic Review*, 86(2): 274–279.

Flake, Dallan F, and Renata Forste. 2006. "Fighting families: family characteristics associated with domestic violence in five Latin American countries." *Journal of Family Violence*, 21(1): 19.

Franco, Rocío, and María González. 2009. "Las mujeres en la justicia comunitaria: víctimas, sujetos y actores." *Serie Justicia Comunitaria en los Andes: Perú y Ecuador*, 3.

Fregoso, Rosa-Linda, and Cynthia Bejarano. 2009. *Terrorizing Women: Feminicide in the Americas.* Duke University Press.

Garcia-Moreno, Claudia, Henrica AFM Jansen, Mary Ellsberg, Lori Heise, Charlotte H Watts, et al. 2006. "Prevalence of intimate partner violence: findings from the WHO multi-country study on women's health and domestic violence." *The Lancet*, 368(9543): 1260–1269.

Heinemann, Alessandra, and Dorte Verner. 2006. "Crime and violence in development: A literature review of Latin America and the Caribbean."

Hidrobo, Melissa, and Lia Fernald. 2013. "Cash transfers and domestic violence." *Journal of Health Economics*, 32(1): 304–319.

Holt, Stephanie, Helen Buckley, and Sadhbh Whelan. 2008. "The impact of exposure to domestic violence on children and young people: A review of the literature." *Child abuse & neglect*, 32(8): 797–810.

Huth-Bocks, Alissa C, Alytia A Levendosky, and Michael A Semel. 2001. "The direct and indirect effects of domestic violence on young children's intellectual functioning." *Journal of Family Violence*, 16(3): 269–290.

INEI. 2001. *Encuesta demográfica y de salud familiar.* Instituto Nacional de Estadística and Informática (Peru) and Macro International. MEASURE/DHS+ (Programme).

INEI. 2015. *Encuesta demográfica y de salud familiar.* Instituto Nacional de Estadística and Informática (Peru) and Macro International. MEASURE/DHS+ (Programme).

INEI. 2017. *Peru: Brechas de Genero 2017 - Avances hacia la igualdad de mujeres y hombres.* Instituto Nacional de Estadística e Informática (Peru) (Last available 11/03/2018 at https://www.inei.gob.pe/media/MenuRecursivo/publicaciones_digitales/Est/Lib1444/libro.pdf).

Iyer, Lakshmi, Anandi Mani, Prachi Mishra, and Petia Topalova. 2012. "The power of political voice: women's political representation and crime in India." *American Economic Journal: Applied Economics*, 4(4): 165–93.

Jubb, Nadine, Gloria Camacho, Almachiara D'Angelo, Kattya Hernández, I Macassi León, LI Meléndez López, and G Yáñez De la Borda. 2010. "Women's Police Stations in Latin America: An Entry Point for Stopping Violence and Gaining Access to Justice." *Ottawa: Centre for Planning and Social Studies and International Development Research Centre.*

Koenen, Karestan C, Terrie E Moffitt, Avshalom Caspi, Alan Taylor, and Shaun Purcell. 2003. "Domestic violence is associated with environmental suppression of IQ in young children." *Development and psychopathology*, 15(2): 297–311.

La Ferrara, Eliana, Alberto Chong, and Suzanne Duryea. 2012. "Soap operas and fertility: Evidence from Brazil." *American Economic Journal: Applied Economics*, 4(4): 1–31.

Londoño, Juan Luis, Rodrigo Guerrero, JL Londoño, A Gaviria, and R Guerrero. 2000. "Violencia en América Latina: epidemiología y costos." *Asalto al desarrollo. Violencia en América Latina*, 11-57.

Lundberg, Shelly J, Robert A Pollak, and Terence J Wales. 1997. "Do husbands and wives pool their resources? Evidence from the United Kingdom child benefit." *Journal of Human resources*, 463–480.

Machin, Stephen, and Olivier Marie. 2011. "Crime and police resources: The street crime initiative." *Journal of the European Economic Association*, 9(4): 678–701.

Manser, Marilyn, and Murray Brown. 1980. "Marriage and household decision-making: A bargaining analysis." *International Economic Review*, 32-44.

McElroy, Marjorie B, and Mary Jean Horney. 1981. "Nash-bargained household decisions: Toward a generalization of the theory of demand." *International Economic Review*, 333–349.

Mello, Steven. 2016. "Police and Crime: Evidence from Cops 2.0." *Browser Download This Paper*.

Miller, Amalia R, and Carmit Segal. 2016. "Do Female Officers Improve Law Enforcement Quality? Effects on Crime Reporting and Domestic Violence."

MIMDES, Ministerio de la Mujer y Desarrollo Social. 2007. "¿Que son los Centros de Emergencia Mujer?"

MIMDES, Ministerio de la Mujer y Desarrollo Social. 2009. "Investigacion operativa: "Eficacia de la intervencion de los Centros Emergencia Mujer"."

Morrison, A, MB Orlando, and G Pizzolitto. 2007. "The impact of intimate partner violence against women in Peru: estimates using matching techniques." [Unpublished] 2007. Presented at the Population Association of America 2007 Annual Meeting New York New York March 29-31 2007.

Nowell, Clifford, and Sarah Tinkler. 1994. "The influence of gender on the provision of a public good." *Journal of Economic Behavior & Organization*, 25(1): 25–36.

Oster, Emily, and Bryce Millett Steinberg. 2013. "Do IT service centers promote school enrollment? Evidence from India." *Journal of Development Economics*, 104: 123–135.

Pande, Rohini. 2003. "Can mandated political representation increase policy influence for disadvantaged minorities? Theory and evidence from India." *American Economic Review*, 93(4): 1132–1151.

Perez-Heydrich, Carolina, Joshua L Warren, Clara R Burgert, and Michael Emch. 2013. "Guidelines on the Use of DHS GPS Data."

Pollak, Robert A. 2004. "An intergenerational model of domestic violence." *Journal of Population Economics*, 17(2): 311–329.

Revilla, Ana Teresa. 1999. "La administración de justicia informal en el Perú." *Reforma judicial en América Latina: una tarea inconclusa, Santa Fé de Bogotá: Corporación Excelencia en la Justicia.*

Schacht, Ryan, Kristin Liv Rauch, and Monique Borgerhoff Mulder. 2014. "Too many men: the violence problem?" *Trends in Ecology & Evolution*, 29(4): 214–222.

Stevenson, Betsey, and Justin Wolfers. 2006. "Bargaining in the shadow of the law: Divorce laws and family distress." *The Quarterly Journal of Economics*, 121(1): 267–288.

Thomas, Duncan. 1990. "Intra-household resource allocation: An inferential approach." *Journal of human resources*, 635–664.

UNHCR. 2010. "Peru: Domestic violence, state protection and support services available." *Canada: Immigration and Refugee Board of Canada.* Available at: http://www.refworld.org/docid/4e438b532.html [Last accessed 3 May 2017].

WHO. 2013. *Global and regional estimates of violence against women: prevalence and health effects of intimate partner violence and non-partner sexual violence.* World Health Organization.

Wolfe, David A, Claire V Crooks, Vivien Lee, Alexandra McIntyre-Smith, and Peter G Jaffe. 2003. "The effects of children's exposure to domestic violence: A meta-analysis and critique." *Clinical child and family psychology review*, 6(3): 171–187.

Figure 1: Distribution and Growth of the Openning of the *women's justice centers* (WJCs) by Year - Peru (1999-2016)
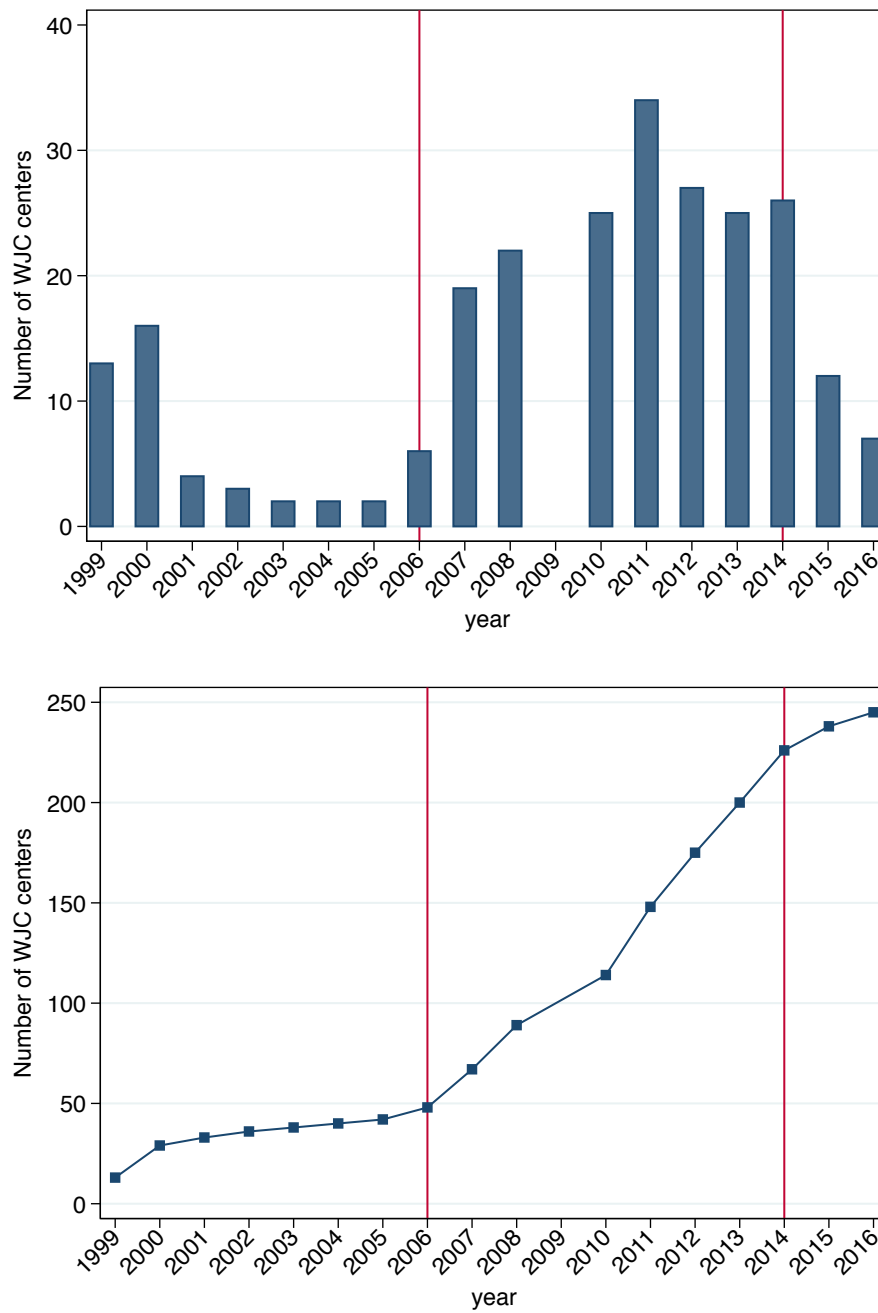
Notes: *Author's estimates based on WJC centers data from the Peruvian Ministry for Women and Vulnerable Populations (MIMP).*

Figure 2: Rollout of the WJCs across Time and Space (1999-2014)

a. WJC centers in 2000

b. WJC centers in 2006

c. WJC centers in 2011

d. WJC centers in 2014

Notes: Author's estimates based on WJC centers data from the Peruvian Ministry for Women and Vulnerable Populations (MIMP).

Figure 3: Total Number of Persons Attended in WJC Centers by Year (2002-2016)
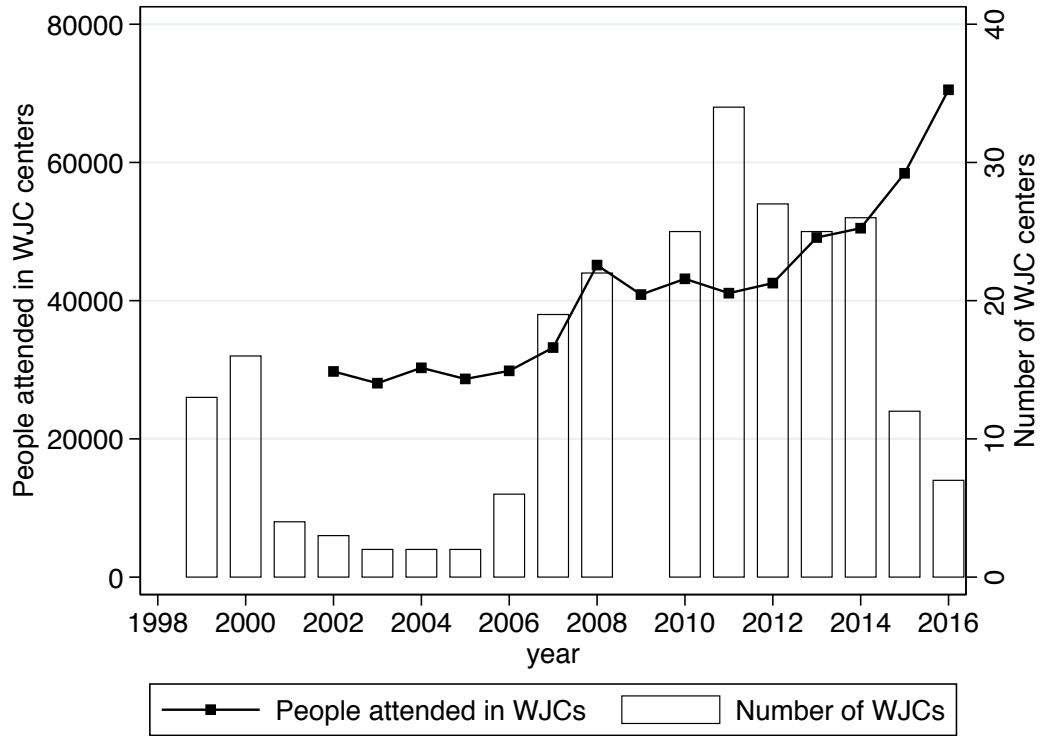
Figure 4: Domestic Violence in Peru (2003-2015)
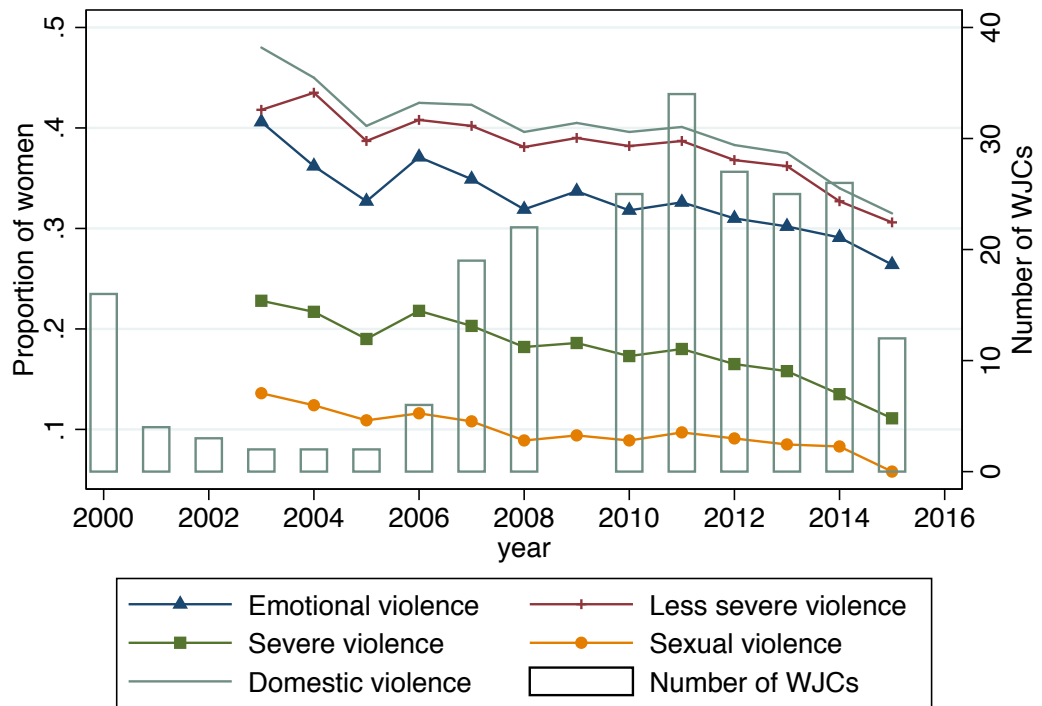
Source: 2003-2015 Peru DHS

