

WOMEN'S EMPOWERMENT IN INDONESIA

Impact evaluation of the 'Reducing the Occurrence of Gender-Based Violence' project

Effectiveness Review Series 2016/17



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EXECUTIVE SUMMARY

Oxfam GB's Global Performance Framework is part of the organization's effort to better understand and communicate its effectiveness, as well as enhance learning across the organization. Under this Framework, a small number of completed or mature projects are selected at random each year for an evaluation of their impact, known as an Effectiveness Review. The project 'Reducing the Occurrence of Gender Based Violence (GBV)' (IDSC82) was one of those selected for an Effectiveness Review in the 2016/17 financial year.

PROJECT DESCRIPTION

The project operated with 10 partners in West Nusa Tenggara, East Nusa Tenggara, South Sulawesi, Central Sulawesi, and Jakarta. The Effectiveness Review was only conducted in East Nusa Tenggara due to budgetary constrain. Project activities started in 2012 in East Nusa Tenggara, and the project was implemented by four partner organizations: SSP, CIS, YABIKU and LBH APIK. Project activities can be divided into three broad categories: activities carried out with men and youth to sensitise them to gender roles; activities of advocacy and community engagement to increase women's leadership participation; and finally, activities undertaken to support women with legal help when exposed to violence. SSP and CIS Timor have mainly conducted community engagement activities that sensitise men and youth, while YABIKU and LBH APIK have focused on supporting women within the legal and judiciary system.

The project activities aimed to reduce gender-based violence (GBV) in the communities that participated in the project. Paralegals' and lawyers' support are expected to promote appropriate assistance from the police and other authorities in the cases of violence. Advocacy and engagement with community leaders is undertaken to increase women's leadership in the communities. Additionally, it is expected that social norms may change with an increase in knowledge and an awareness of GBV among local leaders.

EVALUATION DESIGN

The Effectiveness Review took place in August 2016 in East Nusa Tenggara, Indonesia, in order to evaluate the success of the project 'Reducing the Occurrence of Gender Based Violence' in reducing (GBV) and promoting women's empowerment.

A quasi-experimental impact evaluation design was used to measure the effect that is causally attributable to - and representative of - the project's intervention. The evaluation design involved comparing a random sample of women who live in villages supported by the project, with a random sample of women living in neighbouring communities and have similar characteristics in 2012, but who had not participated in the project. The evaluation was conducted in 12 communities involved in the project and 28 comparison communities.

An individual survey was conducted with 295 women randomly selected from project villages and 505 women with comparable characteristics who had not been involved in the project. At the analysis stage, the statistical tools of propensity-score matching and multivariate regression were used to control for demographic and baseline differences between the households surveyed regarding the project and comparison characteristics to provide additional confidence when estimating the project's impact.

RESULTS

The evaluation found positive and significant results on overall women's empowerment. Women in project communities scored 61 percent on the Women's Empowerment Index, compared with 52 percent in comparison communities. The overall project had positive and significant results on various indicators at a personal level (confidence in speaking in public events and knowledge of women's rights), relational level (provide support to and counselling to peers), and environmental level (social norms of women holding leadership positions, likelihood for

women holding leadership positions, and in the event of Cases of violence are treated more appropriately by the legal system, police and community support).

Project partners delivered a variety of activities, and the evaluation estimated differential effects based on the underlying activities carried out by the four partner organizations.

Community engagement activities designed to sensitising men and youth were mainly implemented by SSP and CIS Timor. Results for these activities provide evidence of a positive and significant impact on women’s willingness to report cases of violence, as well as greater support for women who have been victims of violence. These activities are also associated with women having a higher confidence to speak in public, as well as greater likelihood to participate in public events and engage in taking important decisions in these events. Finally, in communities where SSP and CIS Timor implemented their activities, women are more likely to hold a leadership position, as well as finding social norms that consider acceptable for a woman to run for local elections.

Project activities supporting women within the legal and judiciary system were mainly carried out by YABIKU and LBH APIK. Estimates for these activities suggest a positive and significant effect on indicators measuring services supporting women in case of violence, as well as indicators of the quality of support received by the judiciary system and police. Results also suggest that women in communities where YABIKU and LBH APIK are working have higher levels of knowledge of women’s rights, and a greater likelihood of providing support and counselling to peers. Findings suggest that women from communities where YABIKU and LBH APIK implemented their activities are more confident speaking up at public events and are more likely to hold a leadership position. Results also identified shifts in social norms within communities, with men and women being more likely to consider it acceptable for a woman to run for local elections. Finally, the evaluation found evidence that women in communities where YABIKU and LHP APIK delivered activities also demonstrated greater control over household resources than women in comparison communities. This came as a surprise, as it was not an outcome that the project expected to influence.

Characteristics of women’s empowerment examined in this Effectiveness Review

Level	Characteristic	Linked to the project	Evidence of impact (overall)	Evidence of impact (SSP/CIS)	Evidence of impact (YABIKU and LBH APIK)
Personal	Considers violence unacceptable	Yes	No		
	Willingness to denounce cases of violence	Yes	No	Yes	
	Control over personal decision making	Yes	No		
	Positive opinion of women taking up leadership positions	Yes	No		
	Confidence to speak up at public events	Partially*	Yes	Yes	Yes
	Access to economic resources	No	No		
	Access to information (knowledge of their rights)	Yes	Yes		Yes
Relational	Household decision making	Yes	No		
	Control over resources	No	No		Yes
	Free from violence	Yes	No		
	Men in household help with care responsibilities	Partially*	No		
	Participate in public events, meetings, forums	Yes	No	Yes	
	Influence at public events, meetings, forums	Partially*	No	Yes	
	Woman provides support and counselling to peers	Partially*	Yes		Yes
Environmental	Social norms that consider it acceptable for a woman to have a leadership position: acceptance of a woman running for election	Partially**	Yes	Yes	Yes

Women taking up leadership positions	Yes	Yes	Yes	Yes
Violence is not accepted in the community	Yes	No		
Cases of violence are treated appropriately (by legal system and policemen)	Partially***	Yes		Yes
Community social support for survivors of gender-based violence	Yes	Yes	Yes	Yes

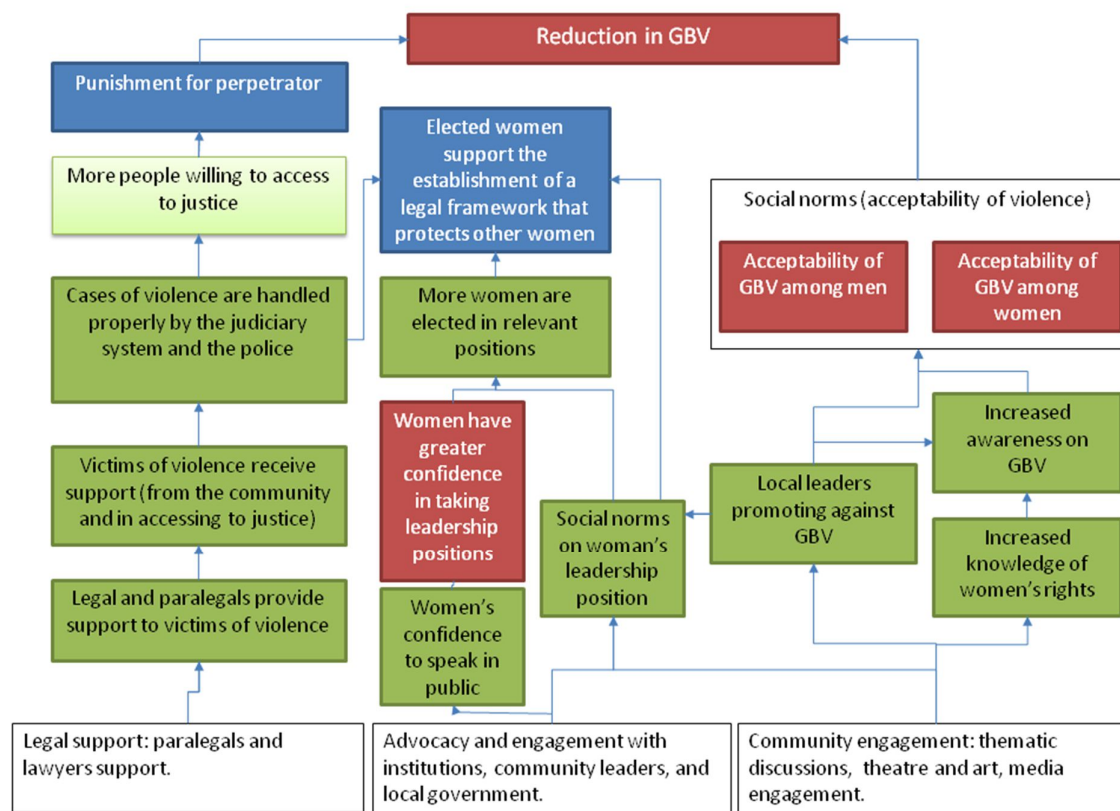
* This refers only to project participants, not the entire community; ** Only for activities conducted by SSP not APIK, YABIKU, CIS; *** Only for activities conducted by APIK, SSP, YABIKU, not CIS.

While there is no evidence in a reduction of episodes of gender-based violence attributable to the project, the Effectiveness Review provides evidence that the project had a positive and significant impact on indicators referring to the quality of support women received in the case of violence. There is strong evidence that women who were a victim of violence are more likely to receive support from paralegals and medical assistance, especially in communities where YABIKU and LBH APIK conducted their activities. Women in intervention communities (served by both from YABIKU and LBH APIK as well as from SSP and CIS) are significantly more likely to report the existence of legal and practical support for survivors of gender-based violence. Also, the quality of the assistance from the police seems to be greater among project communities, with questioning conducted in private rooms by female police officers and a higher likelihood that victims do not feel blamed by the police while reporting.

The evaluation found evidence of higher willingness to denounce in the case of violence is present in communities where SSP and CIS conducted their community engagement activities, but not in communities where YABIKU and LBH APIK was active supporting women within the legal and judiciary system. The evaluation also found that three out of four women go back to their houses after having reported violence, posing important questions of why women return and how programmes should address the ongoing and additional risks for such women.

The project was successful in increasing knowledge of women's rights, and awareness of gender-based violence. In intervention communities, local leaders reported talking more frequently about gender justice issues such as violence against women and the role of men in the society. However, there is no evidence of overall differences in social norms around the acceptability of gender-based violence, which remains high both in intervention and comparison communities (40% of women considering acceptable violence, and 75% of men perceived to consider acceptable violence).

Causal pathway for the project



PROGRAMME LEARNING CONSIDERATIONS

1 Consider introducing complementary interventions to increase women's willingness to report violence.

The evaluation findings raise questions about whether working mainly with paralegals is sufficient to increase women's willingness to report violence. Results on a positive and significant impact on willingness to report cases of violence were found in communities where the project conducted engagement activities, while were not observed within those communities where the project supported women within the legal and judiciary system. This does not suggest that work with paralegals and within the legal and judiciary system should be interrupted. Rather, that future programmes may want to complement work to strengthen the awareness and capacities of paralegals with other community-level activities. The evaluation found that community engagement activities (including working with community and cultural leaders and sensitising men and youth) seemed to be more effective in supporting women's willingness to report cases of violence.

2 Invest more in mitigating the risks to women who experience violence and decide to report their perpetrator.

The project was successful in improving some aspects related to quality of the assistance received in cases of violence (e.g., support by paralegals and interactions with the police). However, there still seems to be a lack infrastructures and services providing shelter to women victim of violence. From the survey, it appears that three out of four women who reported violence returned home after having reported violence. There is a need to better understand why women return and how programmes can help to address the ongoing and additional risks such women may face. The project could consider partnering with local government and others to provide adequate and safe infrastructure to support women who experience violence and decide to report it to the authorities.

3 Use high violence prevalence rates to improve targeting in future projects.

The project may want to concentrate its effort in areas with high prevalence and acceptability of violence and low willingness to report. Estimates from the survey suggest that women in the districts of Timor Tengah Selatan and Timor Tengah Utara (regardless of whether they are in intervention or comparison communities) are on average more exposed to violence, less willing to report violence, and more willing to accept violence than those women living in Kupang.

4 Consider identifying evaluation questions during programme design.

In future projects, the team could consider including an evaluation framework in the project design. Evaluation is a key tool for learning -it can help to strengthen theories of change and sharpen project design, enable evidence informed adaptation, and support projects and programmes to capture and communicate their effectiveness. When designing a project, the programme team is encouraged to consider and define key evaluation questions to be addressed and to plan for sufficient budget, time and resources. Different evaluation designs and methodologies provide different types of evidence, with different levels of confidence.

5 Invest more in understanding how working with men may lead to intended outcomes.

The current evaluation rigorously assessed the impact of the project on women as the final intended beneficiary of the project. It provided evidence of positive impact on women across a range of empowerment indicators. However, considering the project's explicit intent to work with men, it would be important to also invest in understanding if and how men's views were influenced by the project. The country team is advised to consider undertaking further research or evaluation exercises to better understand this intended change pathway.

1 INTRODUCTION

Oxfam GB's Global Performance Framework is part of the organization's effort to better understand and communicate its effectiveness, as well as enhance learning across the organization. Under this framework, a small number of completed or mature projects are selected at random each year for an evaluation of their impact, known as an Effectiveness Review. One key focus is on the extent to which they have promoted positive change in relation to a relevant OGB global outcome indicators.

This Effectiveness Review took place in August 2016 in three districts in East Nusa Tenggara on the Timor island, and it was intended to evaluate the success of the project 'Reducing the Occurrence of Gender Based Violence' in supporting women to achieve greater empowerment and reduce exposure to violence.

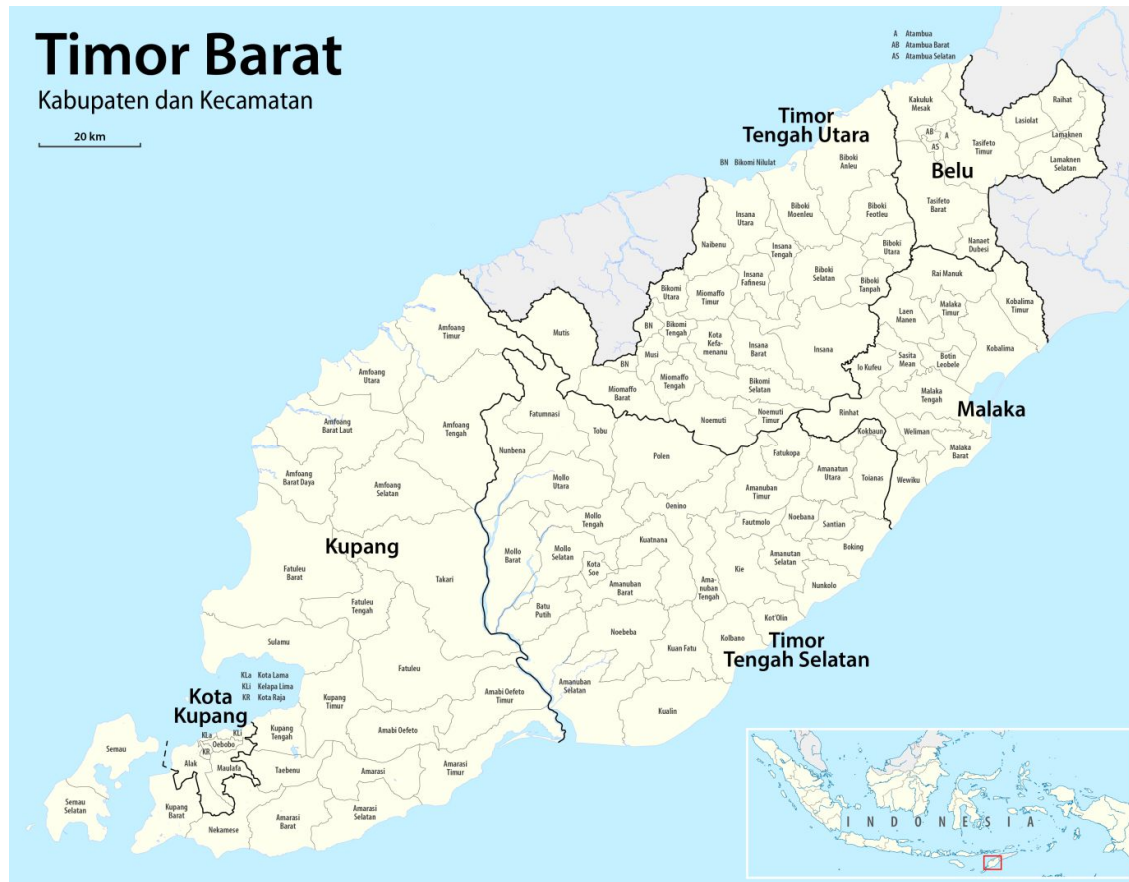
The OGB global outcome indicator under which this project has been selected is Women's Empowerment, which is defined by a composite index assessing indicators of empowerment that are relevant to the socio-economic context of the project under analysis. The index is explained in more detail in Section 5.