Figure 5: Euclidean Distance Buffers and WJC centers (Schools and DHS Clusters of Households) - Lima and Tumbes
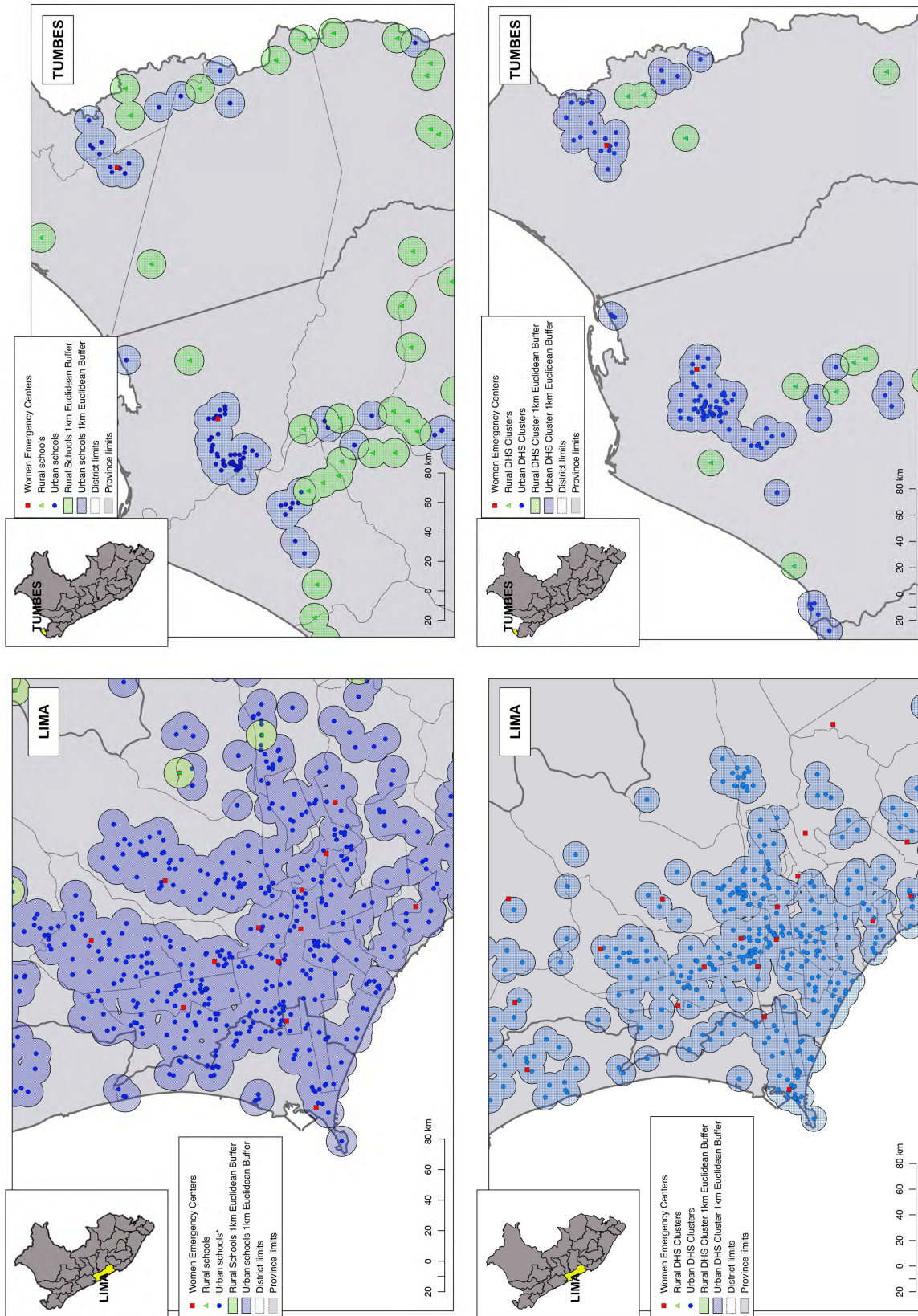
Figure 6: Femicides, Female Deaths due to Aggression and Female Hospitalizations for Mental Health Problems - Peru

Source: Peruvian Crime Observatory at the Ministry of Public Affairs

Source: Ministry of Health - General Office of Statistics and Informatics

Source: Ministry of Health - General Office of Statistics and Informatics
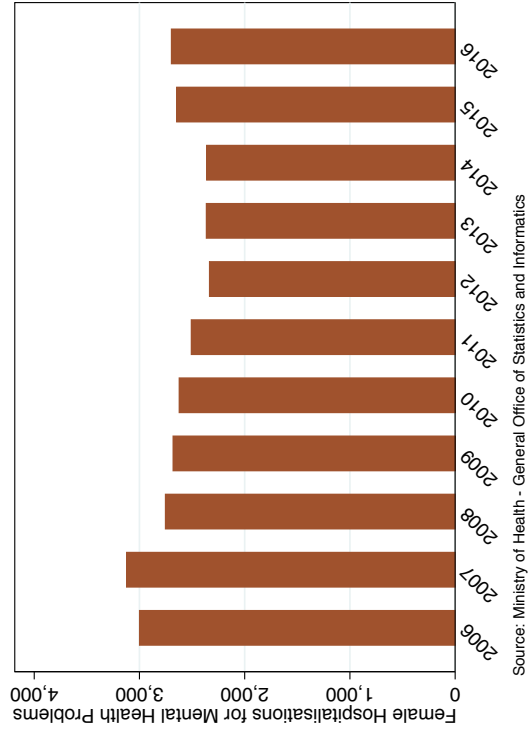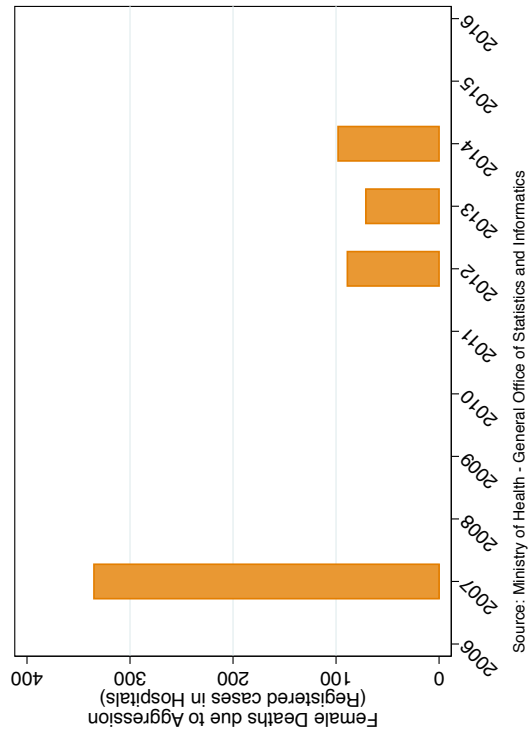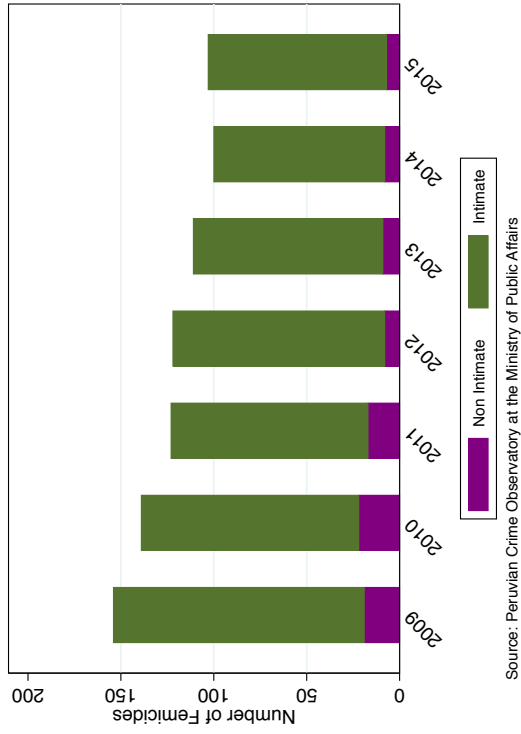
Notes: Author's estimates based on femicides data from the Peruvian Crime Observatory at the Ministry of Public Affairs, on female deaths data due to aggressions (cases registered in hospitals) and on female hospitalizations for mental health problems from the Peruvian Ministry of Health - General Office of Statistics and Informatics.

43

Figure 7: WJC center and CCT *Juntos* presence in the district
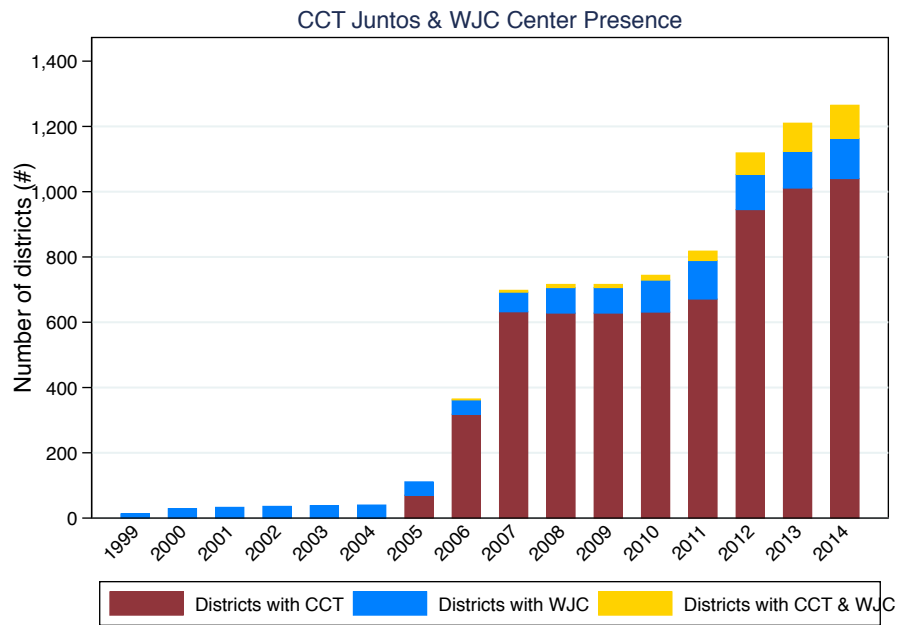
Figure 8: WJC center and CCT *Juntos* entry in the district
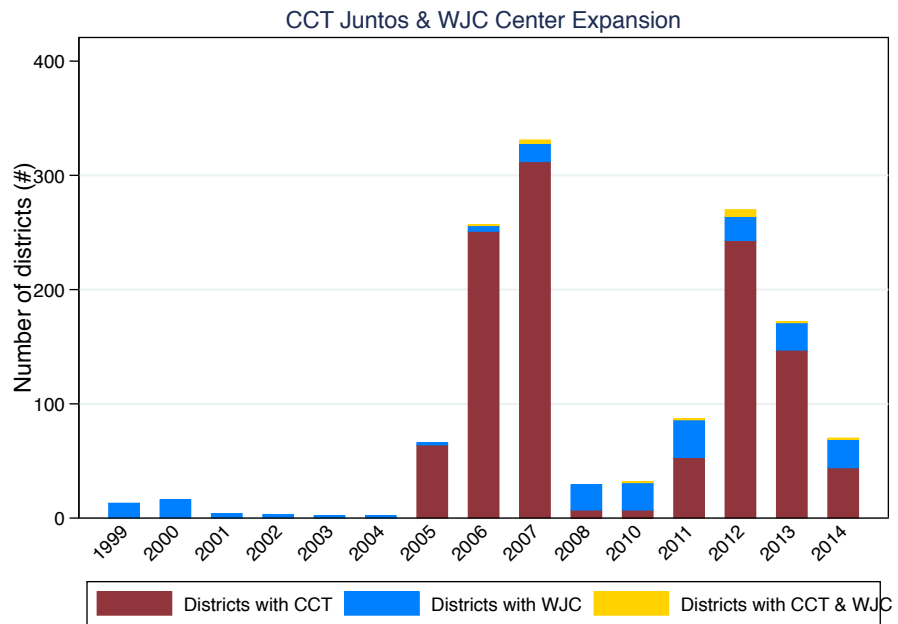
Table 1: Women's Descriptive Statistics and WJC Center Exposure - DHS (2006-2014)

	Women: 15-49 years old		
	All	Urban	Rural
Panel A.1: Number of women by exposure to a WJC center			
No WJC within 1km	55,323	29,432	25,891
WJC within 1km	9,040	8,965	75
No WJC within 5km	38,603	13,841	24,762
WJC within 5km	25,760	24,556	1,204
Total of women	64,363	38,397	25,966
Panel A.2: Number of women by exposure to a WJC center			
No WJC in the district	61,946	28,540	33,406
WJC in the district	34,614	30,041	4,573
Total of women	96,560	58,581	37,979
	Women: 15-49 years old		
	Obs	Mean	Std. Dev.
Panel B: Women's Summary Statistics			
Domestic violence last 12 months	64,363	0.390	0.487
Less severe violence	64,363	0.376	0.484
Severe violence	64,363	0.174	0.379
Sexual violence	64,363	0.093	0.291
Emotional violence	64,363	0.323	0.467
Anemic	57,540	0.220	0.414
Weight (kg)	59,460	61.57	11.10
BMI	59,460	26.80	4.416
Underweight	59,460	0.006	0.079
Overweight	59,460	0.511	0.499
Obese	59,460	0.208	0.406
Smokes	64,363	0.035	0.184
Age	64,363	33.93	8.336
Age at first marriage	64,363	20.14	4.739
# Total children ever born	64,363	2.811	1.993
# Years of education	64,363	8.577	4.481
# Household Members	64,363	4.626	1.818
Married	64,363	0.356	0.478
Living together	64,363	0.517	0.499
Widowed	64,363	0.007	0.089
Divorced/Not living together	64,363	0.118	0.319
Urban cluster	64,363	0.596	0.490
Currently working	64,363	0.684	0.464

Notes: The GPS data was not available for the years 2012 and 2013 in the Peru DHS. Source: Peru DHS (2006-2014)

Table 2: Children's Descriptive Statistics and WJC Center Exposure - DHS (2006-2014)

	Primary Level (Children: 6-11 years old)			Secondary Level (Children: 12-16 years old)		
	All	Urban	Rural	All	Urban	Rural
Panel A.1: Number of children by exposure to a WJC center - (GPS data)						
No WJC within 1km	42,914	19,654	23,260	29,494	14,282	15,212
WJC within 1km	5,789	5,740	49	4,025	3,991	34
No WJC within 5km	32,066	9,706	22,360	21,691	7,087	14,604
WJC within 5km	16,637	15,688	949	11,828	11,186	642
Total of children	48,703	25,394	23,309	33,519	18,273	15,246
Panel A.2: Number of children by exposure to a WJC center - (All data)						
No WJC in the district	48,895	19,250	29,645	33,392	13,999	19,393
WJC in the district	22,971	19,084	3,887	16,069	13,490	2,579
Total of children	71,866	38,334	33,532	49,461	27,489	21,972
	Primary Level (Children: 6-11 years old)			Secondary Level (Children: 12-16 years old)		
	Obs	Mean	Std. Dev.	Obs	Mean	Std. Dev.
Panel B: Children's Summary Statistics						
Currently Attending	48,703	0.970	0.169	33,519	0.895	0.305
Female Attendance	24,689	0.970	0.169	18,549	0.899	0.300
Male Attendance	24,014	0.970	0.169	14,970	0.891	0.311
Passed Grade	48,213	0.919	0.271	30,380	0.782	0.412
Repeated Grade	48,213	0.048	0.215	30,380	0.038	0.191
Dropped Out	48,213	0.022	0.146	30,380	0.090	0.287
Left School +2 years ago	48,213	0.002	0.047	30,380	0.084	0.278
Age	48,703	8.467	1.700	33,519	13.786	1.384
Head's Years of Education	48,703	8.602	7.159	33,519	8.348	7.025
Urban Cluster	48,703	0.521	0.499	33,519	0.545	0.497
# Female Adults in HH	48,703	1.219	0.532	33,519	1.218	0.541
# Male Adults in HH	48,703	1.101	0.611	33,519	1.120	0.669
# HH Members 0-18 years old	48,703	3.166	1.522	33,519	3.248	1.551

Notes: The GPS data was not available for the years 2012 and 2013 in the Peru DHS. Source: Peru DHS (2006-2014)

Table 3: School Descriptive Statistics and WJC Center Exposure - School Census (2006-2014)

	Primary Schools (1st - 6th Grade)			Secondary Schools (1st - 5th Grade)		
	All	Urban	Rural	All	Urban	Rural
Panel A: Years of coverage and number of schools						
Number of schools in						
First year of coverage (2006)	32,817	12,007	20,810	9,693	6,822	2,871
Last year of coverage (2014)	36,859	14,325	22,534	12,773	8,488	4,285
Panel B: Number of schools by exposure to a WJC center						
Never had WJC within 1km	34,372	11,883	22,489	11,287	7,018	4,269
WJC within 1km	2,575	2,524	51	1,522	1,504	18
Never had WJC within 5km	26,418	5,095	21,323	7,282	3,164	4,118
WJC within 5km	10,529	9,312	1,217	5,527	5,358	169
Total of schools	36,947	14,407	22,540	12,809	8,522	4,287
Never had WJC in the district	24,439	6,530	17,909	7,481	4,040	3,441
WJC in the district	12,555	7,884	4,671	5,330	4,484	846
Total of schools	36994	14,414	22,580	12,811	8,524	4,287
	Primary Schools (1st - 6th Grade)			Secondary Schools (1st - 5th Grade)		
	Obs	Mean	Std. Dev.	Obs	Mean	Std. Dev.
Panel C: School Summary Statistics						
Total Enrollment	315,221	95.9	142.5	102,685	174.8	206.8
Female Enrollment	315,221	46.9	73.6	102,685	84.4	114.9
Male Enrollment	315,221	49.0	75.4	102,685	90.4	113.1
Public School	315,221	0.797	0.402	102,685	0.636	0.481
Urban School	315,221	0.378	0.485	102,685	0.679	0.466
School Language (Spanish)	315,221	0.815	0.387	102,685	0.905	0.292
School Language (Quechua)	315,221	0.124	0.330	102,685	0.000	0.242
School with electricity	315,221	0.671	0.469	102,685	0.872	0.334
Schools with piped water	315,221	0.729	0.444	102,685	0.845	0.361
Reading test-scores (2nd grade)	181,240	510.18	73.08			
Math test-scores (2nd grade)	181,240	507.74	81.68			
Both test-scores (2nd grade)	181,240	508.9	73.44			

Notes: The GPS data was not available for 49 schools (47 primary schools and 2 secondary schools) in the Peruvian School Census. Source: Peru School Census (2006-2014)

Table 4: Placement of WJC Centers in the District

Dependent variables	WJC in district, by 2014		Added WJC in district during 2006-2014			
	(1)	(2)	(3)	(4)	(5)	(6)
# Criminal Attorney Offices	-0.022*	-0.022*	-0.050***	-0.050***	-0.048***	-0.050***
	(0.013)	(0.013)	(0.015)	(0.015)	(0.016)	(0.015)
# Family Attorney Offices	0.090**	0.089**	0.110***	0.111***	0.089**	0.109***
	(0.036)	(0.036)	(0.040)	(0.040)	(0.040)	(0.040)
# Mixed Attorney Offices	0.106***	0.107***	0.069	0.071*	0.037	0.070
	(0.033)	(0.033)	(0.043)	(0.043)	(0.049)	(0.043)
# Criminal Courts	0.005	0.005	-0.001	-0.001	-0.001	-0.001
	(0.018)	(0.018)	(0.024)	(0.024)	(0.023)	(0.024)
# Family Courts	-0.093**	-0.092**	-0.126**	-0.127**	-0.107*	-0.125**
	(0.040)	(0.040)	(0.058)	(0.058)	(0.058)	(0.058)
# Mixed Courts	0.183***	0.181***	0.233***	0.233***	0.213***	0.232***
	(0.035)	(0.035)	(0.041)	(0.042)	(0.040)	(0.041)
# Police Stations	0.082***	0.083***	0.049***	0.048***	0.048***	0.049***
	(0.012)	(0.012)	(0.015)	(0.015)	(0.016)	(0.015)
# of Health Establishments	0.246***	0.247***	0.194***	0.167***	0.167***	0.196***
	(0.043)	(0.042)	(0.050)	(0.049)	(0.059)	(0.049)
Log. Population, 2000	0.017***	0.014**	0.012**	0.012**	0.014	0.011*
	(0.005)	(0.006)	(0.005)	(0.005)	(0.012)	(0.006)
△ Primary Enrollment, (1998-2005)			0.0002		0.0001	0.0001
			(0.0002)		(0.0003)	(0.0002)
△ Secondary Enrollment, (1998-2005)				0.00008	0.00002	0.00006
				(0.00008)	(0.0002)	(0.00009)
Domestic Violence, 2000					0.065	
					(0.063)	
CCT *Juntos* in the district		-0.010				-0.0001
		(0.017)				(0.019)
# Households with CCT *Juntos*, 2014		0.00001				0.00001
		(0.00001)				(0.00001)
Observations (Districts)	1,843	1,838	1,843	1,843	700	1,838
R-squared	0.703	0.702	0.535	0.534	0.487	0.535
Department FE	YES	YES	YES	YES	YES	YES

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Notes: This table shows the effects of district characteristics on WJC center's placement. The left hand side variable in Columns 1 and 2 is the number of WJC centers in the district by 2014; in Columns 3 to 6 it is whether any centers were added during the sample period 2006-2014. Standard errors are in parentheses, clustered at the district level. Source: MIMP (*Ministerio de la Mujer y Poblaciones Vulnerables*)

Table 5: The Effect of WJC centers on Domestic Violence - (2006-2014)

Dep. variable	Domestic Violence in last 12 months			
Sample	All women	All women	Only urban clusters	Ever WJC in district
Controls	Standard	District trends	Standard	Standard
	(1)	(2)	(3)	(4)

Panel A: WJC center within a distance buffer from the cluster of residence

WJC within 1km	-0.022**	-0.018*	-0.029***	-0.017
	(0.010)	(0.011)	(0.010)	(0.012)
Observations	64,363	64,363	38,395	27,996
Number of districts	1167	1167	485	215
Mean dep. var	0.390	0.390	0.399	0.397

Panel B: WJC center in the district of residence

WJC in district	-0.024**	-0.060***	-0.023*	-0.032*
	(0.011)	(0.020)	(0.014)	(0.018)
Observations	96,560	96,560	58,579	42,393
Number of districts	1293	1293	531	225
Mean dep. var	0.387	0.387	0.397	0.394
District FE	YES	YES	YES	YES
Province*Year FE	YES	YES	YES	YES
Covariates	YES	YES	YES	YES

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Notes: The dependent variable is a dummy indicating whether the women suffered any type of domestic violence (less severe, severe or sexual violence) during the last 12 months. The independent variables measures the presence of a WJC within a 1km Euclidean buffer of the women's cluster of residence and presence of WJC center in the women's district. Robust standard errors (in parentheses) are clustered at the district level. The sample includes women between the ages of 15 and 49. Women who were never married or never cohabited are excluded from the sample. Covariates include age, age at first marriage, number of children, years of education, number of household members, number of households in the dwelling, marital status (married=1), rural residence dummy, district fixed-effects and province-by-year fixed effects. Source: Peru DHS 2006-2014.

Table 6: Impact of WJC centers on Emotional Violence - (2006-2014)

Dep. variables	Emotional violence	Spouse ever humiliated	Spouse ever threatened with harm	Spouse ever threatened to take children
	(1)	(2)	(3)	(4)
Sample A: All women 15-49 years old				
WJC within 1km	-0.010	-0.002	-0.003	-0.017*
	(0.010)	(0.009)	(0.006)	(0.010)
Observations	64,364	64,364	64,364	64,364
Number of districts	1167	1167	1167	1167
Mean dep.var.	0.323	0.229	0.119	0.206
Sample B: Only women in urban clusters				
WJC within 1km	-0.018	-0.009	-0.007	-0.024**
	(0.011)	(0.010)	(0.007)	(0.011)
Observations	38,396	38,396	38,396	38,396
Number of districts	485	485	485	485
Mean dep.var.	0.337	0.239	0.114	0.219
District FE	YES	YES	YES	YES
Province*Year FE	YES	YES	YES	YES
Covariates	YES	YES	YES	YES

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Notes: The dependent variable is a dummy indicating whether the women suffered any type of emotional violence during the last 12 months. The independent variables measures the presence of a WJC within a 1km Euclidean buffer of the women's cluster of residence. Robust standard errors (in parentheses) are clustered at the district level. The sample includes women between the ages of 15 and 49. Women who were never married or never cohabited are excluded from the sample. Covariates include age, age at first marriage, number of children, years of education, number of household members, number of households in the dwelling, marital status (married=1), rural residence dummy, district fixed-effects and province-by-year fixed effects. Source: Peru DHS 2006-2014.

Table 7: WJC centers and Femicides at the District Level - (2009-2015)

Dep. var	Log(# Femicides)					
Sample	All	All	Age 0-19	Age 20-39	Age 40-59	Age 60+
	(1)	(2)	(3)	(4)	(5)	(6)
WJC centers in the district	-0.008	-0.008	0.012	-0.021*	0.003	0.002
	(0.015)	(0.015)	(0.008)	(0.012)	(0.008)	(0.001)
Log (District population)		0.023	-0.015	0.017	0.015	0.012*
		(0.036)	(0.022)	(0.026)	(0.018)	(0.007)
Observations	12,915	12,894	12,894	12,894	12,894	12,894
Number of districts	1845	1842	1842	1842	1842	1842
Mean dep. var	0.058	0.058	0.010	0.035	0.010	0.001
District FE	YES	YES	YES	YES	YES	YES
Province-Year FE	YES	YES	YES	YES	YES	YES

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Notes: The dependent variable number of femicides at the district level was obtained from Peru's Crime Observatory at the Ministry of Public Affairs.