The questions examined in this evaluation are:

- What has been the impact of the project's activities implemented at community level in promoting women's empowerment?
- What was the impact of the project in changing other outcome indicators connected with the project logic (such as violence against women and social norms) among communities where the project was implemented?
- What was the impact of the project in establishing a network of groups supporting victims of violence, and in promoting a more effective judiciary system?

The project was implemented by Oxfam's partners: SSP, CIS Timor, Yabiku, LBH APIK. The project began in 2012, working in 43 communities in 3 districts in East Nusa Tenggara. The project was still under implementation when the evaluation was conducted in August 2016.

Figure 1.1: Map of West Timor in East Nusa Tenggara



Source: https://en.wikipedia.org/wiki/West_Timor

This report presents the findings of the Effectiveness Review. Section 2 describes the project. Section 3 presents the evaluation design and Section 4 explains how this design was implemented. Section 5 describes how women’s empowerment was measured for this evaluation. Section 6 presents the results of the data analysis, expressed as differences in outcome measures between the intervention and comparison groups. Section 7 concludes with a summary of the findings and some considerations for future learning.

2 PROJECT DESCRIPTION

The project started operating in East Nusa Tenggara in 2012 and was implemented by four partner organizations, named Sanggar Suara Perempuan (SSP), CIS Timor, Yayasan Amnaut Bife Kuan (YABIKU) and Lembaga Bantuan Hukum APIK (LBH APIK). The project activities can be divided into three broad categories: activities carried out with men and youth to sensitise them with gender roles; community engagement activities and advocacy to increase women's leadership participation; and finally, activities undertaken to support women with legal help when exposed to violence. SSP and CIS Timor mainly delivered community engagement activities and sensitising men and youth, while YABIKU and LBH APIK focused on supporting women within the legal and judiciary system.

SSP worked in 12 communities in 4 sub-districts. They established community groups with both men and women with 390 people. SSP specifically engaged with men, organising thematic discussions on gender justice, and facilitating reflections of roles within the families in order to change social norms and behaviour of men around gender based violence. They also conducted advocacy interventions at the community level to promote a legal framework that better protects women and supported women to run for elections taking leadership positions.

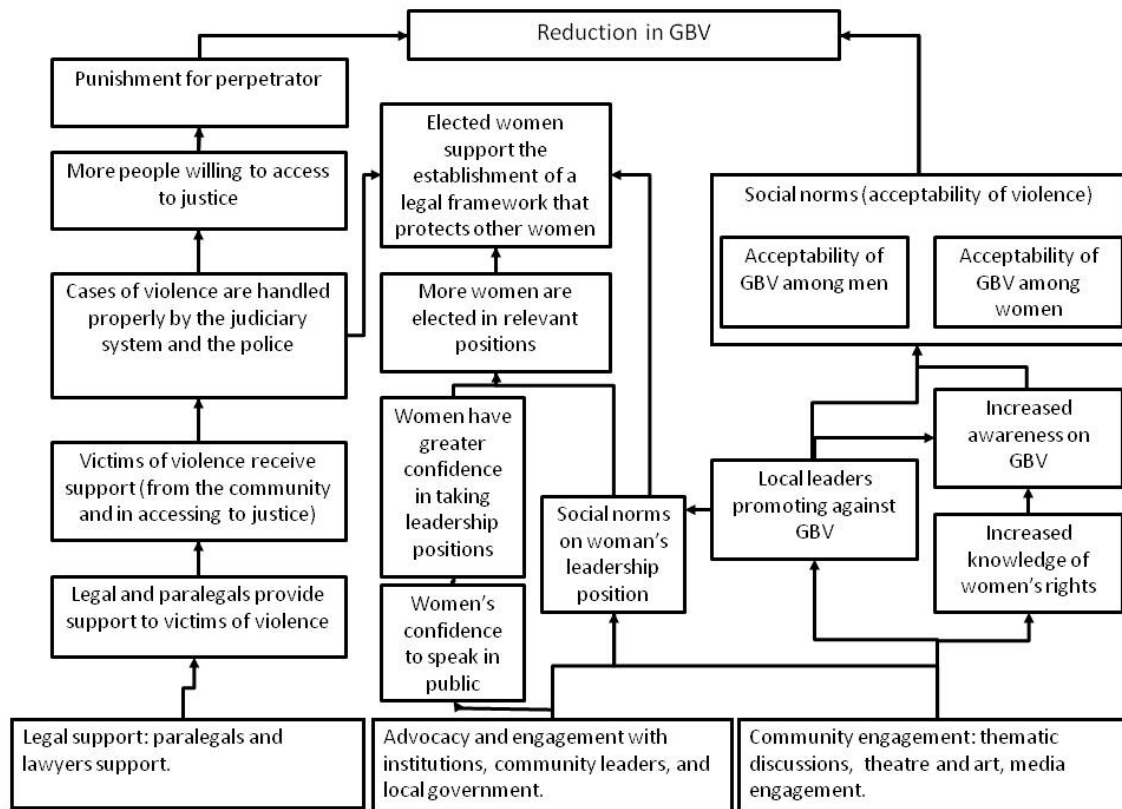
CIS Timor is a men's movement which works with youth organizations. Their strategy is to work with young people, between 17-35, in order to change mindsets in the next generation, reducing gender-based violence, and increasing women's confidence in speaking up and joining public events. CIS Timor implemented activities for this project with 15 community groups, directly working with 350 people. Within these groups, CIS Timor conducted a wide range of activities, including capacity building and training on public speaking and group engagement, worked with traditional art and radio programmes to promote positive role models, and established counselling centres for women who have experienced gender-based violence.

YABIKU conducted a community-based intervention providing women who suffered gender-based violence with paralegal support. They trained and provided capacity building to a team of 63 paralegals in 12 communities in 2 districts, and facilitated thematic and awareness-raising discussions open to all the community members. Paralegals were trained to protect and support women and children in case of violence. They were also trained in holding strategic positions within the community and how to support the process of implementing laws protecting women and children.

Finally, LBH APIK conducted activities aimed at policy reforms both at the local and then national level. They also conducted community level activities, included forming self-help groups for women exposed to violence. LBH APIK also trained and built the capacity of 25 paralegals to help with monitoring and documenting legal cases. Activities were implemented in 4 communities in 4 different sub-districts. Since 2011 more than 260 legal cases have been filed in these communities. LBH APIK also worked on setting up a memorandum of understanding between agencies to ensure that cases of violence were treated appropriately, and worked with different actors involved in the judiciary system to hold them accountable. Finally, LBH APIK worked with local leaders to establish a local advocacy network to prevent episodes of violence.

Figure 2.1 shows the causal pathway for the project.

Figure 2.1: Causal pathway



3 EVALUATION DESIGN

The central problem presented in designing an impact evaluation of any social programme is how to compare the outcomes that result from that programme with *what would have been the case* without that programme having been carried out. In the case of this Effectiveness Review, the situation of women in the communities where the project was implemented was examined through an individual questionnaire – but clearly it was not possible to observe what their situation would have been had they not had the opportunity to participate in this project. In any evaluation, that ‘counterfactual’ situation cannot be directly observed, it can only be estimated.

In the evaluation of programmes that involve a large number of units (whether individuals, households, or communities), common practice is to make a comparison between units that were subject to the programme and units that were not. As long as the two groups can be assumed to be similar in all respects except for the implementation of the specific programme, observing the situation of units where the programme was not implemented can provide a good estimate of the counterfactual.

An ideal approach to an evaluation such as this is to select the units in which the programme will be implemented at random. Random selection minimises the probability of there being systematic differences between the programme and non-programme units, and so maximises the confidence that any differences in outcome are due to the effects of the programme.

In the case of the project examined in this Effectiveness Review, the unit at which the programme was implemented was the community: within each of the project areas, communities were selected, while in other similar communities’ project activities were not conducted. A ‘quasi-experimental’ evaluation design was adopted, in which the situation of women in those communities where the project was not implemented was assessed as providing a reasonable counterfactual for women in the implementation communities.