Table 8: WJC centers and Female Deaths due to Aggression (registered cases in hospitals) at the District Level - (2007-2014)

Dep. var.	Log(# Female Deaths due to Aggression)	
	2007-2014	
	(1)	(2)
WJC centers in the district	-0.074**	-0.075**
	(0.031)	(0.031)
Log (Population)		-0.057
		(0.051)
Observations	7,384	7,372
Number of clusters	1846	1843
Mean dep. var.	0.080	0.080
District FE	YES	YES
Province-Year FE	YES	YES

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Notes: Female deaths due to aggression at the district level was obtained from the Peruvian Ministry of Health. The sample of emale deaths due to aggression includes women between the ages of 18 and 59 and covers the rounds 2007, 2012, 2013 and 2014.

Table 9: WJC centers and Female Deaths due to Aggression (registered cases in hospitals) at the District Level - (2007-2014)

Dep. var.	Log(# Female Deaths due to Aggression) 2007-2014			Log(# Female Mental Health Problems) 2006-2016		
	(1)	(2)	(3)	(4)	(5)	(6)
WJC centers in the district	-0.074**	-0.075**	-0.078**	-0.0781*	-0.0875**	
	(0.031)	(0.031)	(0.031)	(0.043)	(0.043)	
Log (Population)		-0.057	-0.060	0.685***		
		(0.051)	(0.051)	(0.189)		
Observations	7,384	7,368	7,368			
Number of clusters	1846	1842	1842			
Mean dep. var.	0.080	0.080	0.080			
District FE	YES	YES	YES			
Province-Year FE	YES	YES	YES			
Male deaths/mental			YES			

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Notes: Female deaths due to aggression at the district level was obtained from the Peruvian Ministry of Health. The sample of female deaths due to aggression includes women between the ages of 18 and 59 and covers the rounds 2007, 2012, 2013 and 2014.

Table 10: WJC centers and Female Hospitalizations for Mental Health Problems at the District Level - (2006-2016)

Dep. var.	Log(# Female Mental Health Problems) 2006-2016	
	(1)	(2)
WJC centers in the district	-0.0781*	-0.0875**
	(0.043)	(0.043)
Log (Population)		0.685***
		(0.189)
Observations	4,529	4,529
Number of clusters	1846	1843
Mean dep. var.	0.608	0.608
District FE	YES	YES
Province-Year FE	YES	YES

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Notes: The dependent variable number of female hospitalizations for mental health problems was obtained from the Peruvian Ministry of Health. The sample of female hospitalizations for mental health problems includes women between the ages of 18 and 59.

Table 11: The Effect of WJC centers on Women's Health Outcomes - (2006-2014)

Dep. variables	Anemic (1)	Weight (kg) (2)	BMI (3)	Underweight (4)	Overweight (5)	Obese (6)	Smokes (7)
Sample A: All women 15-49 years old							
WJC within 1km	-0.012	0.508**	0.105	0.001	-0.003	0.004	0.005
	(0.009)	(0.212)	(0.089)	(0.002)	(0.009)	(0.009)	(0.003)
Observations	57,540	59,460	59,460	59,460	59,460	59,460	64,363
Number of districts	1134	1134	1134	1134	1134	1134	1167
Mean dep. var	0.261	61.72	26.86	0.006	0.511	0.208	0.037
Sample B: Only women in urban clusters							
WJC within 1km	-0.008	0.576**	0.127	0.001	-0.005	0.002	0.007
	(0.011)	(0.259)	(0.107)	(0.002)	(0.011)	(0.011)	(0.005)
Observations	34,387	35,534	35,495	35,495	35,495	35,495	38,395
Number of districts	477	477	477	477	477	477	485
Mean dep. var	0.207	63.6	27.4	0.006	0.517	0.252	0.051
District FE	YES	YES	YES	YES	YES	YES	YES
Province-Year FE	YES	YES	YES	YES	YES	YES	YES
Covariates	YES	YES	YES	YES	YES	YES	YES

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Notes: Source: Peru DHS 2006-2014.

53

Table 12: WJC centers and Female Hospitalizations for Mental Health Problems at the District Level - (2006-2016)

Dep. var.	Log(# Female Mental Health Problems)	
	2006-2016	
	(1)	(2)
WJC centers in the district	-0.0781*	-0.0875**
	(0.043)	(0.043)
Log (Population)		0.685***
		(0.189)
Observations	4,529	4,529
Number of clusters	1846	1843
Mean dep. var.	0.608	0.608
District FE	YES	YES
Province-Year FE	YES	YES

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Notes: The dependent variable number of female hospitalizations for mental health problems was obtained from the Peruvian Ministry of Health. The sample of female hospitalizations for mental health problems includes women between the ages of 18 and 59.

Table 13: The Effect of WJC Centers on Children's Primary School Attendance - (2006-2014)

Dep. variable	**Currently Attending Primary Level**			
Sample	All children	All children	Only urban	Ever WJC
	6-11 y.o	6-11 y.o	clusters	in district
Controls	Standard	District trends	Standard	Standard
	(1)	(2)	(3)	(4)

Panel A: WJC center within a distance buffer from the cluster of residence

WJC within 1km	0.019**	0.018*	0.027***	0.023***
	(0.008)	(0.009)	(0.009)	(0.008)
Observations	48,703	48,703	25,391	19,563
Number of districts	1159	1159	485	215
Mean dep. var	0.970	0.970	0.971	0.969

Panel B: WJC center in the district of residence

WJC in the district	0.005	-0.005	0.016**	0.022**
	(0.007)	(0.011)	(0.008)	(0.009)
Observations	71,866	71,866	38,330	29,051
Number of districts	1286	1286	531	225
Mean dep. var	0.970	0.970	0.970	0.967
District FE	YES	YES	YES	YES
Province*Year FE	YES	YES	YES	YES
Covariates	YES	YES	YES	YES

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Notes: The dependent variable is a dummy indicating whether the child is currently attending primary school. The independent variables measures the presence of a WJC within a 1km Euclidean buffer of the child's cluster of residence and presence of a WJC center in the child's district. Robust standard errors (in parentheses) are clustered at the district level. The sample includes children between the ages of 6 and 11. Covariates include age, gender, household's head years of education, number of children in the household aged 0-18, number of children in the household aged 0-5, number of female adults, number of male adults, rural residence dummy, district fixed effect and province-by-year fixed effect. Source: Peru DHS 2006-2014.

Table 14: The Effect of WJC Centers on Children's Secondary School Attendance - (2006-2014)

Dep. variable	Currently Attending Secondary Level			
Sample	All children 12-16 y.o	All children 12-16 y.o	Only urban clusters	Ever WJC in district
Controls	Standard	District trends	Standard	Standard
	(1)	(2)	(3)	(4)

Panel A: WJC center within a distance buffer from the cluster of residence

WJC within 1km	0.022*	0.027*	0.029**	0.027**
	(0.012)	(0.014)	(0.012)	(0.013)
Observations	33,519	33,519	18,266	13,570
Number of clusters	1140	1140	480	215
Mean dep. var	0.895	0.895	0.916	0.908

Panel B: WJC center in the district of residence

WJC in the district	0.012	0.039**	0.027	0.036
	(0.016)	(0.018)	(0.020)	(0.024)
Observations	49,461	49,461	27,482	20,275
Number of districts	1270	1270	528	224
Mean dep. var	0.896	0.896	0.913	0.904
District FE	YES	YES	YES	YES
Province*Year FE	YES	YES	YES	YES
Covariates	YES	YES	YES	YES

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Notes: The dependent variable is a dummy indicating whether the child is currently attending secondary school. The independent variables measures the presence of a WJC within a 1km Euclidean buffer of the child's cluster of residence and presence of a WJC center in the child's district. Robust standard errors (in parentheses) are clustered at the district level. The sample includes children between the ages of 12 and 16. Covariates include age, gender, household's head years of education, number of children in the household aged 0-18, number of children in the household aged 0-5, number of female adults, number of male adults, rural residence dummy, district fixed effect and province-by-year fixed effect. Source: Peru DHS 2006-2014.

Table 15: School Attendance Status and Proximity to a WJC center - (2006-2014)

Sample	Primary School Attendance Status				Secondary School Attendance Status			
	Children: 6-11 years old				Children: 12-16 years old			
Dep. variables	Passed grade	Repeated grade	Dropped out	Left school +2 years ago	Passed grade	Repeated grade	Dropped out	Left school +2 years ago
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Sample A: All Children							
WJC within 1km	0.020**	-0.004	-0.018**	0.001	0.020*	-0.000	-0.017*	-0.002
	(0.010)	(0.005)	(0.009)	(0.001)	(0.013)	(0.005)	(0.012)	(0.009)
Observations	64,921	64,921	64,921	64,921	53,378	53,378	53,378	53,378
Number of districts	1165	1165	1165	1165	1161	1161	1161	1161
Mean dep. var.	0.917	0.048	0.023	0.002	0.778	0.036	0.094	0.085
	Sample B: Children of the women selected for the DV Module							
WJC within 1km	0.023***	-0.006	-0.019***	0.001	0.030**	-0.007	-0.018	-0.003
	(0.008)	(0.005)	(0.007)	(0.001)	(0.013)	(0.005)	(0.012)	(0.009)
Observations	48,213	48,213	48,213	48,213	30,380	30,380	30,380	30,380
Number of districts	1155	1155	1155	1155	1135	1135	1135	1135
Mean dep. var.	0.919	0.048	0.022	0.002	0.782	0.038	0.090	0.084
District FE	YES	YES	YES	YES	YES	YES	YES	YES
Province-Year FE	YES	YES	YES	YES	YES	YES	YES	YES
Covariates	YES	YES	YES	YES	YES	YES	YES	YES

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Notes: The dependent variable is a dummy indicating the school attendance status of the child. The independent variables measures the presence of a WJC within a 1km Euclidean buffer of the child's cluster of residence. Robust standard errors (in parentheses) are clustered at the district level. The sample for primary level includes children between the ages of 6 and 11 and the sample for secondary level includes children between the ages of 12 and 16. Covariates include age, gender, household's head years of education, number of children in the household aged 0-18, number of children in the household aged 0-5, number of female adults, number of male adults, rural residence dummy, district fixed effect and province-by-year fixed effect. Source: Peru DHS 2006-2014.

Table 16: The Effect of WJC Centers on Primary School Enrollment (2006-2014)

Dep. variable	Log (Primary School Enrollment)				
Sample	All schools	All schools	All schools	Only urban schools	Ever WJC in district
Controls	Standard	District trends	Standard	Standard	Standard
	(1)	(2)	(3)	(4)	(5)

Panel A: WJC center within a distance buffer from the school

WJC within 1km	0.028***	0.027***	0.033***	0.032***	0.024**
	(0.008)	(0.008)	(0.008)	(0.008)	(0.010)
Log (District Population)			0.443***	0.424***	0.415***
			(0.023)	(0.031)	(0.055)
Observations	315,221	315,221	315,221	119,232	103,662
Number of schools	36947	36947	36947	14405	12413
Mean dep. var	95.9	95.9	95.9	177.8	127.7

Panel B: WJC center in the district of the school

WJC in the district	0.009*	0.002	0.005	0.012**	0.019**
	(0.005)	(0.004)	(0.005)	(0.006)	(0.009)
Log (District Population)			0.439***	0.417***	0.398***
			(0.023)	(0.031)	(0.056)
Observations	315,407	315,407	315,407	119,270	103,730
Number of schools	36994	36994	36994	14412	12427
Mean dep. var	95.9	95.9	95.9	177.8	127.7
School FE	YES	YES	YES	YES	YES
Province*Year FE	YES	YES	YES	YES	YES
Covariates	YES	YES	YES	YES	YES

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Notes: The dependent variable is the logarithm of enrollment plus one. The independent variables measures the number of WJC centers within a 1km Euclidean buffer from the school and presence of WJC center in school's district. Standard errors (in parentheses) are clustered at the school level. All regressions are weighted by initial school enrollment level. Covariates include school fixed effects, year fixed effects, year-by-province fixed effects, and a vector of controls of baseline school characteristics interacted with academic year (including initial school enrollment, presence of electricity, presence of piped water, school language (Spanish), urban and public school dummy).Source: Peruvian School Census 2006-2014.

Table 17: The Effect of WJC Centers on Secondary School Enrollment (2006-2014)

Dep. variable	Log (Secondary School Enrollment)				
Sample	All schools	All schools	All schools	Only urban schools	Ever WJC in district
Controls	Standard	District trends	Standard	Standard	Standard
	(1)	(2)	(3)	(4)	(5)

Panel A: WJC center within a distance buffer from the school

WJC within 1km	0.029**	0.017	0.030**	0.034***	-0.005
	(0.012)	(0.014)	(0.012)	(0.013)	(0.019)
Log (District Population)			0.427***	0.426***	0.442***
			(0.038)	(0.043)	(0.082)
Observations	102,685	102,685	102,685	69,686	41,324
Number of schools	12809	12809	12809	8516	5175
Mean dep. var	174.8	174.8	174.8	215.3	195.3

Panel B: WJC center in the district of the school

WJC in the district	0.023***	-0.004	0.014*	0.019**	-0.005
	(0.008)	(0.008)	(0.008)	(0.008)	(0.013)
Log (District Population)			0.420***	0.417***	0.448***
			(0.038)	(0.043)	(0.083)
Observations	102,691	102,691	102,691	69,692	41,324
Number of schools	12811	12811	12811	8518	5175
Mean dep. var	174.8	174.8	174.8	215.3	195.3
School FE	YES	YES	YES	YES	YES
Province*Year FE	YES	YES	YES	YES	YES
Covariates	YES	YES	YES	YES	YES

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Notes: The dependent variable is the logarithm of enrollment plus one. The independent variables measures the number of WJC centers within a 1km Euclidean buffer from the school and presence of WJC center in school's district. Standard errors (in parentheses) are clustered at the school level. All regressions are weighted by initial school enrollment level. Covariates include school fixed effects, year fixed effects, year-by-province fixed effects, and a vector of controls of baseline school characteristics interacted with academic year (including initial school enrollment, presence of electricity, presence of piped water, school language (Spanish), urban and public school dummy).Source: Peruvian School Census 2006-2014.

Table 18: The Effect of WJC Centers on Primary Level 2nd Grade Test Scores - (2006-2014)

Dep. variable	Standardized Test Scores (2nd Grade)			
Sample	All schools	All schools	Only urban schools	Ever WJC in district
Controls	Standard	District trends	Standard	Standard
	(1)	(2)	(3)	(4)

Panel A: WJC center within a distance buffer from the school

WJC within 1km	0.028*	0.018	0.040**	0.027
	(0.017)	(0.019)	(0.018)	(0.021)
Observations	181,240	181,240	92,666	69,822
Number of schools	29737	29737	13507	10858
Mean dep. var	508.9	508.9	536.9	526.9

Panel B: WJC center in the district of the school

WJC in the district	0.026**	-0.020	0.050***	0.050***
	(0.011)	(0.016)	(0.013)	(0.016)
Observations	181,279	181,279	92,681	69,838
Number of schools	29747	29747	13510	10862
Mean dep. var	508.9	508.9	537.0	527.0
School FE	YES	YES	YES	YES
Province*Year FE	YES	YES	YES	YES
Covariates	YES	YES	YES	YES

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Notes: The dependent variable is the average of the standardized reading and math test scores for 2nd grade of primary school. The independent variables measures the number of WJC centers within a 1km Euclidean buffer from the school and presence of WJC center in school's district. Standard errors (in parentheses) are clustered at the school level. All regressions are weighted by initial school enrollment level. Covariates include school fixed effects, year fixed effects, year-by-province fixed effects, and a vector of controls of baseline school characteristics interacted with academic year (including initial school enrollment, presence of electricity, presence of piped water, school language (Spanish), urban and public school dummy). Source: Peru ECE 2007-2014.

Table 19: Impact of WJC centers on Decision Making and Bargaining Power in the Household - (2006-2014)

Dep. variable	Joint decision-making		
	score (0-6)	score (0-1)	dummy(0/1)
	(1)	(2)	(3)

Sample: Married or cohabiting women 15-49 years old

WJC within 1km	0.040	0.007	0.017*
	(0.047)	(0.008)	(0.009)
Observations	72,009	72,009	72,009
Number of clusters	1168	1168	1168
Mean dep.var.	2.238	0.373	0.798

Dep. variable	Earnings compared to husband		
	Earns more than husband	Earns Less than husband	Earns the same as husband

Sample: Married or cohabiting women 15-49 years old

WJC within 1km	0.008	-0.034*	0.029**
	(0.011)	(0.018)	(0.014)
Observations	33,767	33,767	33,767
Number of districts	1094	1094	1094
Mean dep.var.	0.125	0.676	0.189
District FE	YES	YES	YES
Province*Year FE	YES	YES	YES
Covariates	YES	YES	YES

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Notes: In the DHS women are asked who makes decisions on a variety of household issues. For instance, a women is asked *"who makes the final decision on your own health care?"* *"who makes the final decision on large household purchases?"* etc. Responses include: respondent only, jointly with partner, and partner only. From these replies, we construct three measures of equal decision-making, that is, when the women makes decisions jointly with the partner. Robust standard errors (in parentheses) are clustered at the district level. The sample includes women between the ages of 15 and 49. Covariates include age, age at first marriage, number of children, years of education, number of household members, number of households in the dwelling, marital status (married=1), rural residence dummy, district fixed-effects and province-by-year fixed effects. Source: Peru DHS 2006-2014.

Table 20: Impact of WJC centers on Women's Labor Force Participation - (2006-2014)

Dep. variables	Currently working (1)	Works for family (2)	Works for someone else (3)	Self-employed (4)
Sample A: All women 15-49 years old				
WJC within 1km	-0.010	-0.004	-0.010	0.005
	(0.010)	(0.005)	(0.008)	(0.007)
Observations	113,785	113,786	113,786	113,786
Number of clusters	1168	1168	1168	1168
Mean dep.var.	0.646	0.211	0.305	0.236
Sample B: Married or cohabiting women selected for the DV module				
WJC within 1km	-0.009	-0.004	-0.024	0.017
	(0.014)	(0.009)	(0.017)	(0.011)
Observations	64,354	64,354	64,354	64,354
Number of districts	1167	1167	1167	1167
Mean dep.var.	0.684	0.209	0.269	0.300
District FE	YES	YES	YES	YES
Province*Year FE	YES	YES	YES	YES
Covariates	YES	YES	YES	YES

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Notes: The dependent variable is a dummy indicating women's labor force participation during the last 12 months. The independent variables measures the presence of a WJC within a 1km Euclidean buffer of the women's cluster of residence. Robust standard errors (in parentheses) are clustered at the district level. The sample includes women between the ages of 15 and 49. Covariates include age, age at first marriage, number of children, years of education, number of household members, number of households in the dwelling, marital status (married=1), rural residence dummy, district fixed-effects and province-by-year fixed effects. Source: Peru DHS 2006-2014.

Table 21: The Effect of WJC centers on Type of Institution Women Choose to Seek Help from Domestic Violence Events- (2006-2014)

	Any inst. Help (1)	Police Station (2)	Justice Court (3)	District Attorney Office (4)	DEMUNA (5)	WJC Center (6)	Ombudsman Office (7)	Health Facility (8)	NGO (9)	Other (10)
Sample A: All Married or cohabiting women 15-49 years old										
WJC within 1km	-0.014*	-0.019***	-0.001	-0.002	0.002	0.004*	-0.00009	-0.001	0.00008	0.002
	(0.008)	(0.007)	(0.002)	(0.002)	(0.003)	(0.002)	(0.0005)	(0.002)	(0.0001)	(0.002)
Observations	64,363	64,363	64,363	64,363	64,363	64,363	64,363	64,363	64,363	64,363
Number of districts	1167	1167	1167	1167	1167	1167	1167	1167	1167	1167
Mean dep. var	0.135	0.089	0.019	0.011	0.014	0.004	0.0009	0.008	0.0001	0.014
Sample B: Only married or cohabiting women 15-49 years old who have suffered domestic violence										
WJC within 1km	-0.022	-0.036*	-0.0004	-0.008	0.004	0.009*	-0.0002	0.00008	0.00008	-0.003
	(0.023)	(0.020)	(0.004)	(0.006)	(0.009)	(0.005)	(0.002)	(0.004)	(0.0001)	(0.005)
Observations	25,090	25,090	25,090	25,090	25,090	25,090	25,090	25,090	25,090	25,090
Number of districts	1110	1110	1110	1110	1110	1110	1110	1110	1110	1110
Mean dep. var	0.293	0.193	0.043	0.026	0.033	0.011	0.002	0.019	0.0003	0.029
District FE	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Province-Year FE	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Covariates	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Notes: Source: Peru DHS 2006-2014. *DEMUNA* is the acronym for "Defensoria Municipal del Niño y el Adolescente" or "Municipal Defense Centers for Children and Adolescentes"

Table 22: The Effect of WJC Centers on Child Labor - (2006-2014)

Dep. variable	Child Labor			
Sample	All children	All children	Female	Male
	6-14 y.o	6-14 y.o		
	(1)	(2)	(3)	(4)
Panel A: All Children				
WJC within 1km	-0.021***	-0.008*	-0.014**	-0.003
	(0.005)	(0.004)	(0.006)	(0.006)
Observations	97,933	97,933	48,108	49,816
Number of districts	1169	1169	1162	1164
Mean dep. var	0.070	0.070	0.064	0.075
Panel B: Children of the women selected for the DV module				
WJC within 1km	-0.024***	-0.012**	-0.018**	-0.006
	(0.006)	(0.005)	(0.008)	(0.007)
Observations	71,410	71,410	35,162	36,215
Number of districts	1163	1163	1145	1147
Mean dep. var	0.065	0.065	0.059	0.070
District FE	YES	YES	YES	YES
Province*Year FE	YES	YES	YES	YES
Covariates	NO	YES	YES	YES

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Notes: The dependent variable is a dummy indicating whether the child is currently working. The independent variables measures the presence of a WJC within a 1km Euclidean buffer of the child's cluster of residence. Robust standard errors (in parentheses) are clustered at the district level. The sample includes children between the ages of 6 and 14 years old. Covariates include age, gender, household's head years of education, number of children in the household aged 0-18, number of children in the household aged 0-5, number of female adults, number of male adults, rural residence dummy, district fixed effect and province-by-year fixed effect. Source: Peru DHS 2006-2014.

Table 23: CCT *Juntos* and WJC Centers on Children's Primary School Attendance - (2006-2014)

Dep. variable	**Currently Attending Primary Level**			
Sample	All children	All children	Only urban	Ever WJC
	6-11 y.o	6-11 y.o	clusters	in district
Controls	Standard	District trends	Standard	Standard
	(1)	(2)	(3)	(4)

Panel A: WJC center within a distance buffer from the cluster of residence

WJC within 1km * CCT in district	-0.027*	-0.010	0.014	-0.013
	(0.015)	(0.017)	(0.046)	(0.017)
WJC within 1km	0.021**	0.019**	0.026***	0.024***
	(0.008)	(0.009)	(0.009)	(0.008)
CCT in the district	0.012	-0.055	0.005	-0.016**
	(0.029)	(0.057)	(0.042)	(0.007)
Observations	48,632	48,632	25,377	19,563
Number of districts	1155	1155	483	215
Mean dep. var	0.970	0.970	0.971	0.969

Panel B: WJC center in the district of residence

WJC in district * CCT in district	-0.019	0.010	0.000	-0.030
	(0.012)	(0.022)	(0.024)	(0.033)
WJC in the district	0.009	-0.004	0.016*	0.024**
	(0.007)	(0.012)	(0.009)	(0.010)
CCT in the district	0.008	-0.038	-0.008	0.011
	(0.017)	(0.031)	(0.027)	(0.028)
Observations	71,772	71,772	38,309	29,051
Number of districts	1281	1281	529	225
Mean dep. var	0.970	0.970	0.970	0.967
District FE	YES	YES	YES	YES
Province*Year FE	YES	YES	YES	YES
Covariates	YES	YES	YES	YES

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Notes: The dependent variable is a dummy indicating whether the child is currently attending primary school. The independent variables measures the presence of a WJC within a 1km Euclidean buffer of the child's cluster of residence and presence of a WJC center in the child's district. Robust standard errors (in parentheses) are clustered at the district level. The sample includes children between the ages of 6 and 11. Covariates include age, gender, household's head years of education, number of children in the household aged 0-18, number of children in the household aged 0-5, number of female adults, number of male adults, rural residence dummy, district fixed effect and province-by-year fixed effect. Source: Peru DHS 2006-2014.

Table 24: CCT *Juntos* and WJC Centers on Primary School Enrollment - (2006-2014)

Dep. variable	Log (Primary School Enrollment)				
Sample	All schools	All schools	All schools	Only urban schools	Ever WJC in district
Controls	Standard	District trends	Standard	Standard	Standard
	(1)	(2)	(3)	(4)	(5)

Panel A: WJC center within a distance buffer from the school

WJC within 1km * CCT in district	0.050***	0.035***	0.046***	0.068***	0.032**
	(0.013)	(0.013)	(0.013)	(0.014)	(0.016)
WJC within 1km	0.013	0.017**	0.019**	0.013	0.016
	(0.008)	(0.008)	(0.008)	(0.009)	(0.011)
CCT in district	0.012***	0.007**	0.012***	0.022***	0.094***
	(0.004)	(0.003)	(0.004)	(0.007)	(0.023)
Log (District Population)			0.444***	0.423***	0.396***
			(0.023)	(0.031)	(0.056)
Observations	314,410	314,410	314,410	118,598	103,662
Number of schools	36844	36844	36844	14325	12413
Mean dep. var	95.7	95.7	95.7	177.5	127.7

Panel B: WJC center in the district of the school

WJC in district * CCT in district	0.006	-0.005	0.011	0.054***	-0.015
	(0.008)	(0.006)	(0.007)	(0.012)	(0.027)
WJC in the district	0.006	0.003	-0.000	0.001	0.016*
	(0.006)	(0.005)	(0.005)	(0.007)	(0.009)
CCT in the district	0.015***	0.010***	0.014***	0.020***	0.105***
	(0.004)	(0.003)	(0.004)	(0.007)	(0.026)
Log (District Population)			0.443***	0.421***	0.385***
			(0.023)	(0.031)	(0.056)
Observations	314,596	314,596	314,596	118,636	103,730
Number of schools	36891	36891	36891	14332	12427
Mean dep. var	95.9	95.9	95.9	177.8	127.7
School FE	YES	YES	YES	YES	YES
Province*Year FE	YES	YES	YES	YES	YES
Covariates	YES	YES	YES	YES	YES

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Notes: The dependent variable is the logarithm of enrollment plus one. The independent variables measures the number of WJC centers within a 1km Euclidean buffer from the school and presence of WJC center in school's district. Standard errors (in parentheses) are clustered at the school level. All regressions are weighted by initial school enrollment level. Covariates include school fixed effects, year fixed effects, year-by-province fixed effects, and a vector of controls of baseline school characteristics interacted with academic year (including initial school enrollment, presence of electricity, presence of piped water, school language (Spanish), urban and public school dummy).Source: Peruvian School Census 2006-2014.