Women in the project communities were ‘matched’ with women with similar characteristics in non-project (or ‘comparison’) communities. Matching was performed on the basis of a variety of characteristics – including religion, ethnicity, age, education, household wealth, and group involvement. Since some of these characteristics may have been affected by the project itself, matching was performed on the basis of these indicators *before* the implementation of the project. Since relevant baseline data were not available, survey respondents from both intervention and comparison groups were asked to recall some basic information about their household’s situation from 2011, before the project was implemented. Although this recall data is unlikely to be completely accurate, it should not have led to significant bias in the estimates as long as measurement errors due to the recall data were not significantly different for respondents in the intervention and comparison groups.

The survey data provided a large number of individual and household characteristics on which matching could be carried out. Matching was based on a ‘propensity score’, which represented the conditional probability of the household being in project communities, given particular background variables or observable characteristics. Women in the project and comparison communities were matched based on their having propensity scores within certain ranges. Tests were carried out after matching to assess whether the distributions of each characteristic were similar between the two groups. Details on the validity of the propensity score matching procedure are reported in Appendix 2.

As additional check on the validity of the results derived from the propensity-score matching procedure, results were also estimated using alternative matching procedures, and multivariate regression models. Appendix 3 provides estimates for the robustness checks.

It should be noted that both propensity-score matching and multivariate regression rely on the assumption that the ‘observed’ characteristics (those that are collected in the survey and controlled for in the analysis) capture all of the relevant differences between the two groups. If there are ‘unobserved’ differences between the groups, then estimates of outcomes derived from them may be misleading. Unobserved differences between the communities could potentially include differences in community leadership. The choice of which intervention and comparison communities to survey for this Effectiveness Review was made principally to minimise the potential for any such unobservable differences to bias the results.

4 DATA

4.1 SAMPLING OF INTERVENTION AND COMPARISON GROUPS

To form a sample of project and comparison women for this evaluation, we began by selecting the *project* communities on which to focus the evaluation. At the time of the evaluation, the project was implemented in 33 communities. However, we restricted our sample frame to 20 communities spread across 15 sub-districts where the project started in 2012 (In the other 13 communities the project has started later, and it was not expected to have enough maturity to have developed a measurable impact). From there, a sample of 12 communities in nine sub-districts was selected at random.

In order to identify a suitable comparison group, discussions were held with programme staff, partner organizations and a local consultant in order to locate comparable communities within the same district that were not covered by the project. Communities identified as potential comparisons needed to share similar socio-economic characteristics and be located within the district; but to reduce the risk of spillover they needed to be being located in a separate sub-district. Nine sub-districts were identified as potential comparison, within which 28 communities were selected at random.

The project was expected to have an impact on all the women within the community, not only those directly engaged by the programme, and as such, women were randomly selected within each community. To generate a systematic random sample of respondents to interview, the data collection team adopted a modified version of the 'left-hand rule'. This involved the following steps:

1. On arrival at the community, identify the centre of the community.
2. An imaginary line was drawn to split the community into quarters.
3. Enumerators were distributed to each quarter of the community.
4. Within each quarter pen was used to indicate the direction for the enumerator to take.
5. The enumerator followed the path indicated by the pen, and interviewed the third house on the left until reaching either the boundary reached in point 2 or the end of the village.

The final sample included 295 women interviewed from project communities and 505 women interviewed from comparison communities. The number of women interviewed in the project communities and the comparison communities are shown in Tables 4.1.

Table 4.1: Number of interviews conducted in each community

District	Sub-district	Community ¹	Number of interviews	Type respondents	Partner organization
<i>Kupang</i>	Amabi Oefeto	a-1	38	intervention	APIK
	Amabi Oefeto Timur	a-2	18	comparison	
		a-3	18	comparison	
		a-4	18	comparison	
		a-5	18	comparison	
		a-6	18	comparison	
	Amarasi	a-7	17	comparison	
		a-8	18	comparison	
		a-9	37	intervention	
	Amarasi Barat	a-9	37	intervention	CIS
	Kupang Barat	a-10	18	comparison	
		a-11	18	comparison	
		a-12	18	comparison	
		a-13	18	comparison	
	Kupang Tengah	a-14	38	intervention	
	Nekemese	a-15	37	intervention	
	Taebenu	a-16	18	comparison	
		a-17	17	comparison	
a-18		18	comparison		
<i>Timor Tengah Selatan</i>	Kolbano	b-1	17	comparison	SSP
		b-2	18	comparison	
		b-3	18	comparison	
		b-4	18	comparison	
		b-5	18	comparison	
		b-6	18	comparison	
		b-7	18	comparison	
	Kualin	b-8	19	intervention	
		b-9	19	intervention	
		b-10	19	intervention	
		b-11	18	intervention	
<i>Timor Tengah Utara</i>	Biboki Selatan	c-1	18	comparison	YABIKU
		c-2	18	comparison	
		c-3	18	comparison	
	Bikomi Tengah	c-4	19	intervention	
	Insana Barat	c-5	18	comparison	
		c-6	18	comparison	
		c-7	18	comparison	
	Insana Tengah	c-8	19	intervention	
	Miomaffo Tengah	c-9	18	intervention	
	Miomaffo Timur	c-10	18	intervention	
	Musi	c-11	18	comparison	

4.2 BASELINE CHARACTERISTICS

Before analysing the effects of the project on women's empowerment, we compared women from intervention and comparison communities in terms of their socio-economic characteristics in 2011 (that is, before the project began). This helps to check the suitability of the comparison group, and ascertain what variables should be used to control for observable differences between project and non-project households in the analysis of outcomes. These data were based on information recalled during the questionnaire or reconstructed from households' composition at the time of the survey.

The full comparison is shown in Table 4.2. It appears that there were not many significant differences between the two groups. On average women involved in the project were more likely to be Muslim and they were more likely to have at least primary education. They were more likely to live in a large family. In addition, they were less likely to engage in farming in 2011.

These differences, which existed before the project, had the potential to bias any comparison of the project's outcomes between the project and comparison communities. It was therefore important to control for these baseline differences when making such comparisons. As described in Section 3, the main approach used in this Effectiveness Review was propensity-score matching (PSM). The full details of the matching procedure applied are described in Appendix 2. After matching, women in the project and comparison communities were reasonably well-balanced in terms of the recalled baseline data, with no significant observable differences between them. However, not all of the women could be matched, and accordingly 2 of the 505 women surveyed in the comparison group and 1 of the 295 women surveyed in the intervention group had to be dropped from the analysis. Considering the small number of observations excluded, it is unlikely that this will have an effect on the representativeness of the estimates.

Table 4.2: Baseline characteristics before matching

	Intervention mean	Comparison mean	Difference
<i>Ethnic group = Timor (%)</i>	85.4	85.9	-0.005
<i>Religion= Protestant (%)</i>	67.8	71.7	-0.039
<i>Religion= Catholic (%)</i>	29.5	27.9	0.016
<i>Religion = Muslim (%)</i>	02.7	0.4	0.023***
<i>Respondent's age</i>	37.637	37.099	0.538
<i>Respondent has any education (%)</i>	53.6	46.9	0.066*
<i>Respondent is married (%)</i>	72.2	72.5	-0.003
<i>Respondent's contribution to household income in 2011 is >= 30% (%)</i>	60.0	58.4	0.016
<i>Respondent personally engaged in farming in 2011 (%)</i>	76.3	81.8	-0.055*
<i>Wealth index in 2011 (standardized) – Poorest (%)</i>	18.6	20.8	-0.021
<i>Wealth index in 2011 – Second quantile (%)</i>	18.3	21.0	-0.027
<i>Wealth index in 2011 – Third quantile (%)</i>	18.3	21.0	-0.027
<i>Wealth index in 2011 – Forth quantile (%)</i>	19.0	20.6	-0.016
<i>Wealth index in 2011 – Wealthiest (%)</i>	25.8	16.6	0.091***
<i>Household size</i>	4.834	4.426	0.408***
<i>Respondent involved in at least one community group* in 2011 (%)</i>	75.6	71.5	0.041
<i>Respondent involved in at least one public event** in 2011 (%)</i>	92.5	91.3	0.013

* Women's groups (PKK, Posyandu, PNPM), cooperatives ROSCA, farmers' groups, religious group, youth groups (Karang taruna/OSIS/Ekstra kurikuler), other community group.