Figure 9: Effect of WJC center rollout on changes in pre-program outcomes

a. Primary School Enrollment

b. Secondary School Enrollment

c. Primary School Attendance Rate

d. Secondary School Attendance Rate

e. Test Scores (2nd Grade)

f. Domestic Violence
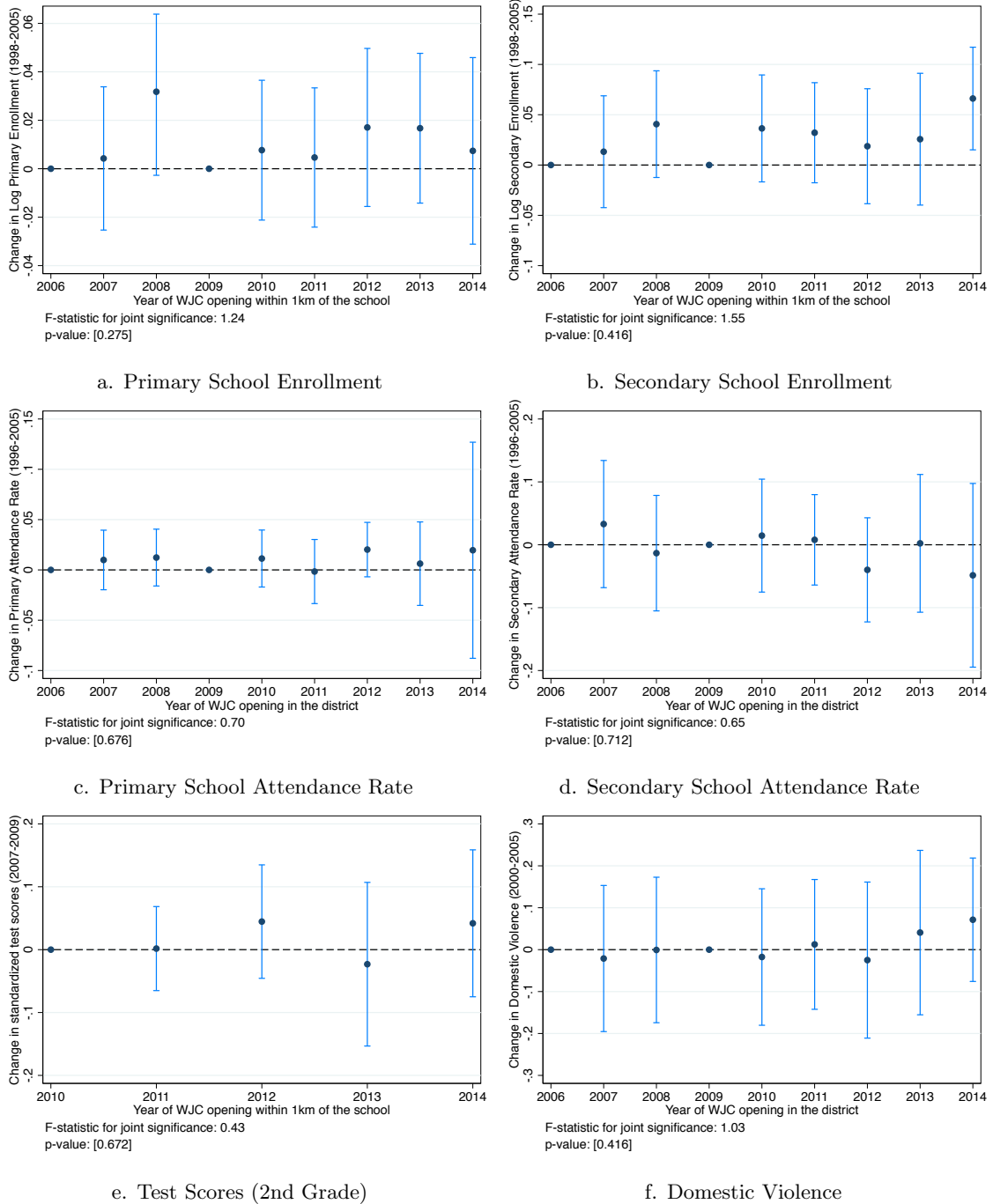
Notes: This figure shows coefficient estimates from changes in the outcomes of interest during pre-program periods (e.g. 1996-2005, 1998-2005, 2000-2005 depending on data availability) on year of WJC center introduction indicators (within 1km or in the district) and year fixed effects.

Figure 10: Event Study: Pre-WJC and Post-WJC Trends in Women's Outcomes
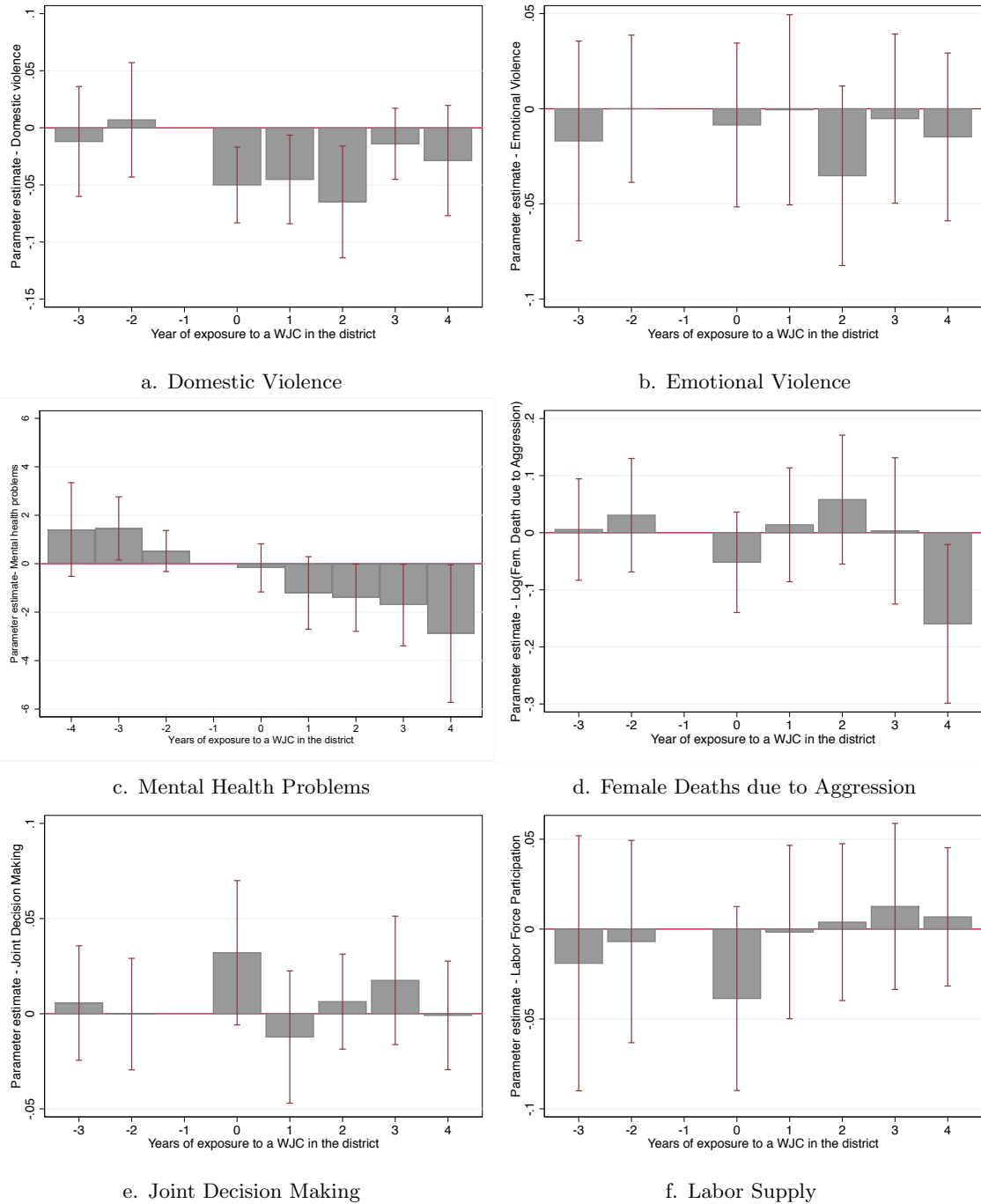
a. Domestic Violence

b. Emotional Violence

c. Mental Health Problems

d. Female Deaths due to Aggression

e. Joint Decision Making

f. Labor Supply

Notes: These graphs plot the coefficient obtained from a regression of the outcomes on the interation between presence of WJC within 1km/in the district and dummies for the years leading up to the opening of the WJC centers and years after the WJC introduction. Each bar represents the estimated coefficients and the capped, vertial line shows the estimated 95% confidence interval. Covariates include district fixed effects, year fixed effects, year-by-province fixed effects, and individual controls.

Figure 11: Event Study: Pre-WJC and Post-WJC Trends in Children's School Attendance
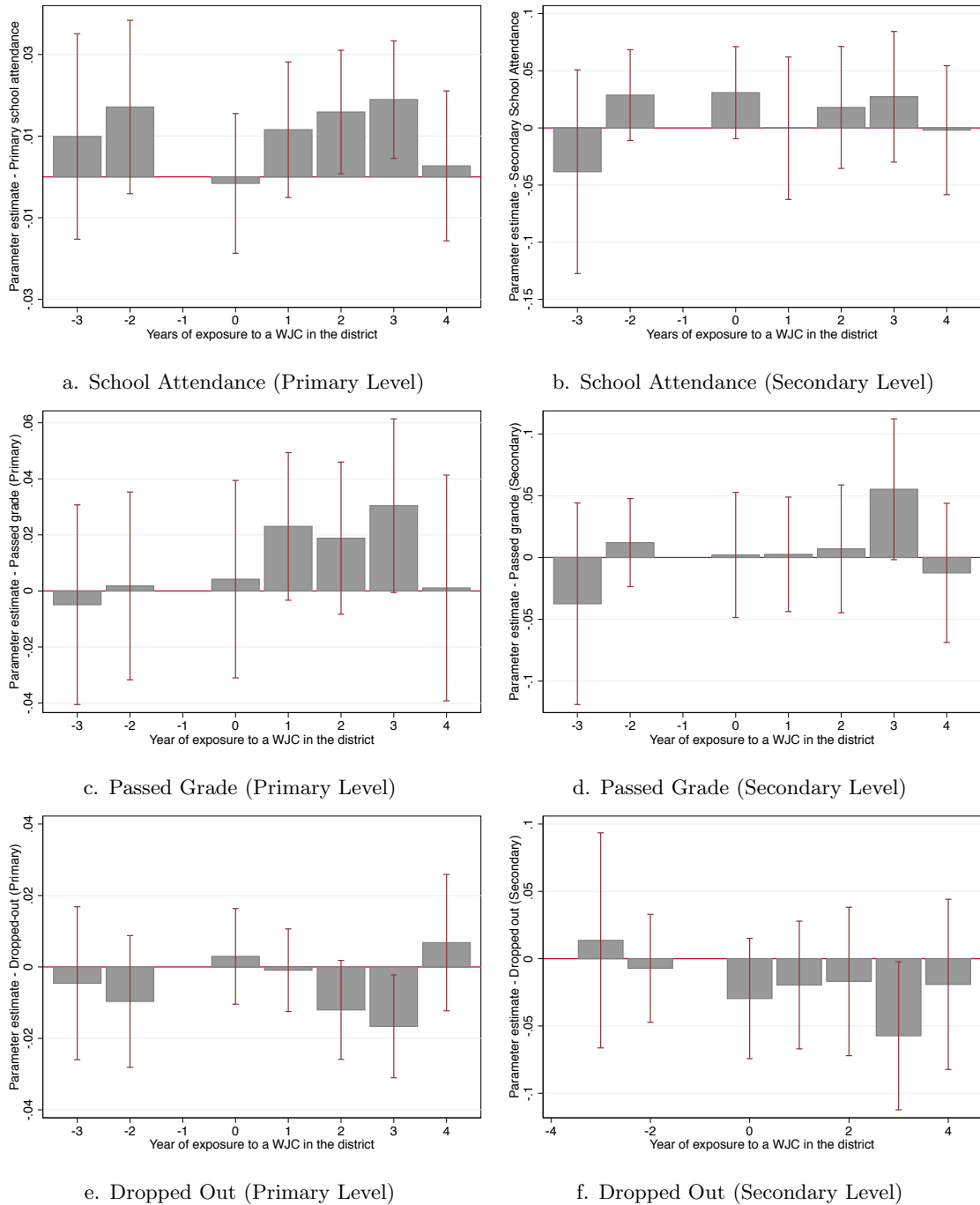
a. School Attendance (Primary Level)

b. School Attendance (Secondary Level)

c. Passed Grade (Primary Level)

d. Passed Grade (Secondary Level)

e. Dropped Out (Primary Level)

f. Dropped Out (Secondary Level)

Notes: These graphs plot the coefficient obtained from a regression of the outcomes on the interation between presence of WJC within 1km/in the district and dummies for the years leading up to the opening of the WJC centers and years after the WJC introduction. Each bar represents the estimated coefficients and the capped, vertial line shows the estimated 95% confidence interval. Covariates include district fixed effects, year fixed effects, year-by-province fixed effects, and individual controls.

Figure 12: Event Study: Pre-WJC and Post-WJC Trends in School Enrollment and Test Scores
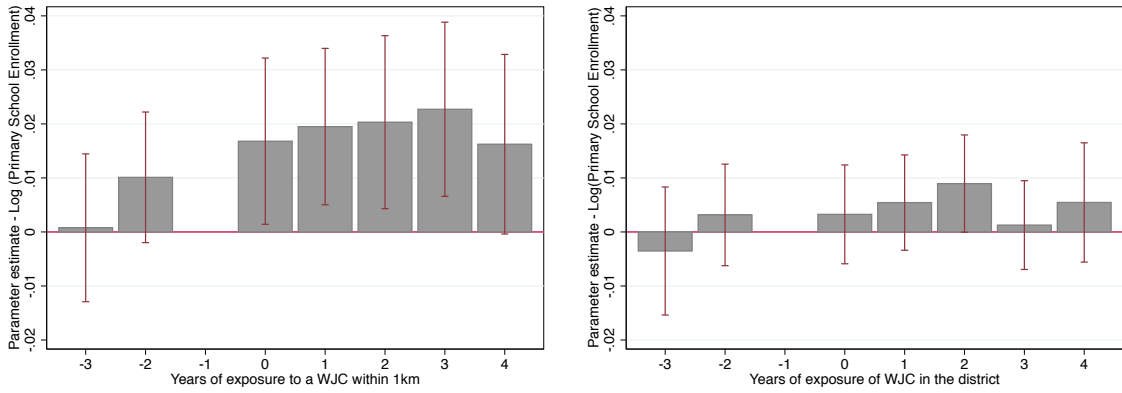
a. Primary School Enrollment - WJC <1km

b. Secondary School Enrollment - WJC in the district
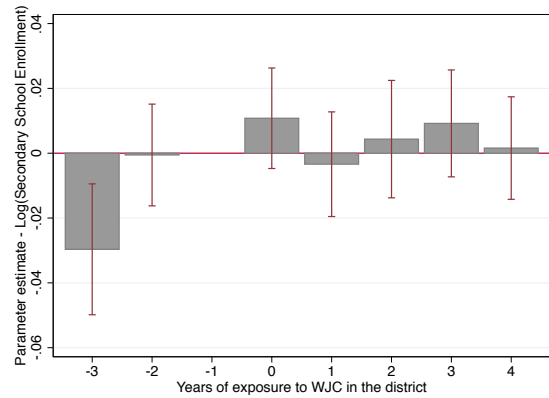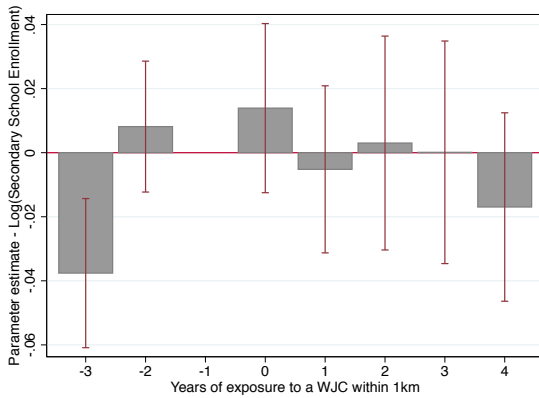
c. Secondary School Enrolment - WJC <1km

d. Secondary School Enrollment - WJC in the district
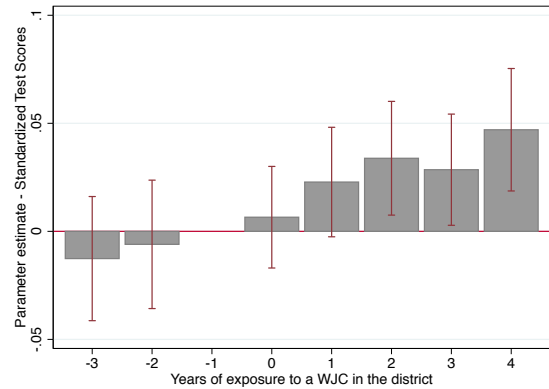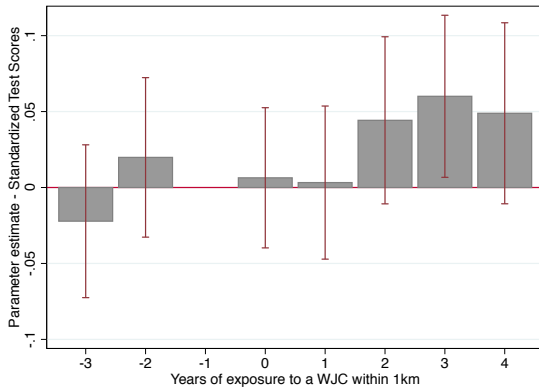
e. Test Scores (2nd Grade) - WJC <1km

f. Test Scores (2nd Grade) - WJC in the district

Notes: These graphs plot the coefficient obtained from a regression of the outcomes on the interation between presence of WJC within 1km/in the district and dummies for the years leading up to the opening of the WJC centers and years after the WJC introduction. Each bar represents the estimated coefficients and the capped, vertial line shows the estimated 95% confidence interval. Covariates include school fixed effects, year fixed effects, year-by-province fixed effects, and a vector of controls of baseline school characteristics interacted with academic year.

APPENDIX

Table A-1: Correlation between WJC center and CCT *Juntos* program implementation (2005-2014)

Dep. var.	WJC center entry$_d$		WJC center presence$_d$	
	(1)	(2)	(3)	(4)
CCT *Juntos* entry$_d$	0.002	0.005		
	(0.003)	(0.004)		
CCT *Juntos* presence$_d$			-0.027***	0.001
			(0.008)	(0.008)
Observations	18,390	18,390	18,390	18,390
Number of districts	1839	1839	1839	1839
District FE	NO	YES	NO	YES
Year FE	NO	YES	NO	YES

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Notes: Standard errors that allow for clustering at the district level level are reported in parentheses. Program (WJC or CCT) entry is equal to one only in the year of introduction in the district. Program presence is equal to one in every year beginning with the first year after the program entry.

Table A-2: School Enrollment Effects by Gender and Grade

Dep. variable	**School Enrollment**					
	Primary Schools			**Secondary Schools**		
	Obs.	Mean	WJC within 1km	Obs.	Mean	WJC within 1km
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: Results for Schools by Gender						
Log(Female enrollment)	315,221	46.9	0.033***	102,685	84.42	0.009
			(0.010)			(0.017)
Log(Male enrollment)	315,221	49.9	0.021	102,685	90.40	0.067***
			(0.013)			(0.014)
Panel B: Results for Schools by Grade						
Grade 1 enrollment	315,221	15.57	0.019*	102,685	40.97	0.027**
			(0.010)			(0.014)
Grade 2 enrollment	315,221	17.08	0.030***	102,685	38.18	0.034**
			(0.009)			(0.014)
Grade 3 enrollment	315,221	16.55	0.026***	102,685	35.18	0.023
			(0.009)			(0.015)
Grade 4 enrollment	315,221	16.07	0.031***	102,685	31.84	0.043**
			(0.009)			(0.018)
Grade 5 enrollment	315,221	15.70	0.023**	102,685	28.64	0.044**
			(0.009)			(0.019)
Grade 6 enrollment	315,221	14.97	0.033***			
			(0.009)			
School FE			YES			YES
Province*Year FE			YES			YES
Covariates			YES			YES

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Notes: The dependent variable is the logarithm of enrollment plus one. The independent variables measures the number of WJC centers within a 1km Euclidean buffer from the school and presence of WJC center in school's district. Standard errors (in parentheses) are clustered at the school level. All regressions are weighted by initial school enrollment level. Covariates include school fixed effects, year fixed effects, year-by-province fixed effects, and a vector of controls of baseline school characteristics interacted with academic year (including initial school enrollment, presence of electricity, presence of piped water, school language (Spanish), urban and public school dummy).Source: Peruvian School Census 2006-2014.

Table A-3: School Enrollment and Children's School Attendance Status Effects by Gender

Dep. variable	Currently Attending School					
	Primary Level Children 6-11 y.o.			Secondary Level Children: 12-16 y.o.		
			WJC within			WJC within
	Obs.	Mean	1km	Obs.	Mean	1km
	(1)	(2)	(3)	(4)	(5)	(6)
Sample: Female						
School attendance	23,973	0.970	0.020**	14,855	0.891	0.022
			(0.009)			(0.019)
Passed grade	23,573	0.917	0.033***	12,808	0.781	0.031
			(0.010)			(0.024)
Repeated grade	23,573	0.047	-0.010*	12,808	0.028	-0.020
			(0.005)			(0.009)
Dropped out	23,573	0.022	-0.025**	12,808	0.088	-0.003
			(0.010)			(0.018)
Left school +2 year ago	23,573	0.002	-0.0009	12,808	0.098	-0.006
			(0.001)			(0.014)
Sample: Male						
School attendance	24,646	0.970	0.015*	18,474	0.899	0.022
			(0.008)			(0.015)
Passed grade	24,543	0.919	0.012	17,358	0.784	0.023
			(0.009)			(0.021)
Repeated grade	24,543	0.050	-0.001	17,358	0.045	0.00007
			(0.008)			(0.008)
Dropped out	24,543	0.021	-0.012*	17,358	0.091	-0.032*
			(0.007)			(0.018)
Left school +2 year ago	24,543	0.002	0.001	17,358	0.074	0.009
			(0.001)			(0.011)
District FE			YES			YES
Province*Year FE			YES			YES
Covariates			YES			YES

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Notes: The dependent variable is a dummy indicating whether the child is currently attending primary or secondary school. The independent variables measures the presence of a WJC within a 1km Euclidean buffer of the child's cluster of residence. Robust standard errors (in parentheses) are clustered at the district level. The sample for primary level includes children between the ages of 6 and 11 and the sample for secondary level includes children between the ages of 12 and 16. Covariates include age, gender, household's head years of education, number of children in the household aged 0-18, number of children in the household aged 0-5, number of female adults, number of male adults, rural residence dummy, district fixed effect and province-by-year fixed effect. Source: Peru DHS 2006-2014.

Table A-4: Domestic Violence Effects by Age, Education Level and Type of Domestic Violence - (2006-2014)

Dep. variable	**Domestic violence in last 12 months**					
			WJC within			WJC in the
	Obs.	Mean	1km	Obs.	Mean	district
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: Results for Women by Age						
Women 15-33 years old	31,442	0.349	-0.004	47,136	0.355	-0.013
			(0.018)			(0.016)
Women 34-49 years old	32,886	0.402	-0.038***	49,380	0.418	-0.038***
			(0.019)			(0.018)
Panel B: Results for Women by Education Level						
No education	2,254	0.374	-0.102	3,380	0.374	0.134
			(0.110)			(0.119)
Primary Level	22,198	0.402	-0.035	32,844	0.390	-0.025
			(0.026)			(0.024)
Secondary Level	24,989	0.415	-0.018	37,834	0.394	-0.042**
			(0.015)			(0.016)
Higher Level	14,033	0.331	-0.029*	21,435	0.316	0.013
			(0.016)			(0.025)
Panel C: Results for Women by Type of Domestic Violence						
Less severe violence	64,366	0.376	-0.029***	96,560	0.373	-0.018
			(0.010)			(0.012)
Severe violence	64,366	0.171	-0.014*	96,560	0.171	-0.006
			(0.009)			(0.009)
Sexual violence	64,366	0.092	0.001	96,560	0.092	-0.007
			(0.006)			(0.007)
District FE			YES			YES
Province-Year FE			YES			YES
Covariates			YES			YES

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Notes: The dependent variable is a dummy indicating whether the women suffered any type of domestic violence (less severe, severe or sexual violence) during the last 12 months. The independent variables measures the presence of a WJC within a 1km Euclidean buffer of the women's cluster of residence. Robust standard errors (in parentheses) are clustered at the district level. The sample includes women between the ages of 15 and 49. Women who were never married or never cohabited are excluded from the sample. Covariates include age, age at first marriage, number of children, years of education, number of household members, number of households in the dwelling, marital status (married=1), rural residence dummy, district fixed-effects and province-by-year fixed effects. Source: Peru DHS 2006-2014.

Table A-5: Domestic Violence by Children's Primary Level School Attendance Status - (2006-2014)

Primary Level (6-11 y.o.)	Children's School Attendance Status		
	Not Attending	Attending	Diff
	(1)	(2)	(3)
Domestic violence (All)	0.435	0.408	0.026**
	(0.010)	(0.001)	(0.010)
Observations	2,131	69,735	
Domestic violence (Urban Areas)	0.469	0.430	0.038***
	(0.014)	(0.002)	(0.014)
Observations	1,149	37,185	
Domestic violence (Rural Areas)	0.395	0.384	0.010
	(0.015)	(0.002)	(0.015)
Observations	982	32,550	

Table A-6: The Effect of WJC Centers on Primary Level Attendance Quintiles - (2006-2014)

Dep. variable	Currently Attending Primary Level			
	Quintile 1	Quintile 2	Quintile 3	Quintile 4
Sample: Children 6 to 11 years old				
WJC within 1km	0.067**	0.014	0.021	0.0002
	(0.029)	(0.010)	(0.014)	(0.003)
Observations	11,802	8,944	9,403	18,549
Number of clusters	171	139	109	740
Mean dep. var	0.917	0.969	0.985	0.998
% Rural	0.335	0.349	0.250	0.486
District FE	YES	YES	YES	YES
Province*Year FE	YES	YES	YES	YES
Covariates	NO	YES	YES	YES

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Notes: Source: Peru DHS 2006-2014.

Table A-7: The Effect of WJC Centers on Children's Primary School Attendance - (2006-2014) - Alternative Euclidean Buffers

Dep. variable	**Currently Attending Primary Level**			
Sample	All children 6-11 y.o	All children 6-11 y.o	Only urban clusters	Ever WJC in district
Controls	Standard	District trends	Standard	Standard
	(1)	(2)	(3)	(4)

Panel A: WJC center within a distance buffer from the cluster of residence

WJC within 3km	0.007	0.004	0.015	0.010
	(0.011)	(0.012)	(0.014)	(0.016)
Observations	48,703	48,703	25,391	19,563
Number of districts	1159	1159	485	215
Mean dep. var	0.970	0.970	0.971	0.969

Panel B: WJC center in the district of residence

WJC within 5km	-0.007	-0.004	0.005	0.006
	(0.008)	(0.008)	(0.011)	(0.007)
Observations	48,703	48,703	25,391	19,563
Number of clusters	1159	1159	485	215
Mean dep. var	0.970	0.970	0.970	0.967
District FE	YES	YES	YES	YES
Province*Year FE	YES	YES	YES	YES
Covariates	YES	YES	YES	YES

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Notes: The dependent variable is a dummy indicating whether the child is currently attending primary school. The independent variables measures the presence of a WJC within a 3km and 5km Euclidean buffer of the child's cluster of residence. Robust standard errors (in parentheses) are clustered at the district level. The sample includes children between the ages of 6 and 11. Covariates include age, gender, household's head years of education, number of children in the household aged 0-18, number of children in the household aged 0-5, number of female adults, number of male adults, rural residence dummy, district fixed effect and province-by-year fixed effect. Source: Peru DHS 2006-2014.

Table A-8: The Effect of WJC Centers on Children's Secondary School Attendance - (2006-2014) - Alternative Euclidean Buffers

Dep. variable	**Currently Attending Secondary Level**			
Sample	All children	All children	Only urban	Ever WJC
	12-16 y.o	12-16 y.o	clusters	in district
Controls	Standard	District trends	Standard	Standard
	(1)	(2)	(3)	(4)

Panel A: WJC center within a distance buffer from the cluster of residence

WJC within 3km	0.008	0.009	0.016	0.012
	(0.012)	(0.014)	(0.014)	(0.017)
Observations	33,519	33,519	18,266	13,570
Number of clusters	1140	1140	480	215
Mean dep. var	0.895	0.895	0.916	0.908

Panel B: WJC center in the district of residence

WJC within 5km	-0.011	-0.001	-0.001	-0.003
	(0.013)	(0.015)	(0.016)	(0.019)
Observations	33,519	33,519	18,266	13,570
Number of clusters	1140	1140	480	215
Mean dep. var	0.896	0.896	0.913	0.904
District FE	YES	YES	YES	YES
Province*Year FE	YES	YES	YES	YES
Covariates	YES	YES	YES	YES

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Notes: The dependent variable is a dummy indicating whether the child is currently attending secondary school. The independent variables measures the presence of a WJC within a 3km and 5km Euclidean buffer of the child's cluster of residence. Robust standard errors (in parentheses) are clustered at the district level. The sample includes children between the ages of 12 and 16. Covariates include age, gender, household's head years of education, number of children in the household aged 0-18, number of children in the household aged 0-5, number of female adults, number of male adults, rural residence dummy, district fixed effect and province-by-year fixed effect. Source: Peru DHS 2006-2014.