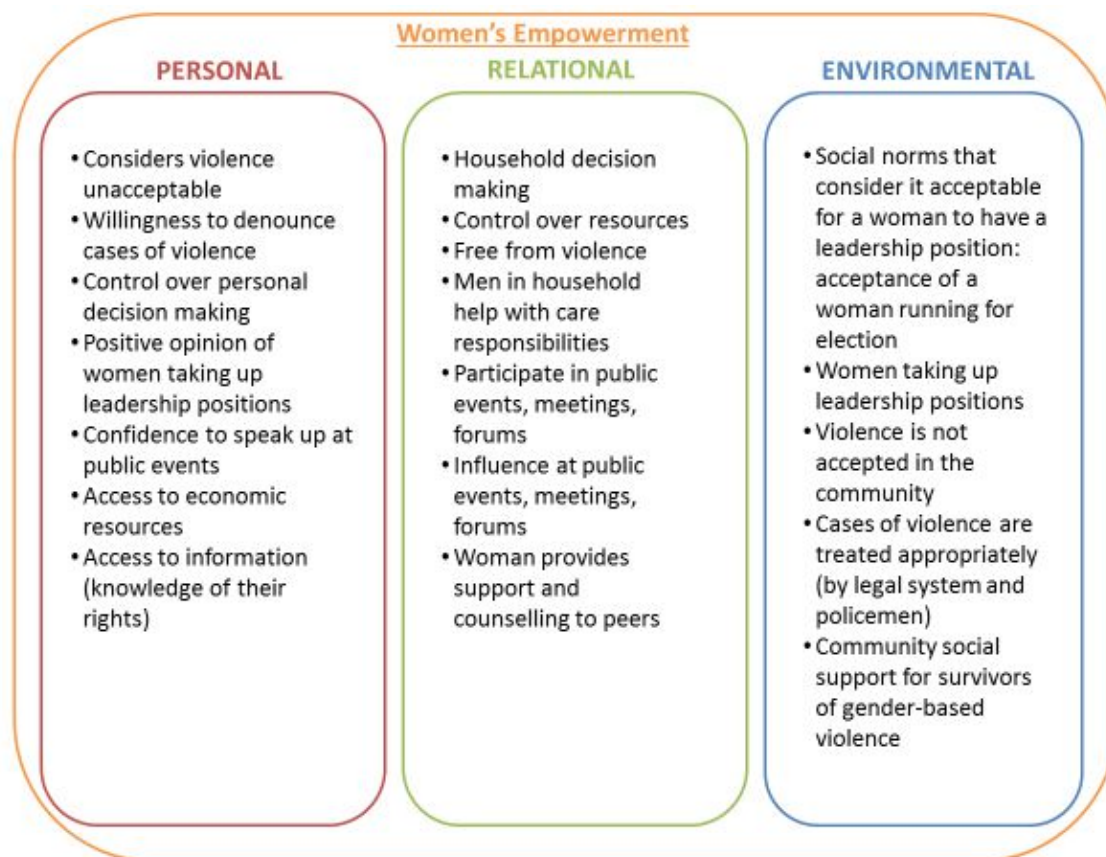
** Community development meetings, RT/RW meetings, socialisation in the community/church, family affairs(death/marriage), meetings in groups (e.g. election leaders), religious meetings and other public events

5 MEASURING WOMEN'S EMPOWERMENT IN INDONESIA

This evaluation specifically aimed to investigate the effect of the project on women's empowerment. In order to being able to measure women's empowerment Oxfam GB has adopted and adapted an approach that assesses several dimensions of women's empowerment. This approach builds on the Women's Empowerment in Agriculture Index (WEAI) developed by the Oxford Poverty and Human Development Initiative (OPHI) with support from the United States Agency for International Development (USAID) and the International Food Policy Research Institute (IFPRI). Oxfam combined this multidimensional approach with a theoretical framework that defines empowerment as a process where lives are transformed from a situation with limited power to a situation where power is enhanced. Details on the measurement approach can be found in the Oxfam publication "A 'How to' guide to measuring women's empowerment".

Women's empowerment is measured in a composite index by combining indicators referring to three levels of change: personal, relational, and environmental. Indicators defined at the personal level refer to empowerment within the person; indicators defined at the relational level refer to empowerment in the power relations within the woman's surrounding network, including within the household or in the community; finally, indicators defined at the environmental level refer to empowerment in the broader environment, including political space and social norms. Figure 5.1 describes the key dimensions of women's empowerment.

Figure 5.1: Key dimensions of women's empowerment



There is no single generic set of ‘women’s empowerment’ characteristics that are applicable to all contexts. For this reason, the measurement tool employed in each evaluation is designed in order to be context specific. The choice of indicators used to define women’s empowerment was constructed following steps.

During a two-day workshop in Kupang, Oxfam staff, staff from the partner organizations and the author of the evaluation identified a list of characteristics and indicators aiming to describe an empowered woman in East Nusa Tenggara. A questionnaire was designed and tested, which included questions intended to capture each of the characteristics identified. Table 5.1 shows the list of indicators identified in this evaluation.

It is important to note that while not all characteristics considered in this evaluation may be directly linked to the project activities, all were deemed to be important to women’s empowerment in this particular context.

In order to combine all the 19 indicators into a unique composite index, a benchmark was defined for each characteristic in order to identify what it means for a woman to be empowered in relation to the characteristic in question. The composite index measures the proportion of characteristics in which a woman scores positively across the 19 indicators describing empowerment. Details on the benchmark employed in each indicator can be found in Appendix 1. Not all characteristic was intentionally targeted by the project.

Table 5.1: Characteristics of women’s empowerment examined in this Effectiveness Review

Level	Characteristic	Linked to the project
Personal	Considers violence unacceptable	Yes
	Willingness to denounce cases of violence	Yes
	Control over decision making	Yes
	Positive opinion of women taking up leadership positions	Yes
	Confidence to speak up at public events	Partially*
	Access to economic resources	No
	Access to information (knowledge of her rights)	Yes
Relational	Household decision making	Yes
	Control over resources	No
	Free from violence	Yes
	Men in household help with care responsibilities	Partially*
	Participation in public events, meetings, forums	Yes
	Influence at public events, meetings, forums	Partially*
Woman provides support and counselling to peers	Yes	
Environmental	Social norms that consider it acceptable for a woman to have a leadership position: acceptance a woman running for election	Partially**
	Women take up leadership positions	Yes
	Violence is not accepted in the community	Yes
	Cases of violence are treated appropriately (by legal apparatus and policemen)	Partially***
	Community social support for survivors of gender-based violence	Yes

* This refers only to project participants, not the entire community; ** Only for activities conducted by SSP not APIK, YABIKU, CIS; *** Only for activities conducted by APIK, SSP, YABIKU, not CIS.

6 RESULTS

6.1 INTRODUCTION

This report is intended to be free from excessive technical jargon, with more detailed technical information being restricted to the appendices and footnotes. However, there are some statistical concepts that cannot be avoided in discussing the results. In this report, results will usually be stated as the average difference between women living in communities where the project was implemented (the ‘intervention group’) and the matched women in communities where the project was not implemented (the ‘comparison group’).

In the tables of results on the following pages, statistical significance will be indicated by asterisks, with three asterisks (***) indicating a p -value of less than 1 per cent, two asterisks (**) indicating a p -value of less than 5 per cent and one asterisk (*) indicating a p -value of less than 10 per cent. The higher the p -value, the less confident we are that the measured estimate reflects the true impact. Results with a p -value of more than 10 per cent are not considered to be statistically significant.

The results are shown after correcting for observable baseline differences between the women interviewed in the intervention group and in the women in comparison communities using a propensity-score matching (PSM) procedure. The details of this procedure are discussed in Appendix 2. All outcomes have also been tested for robustness to alternative statistical models in Appendix 3. Finally, Appendix 4 examines whether there are heterogeneous effects in the impact of the project due to differences in the activities implemented in different communities. As described in Section 2, SSP and CIS Timor mainly conducted community engagement activities in sensitising men and youth, and YABIKU and LBH APIK focused on supporting women in the legal and judiciary system. Where those alternative models produce markedly different results from those shown in the tables in this section, this is discussed in the text.

6.2 INVOLVEMENT IN PROJECT ACTIVITIES

Before considering the project’s effect on outcomes, it is important to examine whether the respondents reported having participated in the activities implemented under this project. Project interventions are rarely implemented in isolation, and it possible that other organizations are operating in the same or neighbouring geographical areas. It is therefore important to assess whether there are other institutions or governmental interventions conducting similar activities within the intervention and comparison group.

As presented in Section 2 the project conducted activities in a number of different ways. This included: establishing a system of paralegals and lawyers supporting victims of violence; engaging and advocating community leaders, local government and institutions to create a system that protects women; engage in community activities for men as well as for women. Although not all the women in the project communities were involved in the project activities directly, we expected that the project activities had an effect on all women living in project communities.

Table 6.1 shows the proportion of women in the intervention and comparison group that reported having received trainings in the following thematic areas since 2012. It provides good evidence that women interviewed in the comparison communities were exposed to significantly less project-related activities as those in the intervention communities, which increases our confidence in the validity of the comparison group.

Table 6.1: Project activities involvement

	1[Capacity building and gender justice]	1[Thematic discussions]	1[Paralegal training]	1[Advocacy training]	1[Laws and policies concerning women's rights]	1[Women's leadership]	1[Survivor counselling trainings]	1[Perpetrator counselling]	1[New men alliance trainings]
<i>Intervention group mean:</i>	0.20	0.24	0.10	0.09	0.27	0.15	0.10	0.08	0.07
<i>Comparison group mean:</i>	0.06	0.05	0.01	0.03	0.08	0.04	0.01	0.01	0.00
<i>Difference:</i>	0.14***	0.19***	0.09***	0.07*	0.18***	0.10**	0.09**	0.07*	0.07**
	(0.05)	(0.07)	(0.03)	(0.04)	(0.07)	(0.04)	(0.04)	(0.04)	(0.03)
<i>Observations intervention:</i>	294	294	294	294	294	294	294	294	294
<i>Observations total:</i>	797	797	797	797	797	797	797	797	797

Notes: Standard errors clustered at community level in parentheses; * p<0.1, ** p<0.05, *** p<0.01; PSM estimates are bootstrapped with 1,000 repetitions. All means are calculated after matching.

6.3 IMPACT ON WOMEN'S EMPOWERMENT

This section examines the differences between the intervention and comparison groups on women's empowerment indicators and the overall women's empowerment index described in Section 5.

The outcomes measures examined in this section are:

- Overall women's empowerment.
- Indicators of empowerment at a personal level
- Indicators of empowerment at a relational level.
- Indicators of empowerment at an environmental level.

6.3.1 Overall women's empowerment

Table 6.2 shows the two measure of women's empowerment presented in Section 5. The first column in Table 6.2 presents estimates of the average difference in the overall empowerment index between intervention and comparison groups. This measure represents the proportion of characteristics in which women scored positively across the 19 indicators describing empowerment. Estimates suggest that women living in project communities score positively on average in 61 percent of the indicators, compared with women not living in communities involved in the project, who score positively on average on 52 percent of the indicators. This difference is statistically significant, suggesting that the project has had a positive impact on overall women's empowerment.

The second column in Table 6.2 presents estimates of the average difference in the empowerment index only based on those indicators that are more closely connected with the project activities and outputs. The indicators included the characteristics that were linked to the project which were described as "Yes" in the third column of Table 5.1. This can be seen as a measure of success of the project referring to women's empowerment. Estimates suggest that women living in project communities scored positively on average in 64 percent of the indicators, compared with women not living in communities involved in the project, who scored positively on average in 56 percent of the indicators. This difference is statistically significant, suggesting a positive and significant impact of the project on overall women's empowerment.

Table 6.2: Overall women’s empowerment index

	Empowerment index	Empowerment index (ToC only)
<i>Intervention group mean:</i>	0.61	0.64
<i>Comparison group mean:</i>	0.52	0.56
<i>Difference:</i>	0.09***	0.07***
	(0.03)	(0.03)
<i>Observations intervention:</i>	294	294
<i>Observations total:</i>	797	797

Notes: Standard errors clustered at community level in parentheses; * p<0.1, ** p<0.05, *** p<0.01; PSM estimates are bootstrapped with 1,000 repetitions. All means are calculated after matching.

Table 6.3 presents estimates of the index disaggregated under the three levels of empowerment: personal, relational, and environmental. Estimates suggest that there is a positive and significant impact of the project for the dimensions of empowerment at personal and environmental levels.

Table 6.3: Women’s empowerment – power dimensions

	Empowerment index (personal)	Empowerment index (relational)	Empowerment index (environmental)
<i>Intervention group mean:</i>	0.63	0.55	0.68
<i>Comparison group mean:</i>	0.58	0.50	0.47
<i>Difference:</i>	0.06**	0.05	0.20***
	(0.03)	(0.04)	(0.04)
<i>Observations intervention:</i>	294	294	294
<i>Observations total:</i>	797	797	797

Notes: Standard errors clustered at community level in parentheses; * p<0.1, ** p<0.05, *** p<0.01; PSM estimates are bootstrapped with 1,000 repetitions. All means are calculated after matching.

The following sections present in detail the indicators and dimensions included in the index presented above.

6.3.2 Personal

The first indicators measure empowerment within the person. This dimension refers to indicators of transformation of power within the person. In the context under analysis the following indicators have been identified:

1. Considers violence unacceptable.
2. Willingness to report cases of violence.
3. Control over personal decision making.
4. Self-confidence in taking up leadership positions.
5. Confidence in speaking up at public events.
6. Access to economic resources.
7. Access to information (respondents’ knowledge of their rights).

Table 6.4: Indicators of empowerment at a personal level

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	1[Respondent does NOT accept violence]	1[Respondent willing to denounce a man in case of violence]	1[Personal decision making]	1[Positive opinion of women taking up leadership positions]	1[Respondent would stand up and speak in public]	1[Household income share >= 30%]	1[Respondent knows her rights]
<i>Intervention group mean:</i>	0.60	0.45	0.79	0.72	0.50	0.67	0.76
<i>Comparison group mean:</i>	0.61	0.32	0.77	0.73	0.29	0.70	0.63
<i>Difference:</i>	-0.01	0.13	0.03	-0.01	0.20***	-0.03	0.12*
	(0.08)	(0.11)	(0.08)	(0.08)	(0.07)	(0.10)	(0.07)
<i>Observations intervention:</i>	294	294	294	294	294	294	294
<i>Observations total:</i>	797	797	797	797	797	797	797

Notes: Standard errors clustered at community level in parentheses; * p<0.1, ** p<0.05, *** p<0.01; PSM estimates are bootstrapped with 1,000 repetitions. All means are calculated after matching.

To assess **whether respondents consider gender-based violence to be unacceptable**, they were asked whether they believed it to be acceptable for a man to hit his wife in the following instances:

- If she disobeys her husband or other family members.
- If he suspects that she has been unfaithful.
- If she neglects the children.
- If she spends money without permission.
- If she is not supporting her husband in livestock and agricultural activities.
- If she goes to see her family without the permission of her husband.

Women who do not consider violence acceptable in any of these circumstances are considered to be more empowered. Estimates in the first column in Table 6.4 indicate that an average of 60 percent of women in the intervention group and 61 in the comparison, do not consider violence acceptable in any of these circumstances, suggesting no evidence of impact on acceptability of violence. These estimates are in line with monitoring data.

Willingness to report cases of violence is measured according to whether a woman is willing to report a man if he does any of the actions listed above.

Estimates in the second column of Table 6.4 indicate the proportion of women who would be willing to denounce. On average, 45 percent of women involved in the project said to be willing to denounce a man in cases of violence; compared with 32 percent of women in the comparison group. This difference of 14 percentage points is not statistically significant. However, Table A4.3 provides evidence that women in communities where SSP and CIS implemented community engagement activities are on average 17 percentage points more likely to being willing to report a man in case of violence compared with women not involved in such activities. This difference is statistically significant and is suggesting a positive impact of community engagement activities on willingness to report cases of violence, which is not observed within those communities where the project supported women within the legal and judiciary system.

Control over personal decision making is measuring a woman’s ability to make decisions for herself. Each respondent was asked who normally makes decisions in the following areas:

- Whether she personally can travel to visit relatives outside the community.
- Whether she personally can participate in community group activities or meetings.

We considered the respondent able to make decisions if she reported making jointly or solely decisions in both areas. Estimates in the third column of Table 6.4 suggests that women in both the intervention and comparison groups appear to have high levels of household decision making power, with 79 and 77 percent, respectively. However, this difference is not statistically significant different from zero, providing no evidence of impact of the project on this indicator.