Table A-9: Heterogeneity by Violent Households

Sample A: Children of households where the grandmother was subject to violence by grandfather

	Enrolled (1)	Passed grade (2)	Repeated grade (3)	Dropped out (4)	Left school +2 years ago (5)
WJC within 1km	0.025***	0.037***	-0.015**	-0.026***	0.003
	(0.009)	(0.011)	(0.006)	(0.009)	(0.002)
Observations	20,636	19,475	19,475	19,475	19,475
R-squared	0.164	0.154	0.135	0.188	0.089

Sample B: Children of households where the grandmother was not subject to violence by grandfather

WJC within 1km	0.018*	0.014	-0.002	-0.015	0.000
	(0.010)	(0.011)	(0.009)	(0.009)	(0.001)
Observations	27,795	28,613	28,613	28,613	28,613
R-squared	0.148	0.117	0.094	0.151	0.071
District FE	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES
Province*Year FE	YES	YES	YES	YES	YES
Covariates	YES	YES	YES	YES	YES

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Notes: The dependent variable is a dummy indicating the school attendance status of the child. The independent variables measures the presence of a WJC within a 1km Euclidean buffer of the child's cluster of residence. Robust standard errors (in parentheses) are clustered at the district level. The sample for primary level includes children between the ages of 6 and 11 and the sample for secondary level includes children between the ages of 12 and 16. Covariates include age, gender, household's head years of education, number of children in the household aged 0-18, number of children in the household aged 0-5, number of female adults, number of male adults, rural residence dummy, district fixed effect and province-by-year fixed effect. Source: Peru DHS 2006-2014.

Table A-10: Placebo regressions, Impact of Future WJC Centers on Primary School Enrollment

Dep. variable	Log (Primary School Enrollment)			
Sample	All schools	All schools	Only urban schools	Ever WJC in district
Controls	Standard	District trends	Standard	Standard
	(1)	(2)	(3)	(4)

Panel A: WJC center within a distance buffer from the school

WJC within 1km, t	0.024***	0.023***	0.027***	0.019**
	(0.008)	(0.007)	(0.008)	(0.009)
WJC within 1km, $t+1$	0.004	0.005	0.003	0.006
	(0.006)	(0.006)	(0.007)	(0.007)
WJC within 1km, $t+2$	0.002	-0.002	-0.003	0.002
	(0.006)	(0.006)	(0.007)	(0.008)
WJC within 1km, $t+3$	0.004	0.011	0.004	-0.002
	(0.008)	(0.008)	(0.009)	(0.010)
Observations	315,221	315,221	119,232	103,518
Number of schools	36947	36947	14405	12398
P-value joint test	0.987	0.493	0.831	0.767
Mean dep. var	95.9	95.9	177.8	127.7

Panel B: WJC center in the district of the school

WJC in the district, t	0.008*	0.000	0.017***	0.029***
	(0.004)	(0.004)	(0.006)	(0.008)
WJC in the district, $t+1$	0.002	-0.000	0.006	-0.002
	(0.004)	(0.004)	(0.005)	(0.006)
WJC in the district, $t+2$	0.003	-0.001	0.001	0.015**
	(0.004)	(0.004)	(0.005)	(0.006)
WJC in the district, $t+3$	-0.007	-0.009**	-0.004	-0.012
	(0.005)	(0.004)	(0.006)	(0.008)
Observations	315,407	315,407	119,270	103,586
Number of schools	36994	36994	14412	12412
P-value joint test	0.200	0.148	0.408	0.071
Mean dep. var	95.9	95.9	177.8	127.7
School FE	YES	YES	YES	YES
Province*Year FE	YES	YES	YES	YES
Covariates	YES	YES	YES	YES

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Notes: The dependent variable is the logarithm of enrollment plus one. The independent variable measures the presence of a WJC center within 1km/in the district in year t and controls for openings of future WJC centers in year $t+1$, $t+2$ and $t+3$. All regressions are weighted by initial school enrollment level. Covariates include school fixed effects, year fixed effects, year-by-province fixed effects, and a vector of controls of baseline school characteristics interacted with academic year (including initial school enrollment, presence of electricity, presence of piped water, school language (Spanish), urban and public school dummy). Source: Peruvian School Census: 2006-2014.

Table A-11: Placebo regressions, Impact of Future WJC centers on Secondary School Enrollment

Dep. variable	Log (Secondary School Enrollment)			
Sample	All schools	All schools	Only urban schools	Ever WJC in district
Controls	Standard	District trends	Standard	Standard
	(1)	(2)	(3)	(4)

Panel A: WJC center within a distance buffer from the school

WJC within 1km, t	0.033***	0.023*	0.039***	0.006
	(0.012)	(0.013)	(0.013)	(0.019)
WJC within 1km, $t+1$	-0.017	-0.017	-0.020	-0.032*
	(0.013)	(0.013)	(0.014)	(0.018)
WJC within 1km, $t+2$	0.010	0.008	0.004	0.008
	(0.013)	(0.014)	(0.014)	(0.020)
WJC within 1km, $t+3$	0.014	0.011	0.023	0.013
	(0.014)	(0.014)	(0.015)	(0.020)
Observations	102,685	102,685	69,686	41,277
Number of schools	12809	12809	8516	5170
P-value joint test	0.162	0.215	0.073	0.163
Mean dep. var	174.8	174.8	215.3	195.3

Panel B: WJC center in the district of the school

WJC in the district, t	0.026***	0.002	0.032***	0.015
	(0.007)	(0.008)	(0.008)	(0.012)
WJC in the district, $t+1$	-0.013*	-0.018**	-0.008	-0.014
	(0.007)	(0.007)	(0.008)	(0.011)
WJC in the district, $t+2$	0.008	0.002	0.003	0.009
	(0.008)	(0.008)	(0.009)	(0.013)
WJC in the district, $t+3$	0.010	-0.002	0.010	0.009
	(0.009)	(0.008)	(0.011)	(0.015)
Observations	102,691	102,691	69,692	41,277
Number of schools	12811	12811	8518	5170
P-value joint test	0.047	0.119	0.314	0.288
Mean dep. var	174.8	174.8	215.3	195.3
School FE	YES	YES	YES	YES
Province*Year FE	YES	YES	YES	YES
Covariates	YES	YES	YES	YES

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Notes: The dependent variable is the logarithm of enrollment plus one. The independent variable measures the presence of a WJC center within 1km/in the district in year t and controls for openings of future WJC centers in year $t+1$, $t+2$ and $t+3$. All regressions are weighted by initial school enrollment level. Covariates include school fixed effects, year fixed effects, year-by-province fixed effects, and a vector of controls of baseline school characteristics interacted with academic year (including initial school enrollment, presence of electricity, presence of piped water, school language (Spanish), urban and public school dummy). Source: Peruvian School Census: 2006-2014.

Table A-12: Relationship between WJCs within 1km rollout and pre-program school enrollment

	Schools matched to WJC within 1km, Pre-WJC period					
	△ **Log(Primary School Enrollment)**			△ **Log(Secondary School Enrollment)**		
	(1)	(2)	(3)	(4)	(5)	(6)
	△98-00	△98-05	△98-10	△98-00	△98-05	△98-10
WJC within 1km in 2002	0.028			0.060		
	(0.032)			(0.047)		
WJC within 1km in 2003	-0.016			0.042		
	(0.036)			(0.050)		
WJC within 1km in 2004	-0.021			-0.070		
	(0.035)			(0.054)		
WJC within 1km in 2005	-0.054			-0.207***		
	(0.156)			(0.066)		
WJC within 1km in 2006	-0.014			-0.048		
	(0.031)			(0.056)		
WJC within 1km in 2007	-0.011	0.004		-0.020	0.013	
	(0.029)	(0.015)		(0.046)	(0.028)	
WJC within 1km in 2008	-0.006	0.032		-0.032	0.041	
	(0.029)	(0.035)		(0.045)	(0.027)	
WJC within 1km in 2009	-	-		-	-	
WJC within 1km in 2010	-0.034	0.008		0.003	0.036	
	(0.028)	(0.015)		(0.045)	(0.027)	
WJC within 1km in 2011	-0.022	0.005		-0.052	0.032	
	(0.027)	(0.015)		(0.045)	(0.025)	
WJC within 1km in 2012	0.002	0.017	0.005	-0.016	0.019	0.000
	(0.035)	(0.017)	(0.009)	(0.043)	(0.029)	(0.013)
WJC within 1km in 2013	-0.029	0.017	0.009	-0.007	0.026	0.004
	(0.029)	(0.016)	(0.011)	(0.045)	(0.033)	(0.018)
WJC within 1km in 2014	-0.021	0.007	0.004	-0.003	0.066**	0.031*
	(0.031)	(0.020)	(0.011)	(0.043)	(0.026)	(0.016)
Observations	2,190	6,372	6,157	1,115	3,400	3,540
Number of schools	1179	1247	678	607	710	404
Year FE	YES	YES	YES	YES	YES	YES
P-value joint test	0.536	0.275	0.925	0.001	0.148	0.197

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Notes: Standard errors that allow for clustering at the school level are reported in parentheses. The dependent variable in columns 1-6 is the change in the logarithm of school enrollment plus one. The observations correspond to three windows of pre-WJC center period for each school. All regressions include year fixed-effects.

Table A-13: Relationship between WJCs in the district rollout and pre-program school attendance

	Districts matched to WJC locations, Pre-WJC △1996-2005					
	△ **Primary School Attendance**			△ **Secondary School Attendance**		
	(1)	(2)	(3)	(4)	(5)	(6)
	△96-00	△96-05	△96-10	△96-00	△96-05	△96-10
WJC in the district in 2002	0.002			-0.071		
	(0.036)			(0.060)		
WJC in the district in 2003	-0.056			0.032		
	(0.060)			(0.062)		
WJC in the district in 2004	-0.005			0.041		
	(0.036)			(0.082)		
WJC in the district in 2005	0.016			-0.051		
	(0.036)			(0.060)		
WJC in the district in 2006	-0.057			-0.078		
	(0.052)			(0.087)		
WJC in the district in 2007	-0.031	0.010		-0.065	0.033	
	(0.040)	(0.015)		(0.109)	(0.051)	
WJC in the district in 2008	-0.011	0.012		-0.008	-0.013	
	(0.039)	(0.014)		(0.098)	(0.046)	
WJC in the district in 2009	-	-	-	-	-	-
WJC in the district in 2010	-0.026	0.011	-0.009	-0.062	0.015	-0.013
	(0.040)	(0.014)	(0.008)	(0.071)	(0.045)	(0.028)
WJC in the district in 2011	-0.034	-0.002	-0.016	0.030	0.008	-0.029
	(0.041)	(0.016)	(0.009)	(0.067)	(0.036)	(0.024)
WJC in the district in 2012	0.012	0.020	0.006	0.022	-0.040	-0.052
	(0.039)	(0.014)	(0.008)	(0.076)	(0.042)	(0.041)
WJC in the district in 2013	-0.008	0.006	-0.012	0.055	0.002	-0.015
	(0.049)	(0.021)	(0.011)	(0.101)	(0.055)	(0.030)
WJC in the district in 2014	-0.073	0.020	-0.007	-0.152	-0.049	-0.030
	(0.076)	(0.054)	(0.038)	(0.125)	(0.074)	(0.054)
Observations	90	186	228	90	184	226
Number of districts	90	106	102	90	106	102
Year FE	YES	YES	YES	YES	YES	YES
P-value joint test	0.000	0.676	0.222	0.000	0.712	0.778

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Notes: Standard errors that allow for clustering at the district level are reported in parentheses. The dependent variable in columns 1-6 is the change in school attendance rate at the district level. The observations correspond to three windows of pre-WJC center period for each district. All regressions include year fixed-effects.

Table A-14: Relationship between WJCs within 1km rollout and four windows of pre-program standardized test scores (2nd grade - Primary School)

	Schools matched to WJC within 1km			
	Pre-WJC period			
	△ **Standradized Test Scores**			
	(1)	(2)	(3)	(4)
	△07-09	△07-10	△07-11	△07-12
WJC within 1km in 2011	0.002			
	(0.034)			
WJC within 1km in 2012	0.045	-0.009		
	(0.046)	(0.029)		
WJC within 1km in 2013	-0.023	-0.029	-0.001	
	(0.066)	(0.038)	(0.034)	
WJC within 1km in 2014	0.042	-0.019	-0.009	-0.025
	(0.060)	(0.039)	(0.033)	(0.034)
Observations	1,565	1,675	1,068	734
Number of schools	821	600	292	168
Year FE	YES	YES	YES	YES
P-value joint test	0.670	0.895	0.828	

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Notes: Standard errors that allow for clustering at the school level are reported in parentheses. The dependent variable in columns 1-4 is the change in standardized reading and math z-scores at the school level. The observations correspond to the pre-WJC center period for each school, it includes all schools which are located within 1km of a WJC center which opened between 2010-2014, 2011-2014, 2012-2014 and 2013-2014. All regressions include year fixed-effects.

Table A-15: Relationship between WJCs in the district and four windows of pre-program domestic violence

	Districts matched to WJC locations, Pre-WJC period			
	$\triangle$ **Domestic violence in last 12 months**			
	(1)	(2)	(3)	(4)
	$\triangle$2000-2005	$\triangle$2000-2008	$\triangle$2000-2010	$\triangle$2000-2013
WJC in the district in 2007	-0.021			
	(0.088)			
WJC in the district in 2008	-0.001			
	(0.087)			
WJC in the district in 2009	-	-		
WJC in the district in 2010	-0.018	-0.006		
	(0.082)	(0.035)		
WJC in the district in 2011	0.013	0.007	-0.026	
	(0.078)	(0.034)	(0.042)	
WJC in the district in 2012	-0.025	0.060	-0.011	
	(0.093)	(0.041)	(0.041)	
WJC in the district in 2013	0.041	0.013	0.005	
	(0.098)	(0.061)	(0.050)	
WJC in the district in 2014	0.071	0.119**	-0.036	-0.016
	(0.074)	(0.078)	(0.042)	(0.020)
Observations	105	161	239	128
Number of districts	78	99	83	38
Year FE	YES	YES	YES	YES
P-value joint test	0.416	0.103	0.433	-

Robust standard errors in parentheses
*** $p<0.01$, ** $p<0.05$, * $p<0.1$

Notes: Standard errors that allow for clustering at the district level are reported in parentheses. The dependent variable in columns 1-4 is the change domestic violence at the district level. The observations correspond to the pre-program period of the WJC center rollout for each district, it includes all districts that ever had a WJC center which opened between 2006-2014, 2009-2014, 2010-2014 and 2013-2014. All regressions include year fixed-effects.