Positive opinion of women taking up leadership positions² is measured by asking to what extent the respondent agreed or disagreed with the following statements:

- I think it is acceptable for women to have a leadership role in the community.
- There should be more women in leadership positions in the community.

We considered the respondent to have a positive opinion of women taking up leadership positions if she partly agreed or strongly agreed with both statements. The fourth column in Table 6.4 suggests that both intervention and comparison groups present largely positive opinions of women taking up leadership positions. On average, 72 percent of the women in the intervention group reported having a positive opinion of women taking up leadership roles, compared with 73 percent for women not involved in the project. This difference is not statistically significant, suggesting that there is no evidence of an effect on this indicator. It is important to remember that Indonesia had a female president from 2001 to 2004. In light of this, it is not surprising to find largely positive opinions of women taking up leadership roles in both the intervention and comparison group.

Confidence in speaking at public events is measured by whether the respondent has the confidence to express her opinions in public. The respondents were asked about the extent to which they agreed with the following statements:

- It is difficult for a woman like you to stand up in a public meeting held in your community and voice any concerns.
- If a decision were made in public meetings/events which might negatively affect your life and the lives of your children, you would not hesitate to stand up and protest despite the possible negative consequences.

We considered that the respondent had self-confidence about speaking up in public events if she partly or strongly disagreed with the first statement and partly or strongly agreed with the second statement. The fifth column of Table 6.4 indicates that the participants in the intervention group were significantly more likely to report that they have confidence in speaking up –50 percent responded positively, compared with 29 percent of the women in the comparison group. This suggests that there is an impact from the project on this indicator. Estimates in the fifth column of Table A4.4 in Appendix 4 suggests that community engagement activities implemented by SSP and CIS had greater impact on this indicator compared with activities focused on providing legal support implemented by with YABIKU and APIK.

Access to economic resources is measured by the proportion of income that women earn independently of their spouses or other household members. This indicator is not connected with the project's theory of change, but it was included as deemed to be important in defining an empowered woman. It comes with no surprise that estimates in the sixth column of Table 6.4 suggest that the project has no effect on this indicator.

The indicator access to information aims to measure **knowledge of women's rights**. Respondents were asked whether they have heard of the any of types of regulations listed below:

- Laws on child protection.
- Elimination of domestic violence.
- Laws against trafficking.
- Community regulations on women's protection.

Estimates in the final column of Table 6.4 suggests that, on average, women in intervention communities are on average more likely to report being aware of such regulations, compared with women in the comparison group. This result seems to be driven from project participants within YABIKU and APIK.

6.3.3 Relational

These indicators measure empowerment in the power relations within the woman’s surrounding network. In the context of the project this evaluation identified the following indicators:

1. Household decision making.
2. Control over resources.
3. Freedom from violence.
4. Men in household help with care responsibilities.

It also includes indicators that reflect the recognition that empowerment is a collective process, which requires the support and interaction of peers and organizations. The following indicators were identified:

1. Participation in public events, meetings, forums.
2. Influence at public events, meetings, forums.
3. Women provide support and counselling to peers.

Table 6.5 provides estimates for the first four indicators identified at relational level.

Table 6.5: Indicators of empowerment at a relational level (Power with)

	1[Household decision making]	1[Control over household assets]	1[Freedom from violence]	1[Time men in household spend on care responsibilities increased since 2011]
<i>Intervention group mean:</i>	0.64	0.63	0.83	0.17
<i>Comparison group mean:</i>	0.61	0.63	0.81	0.16
<i>Difference:</i>	0.03	-0.00	0.02	0.02
	(0.11)	(0.12)	(0.05)	(0.05)
<i>Observations intervention:</i>	294	294	294	294
<i>Observations total:</i>	797	797	797	797

Notes: Standard errors in parentheses; * p<0.1, ** p<0.05, *** p<0.01; PSM estimates are bootstrapped with 1,000 repetitions. All means are calculated after matching.

Household decision making is measured by whether the respondent is involved in decisions made in her own household. Each respondent was asked who normally makes decisions in a number of areas.

Estimates in the first column of Table 6.5 indicate that, on average, women in both the intervention and comparison groups have household decision making power at a rate of 64 and 62 percent, respectively, which results in no statistically significant difference between the two groups. This suggests that there is no evidence of impact from the project on this indicator.

Control over resources is measured by whether women own and control strategic assets, such as land, livestock or household equipment (e.g. time-saving equipment). Respondents were asked about their households’ ownership of various types of assets. As a follow-up to these questions, they were then asked to specify which household members could make decisions about whether to sell, trade or give away an item if need be. Estimates in the second column of Table 6.5 report whether a woman has sole or joint control of all the assets that her household owns. On average, women in both the intervention and comparison groups control many household assets; specifically, 62 percent of respondents indicated that they control their resources, which indicates no statistically significant difference between the two groups. This suggests that there is no an impact from the project on this indicator.

Freedom from violence³ is measured by whether women have experienced violence recently. We asked each participant whether someone had done any of the following to her in the previous 12 months:

- Threatening to hurt her or someone she cares about.
- Slapped or threw something at her that could hurt her.
- Pushed or shoved her or pulled her hair.
- Hit her with a fist or with something else that could hurt her.
- Kicked, dragged, pushed her against the wall or beat her up.
- Choked her on purpose.
- Threatened to use or actually used a gun, knife or other weapon against her.
- Forced her to have sexual intercourse when she did not want to, or perform sexual acts she did not want to.

We considered women who did not experience any of the violence listed above to be free from violence. Estimates in the third column of Table 6.5 suggest that 83 percent of the women in the intervention group and 81 percent of the women in the comparison group are free from violence. This difference is not statistically significant, suggesting that there is no evidence that in communities where project activities were conducted, incidence of gender-based violence is lower than in communities where the project was not implemented. More analysis on violence can be found in section 6.4 and Appendix 5.

The presence of men in the household who help with care responsibilities is measured by whether respondent indicate the men in the household had increased the amount of time devoted to unpaid care activities. Estimates in the final column of Table 6.5 suggest that 17 percent of women in the project communities reported that men in their household increased their time spent doing at least one for these since 2011, compared with 15 percent of women in the comparison communities. However, this difference is not statistically significant.

Table 6.6 provides estimates for the remaining three indicators of empowerment at a relational level.

Table 6.6: Indicators of empowerment at a relational level (Power over)

	1[Respondent involved in public events]	1[Respondent is involved in making decisions in organizing public events]	1[Respondent provided support or advice to a woman victim of violence]
<i>Intervention group mean:</i>	0.79	0.58	0.21
<i>Comparison group mean:</i>	0.76	0.48	0.07
<i>Difference:</i>	0.03 (0.05)	0.10 (0.07)	0.13*** (0.05)
<i>Observations intervention:</i>	294	294	294
<i>Observations total:</i>	797	797	797

Notes: Standard errors in parentheses; * p<0.1, ** p<0.05, *** p<0.01; PSM estimates are bootstrapped with 1,000 repetitions. All means are calculated after matching.

Participation in public events is measured by whether a woman participates to village development meetings, neighbourhood's association meeting, church or village socialisation events, and other group meetings such as group chairperson elections in the previous 12 months. Estimates in the first column of Table 6.6 suggest that, on average, 79 percent of the respondents in the intervention group reported having participated in at least one of the seven public events in the previous 12 months, compared with 76 percent in the comparison group. This difference is not statistically significant for the entire project⁴.

Influence at public events is measured by whether the respondent is involved in managing and making important decisions in each group. Estimates in the second column of Table 6.6 indicate that 58 percent of women in the intervention group and 48 percent of women in the comparison group were 'to some extent' or 'to a large extent' involved with making decisions at least one of the meetings conducted in the previous 12 months. The difference is

not statistically significant for the overall project, however Table A4.5 suggests that women involved in the project with SSP and CIS are on average more involved in making important decisions

The indicator investigating whether **women provide support and counselling to peers** is measured by whether the respondents support women who are close to them within their community who have experienced violence in the previous 12 months. The respondents were asked the following two questions:

- Have you given any advice to other women who have experienced violence?
- Have you given any support to other women who have experienced violence?

Estimates in the third column of Table 6.6 indicate the proportion of women who gave any advice about what has happened, sought help, or gave any support to a peer such as offering counselling, accompanying her to police/legal aid or paralegals or providing shelter. On average, 20 percent of women involved in the project had supported peers, compared with eight percent in the comparison group. This difference of 12 percentage points is statistically significant. This suggests that there is an impact from the project on this indicator. Interestingly, estimates in the last column of Table A4.6 in Appendix 4 suggest that this effect is driven by women who live in the communities where YABILU/APIK worked.

6.3.4 Environmental

The final indicators measure women’s empowerment in the broader environment. The following indicators were identified for this evaluation:

1. Social norms (acceptable for a woman to have a leadership position).
2. Women take up leadership positions.
3. Violence is not accepted in the community.
4. Cases of violence are treated appropriately.
5. Community social support for survivors of gender-based violence.

Table 6.7 provides estimates of the indicators identified under this dimension.

Table 6.7: Indicators of empowerment at an environmental level

	1[Respondent lives in a community where other people consider that a woman can be a leader just like a man]	1[Respondent lives in a community where women have leadership positions]	1[Respondent considers that other men in her community do NOT accept violence]	1[Case handled properly]	1[Community social support for survivors of gender-based violence]
<i>Intervention group mean:</i>	0.61	0.97	0.27	0.87	0.68
<i>Comparison group mean:</i>	0.42	0.91	0.25	0.48	0.31
<i>Difference:</i>	0.19** (0.08)	0.06* (0.03)	0.01 (0.07)	0.39*** (0.14)	0.37*** (0.09)
<i>Observations intervention:</i>	294	294	294	294	294
<i>Observations total:</i>	797	797	797	797	797

Notes: Standard errors in parentheses; * p<0.1, ** p<0.05, *** p<0.01; PSM estimates are bootstrapped with 1,000 repetitions. All means are calculated after matching.

Social norms are shared beliefs about what is typical and appropriate behaviour in a group; in this study, our focus is on social norms regarding women’s leadership roles. We define social norms here as **whether it is acceptable for a woman to have a leadership position**. The respondents in our study were given the following pair of statements and asked about which statement in the pair they think other women and other men in their community agree with most:

- A woman can be a leader, just like a man can. / Men are better leaders than women.

Estimates in the first column of Table 6.7 suggest that 61 percent of respondent involved in the project believed that men and women living in their communities considered that a woman can be a leader just like a man, compared with 42 percent of women in the comparison group. The difference of 18 percentage points is statistically significant. This suggests that there is a strong and significant impact on this indicator.

The indicator measuring whether **women take up leadership positions** is taking value equal to one if the respondent knows female leaders in her community, zero otherwise. Estimates in the second column of Table 6.7 indicate that more than 90 percent of respondents in both groups knew at least one woman who had taken up at least one of the listed positions in their communities. Specifically, 97 percent of women in the intervention group and 91 percent of women in the comparison group reported that they knew women who had taken up leadership positions in their communities. The proportion of women in the intervention group is statistically higher than the proportion of women in the comparison group.

The indicator measuring social norms on violence, measure whether **violence is considered unacceptable in the community**. Respondents are asked whether men in their communities would consider it acceptable to beat their wives in the following instances:

- She disobeys her husband or other family members.
- He suspects that she has been unfaithful.
- She neglects her children.
- She spends money without permission.
- Any other case not mentioned above.

Estimates in the third column of Table 6.7 indicate that 27 percent of women in the intervention group believed that men in their communities would not consider it acceptable to beat their wives in any of the five circumstances listed above, compared with 25 percent of women in the comparison group. This difference is not different from zero.

The indicator measuring whether **incidents of violence are treated appropriately** is capturing whether women receive appropriate assistance in cases of violence or when the authorities take necessary actions to deal with such cases. Specifically, all woman in a given community scored positively for this indicator if, among the women in the community who had experienced violence in the past 12 months and had reported it to the police, more than half had experienced at least one of the following:

- Received support from paralegals.
- Received any medical assistance.
- Did not feel blamed by the police while reporting.
- Was interviewed by a woman police officer.
- Was interviewed in a private room.

Estimates in the fourth column of Table 6.7 suggest a positive effect of the project on the appropriate response to violence; women in the intervention group were 39 percentage points more likely to score positively on this indicator than women in the comparison group. This difference is statistically significant, suggesting a positive and significant impact of the project on this indicator. Estimates in the fourth column of Table A4.7 imply that activities conducted by YABIKU/APIK were particularly effective in supporting this.

Finally, the existence of **community social support for survivors of gender-based violence** is measured by whether the respondent reported that in the community there are services supporting women on legal and practical support in case of violence.

Estimates in the final column of Table 6.7 suggest that, on average, 68 percent of the respondents in the intervention group reported their communities provide at least one of the supports listed above, compared with only 31 percent in the comparison group. This difference of the two groups is statistically significant, suggesting that the project has had a positive impact on this indicator.

6.4 IMPACT ON OTHER OUTCOMES

This section will examine the differences between intervention and comparison groups on outcome measures capturing the project’s logic as discussed in Section 2. The indicators in this section intended to improve conditions for both men and women in the household.

The outcomes measures examined in this section are:

- Gender-based violence.
- Cases of violence are treated appropriately by the judiciary system and the police.
- Community leaders’ engagement.

6.4.1 Gender-based violence

The final goal the project aimed to change is reducing the incidence of gender-based violence in the communities. In order to measure gender-based violence, women were asked whether any form of psychological, physical, or sexual violence had been committed against them in the past 12 months. The same question was posed asking whether the respondent is aware of any violence that had been committed against a woman close to here in the past 12 months³. Table 6.8 provides estimates of actual experiences of violence among the respondents and Table 6.9 provides estimates about women close to them, respectively.⁵

Table 6.8: Gender-based violence against respondents

	1[Received (any) violence – respondent]	1[Received psychological violence – respondent]	1[Received physical violence – respondent]	1[Received sexual violence – respondent]
<i>Intervention group mean:</i>	0.16	0.12	0.12	0.07
<i>Comparison group mean:</i>	0.18	0.12	0.15	0.09
<i>Difference:</i>	-0.02 (0.05)	-0.01 (0.05)	-0.04 (0.05)	-0.02 (0.04)
<i>Observations intervention:</i>	292	292	292	292
<i>Observations total:</i>	791	791	791	791

Notes: Standard errors in parentheses; * p<0.1, ** p<0.05, *** p<0.01; PSM estimates are bootstrapped with 1,000 repetitions. All means are calculated after matching.

Estimates in the first column of Table 6.8 suggest that 16 to 18 percent of women in the intervention and comparison group experienced some form violence, suggesting no statistically significant difference between the two groups. These results are consistent regardless on the type of violence.

Table 6.9: Gender-based violence in the community

	1[Received (any) violence – woman close respondent]	1[Received psychological violence – woman close respondent]	1[Received physical violence – woman close respondent]	1[Received sexual violence – woman close respondent]
<i>Intervention group mean:</i>	0.56	0.41	0.51	0.21
<i>Comparison group mean:</i>	0.37	0.27	0.34	0.12
<i>Difference:</i>	0.19** (0.08)	0.14** (0.06)	0.16** (0.07)	0.08 (0.06)
<i>Observations intervention:</i>	292	292	292	292
<i>Observations total:</i>	791	791	791	791

Notes: Standard errors in parentheses; * p<0.1, ** p<0.05, *** p<0.01; PSM estimates are bootstrapped with 1,000 repetitions. All means are calculated after matching.

The indicator of **exposure to violence for women close to the respondent**, in Table 6.9, suggest that 56 percent of the women in the intervention group and 38 percent of the women in the comparison group heard about cases of violence against another woman who was close to them. Women in the intervention group witnessed someone being psychological and physical violent to at least one woman close to them. These estimates suggest that women in the intervention group are more *aware* of violence taking place in their communities.

6.4.2 Cases of violence are treated appropriately

According to the theory of change presented in Figure 2.1, the project aimed to facilitate and improve the conditions for women who wanted to access to justice. It has done so by providing legal and paralegal support to victims of violence, as well as working with institutions (judiciary the police) to enable appropriate responses to cases of violence.

Table 6.11: Indicators of how cases of gender-based violence were handled

	1[Received support from paralegals]	1[Received medical assistance]	1[Did not feel blamed by the police while reporting]	1[A woman police officer interviewed her]	1[Questioning was conducted in a private room]	1[Woman had to go back to her house after having reported violence]	1[The case arrived at court]
<i>Intervention group mean:</i>	0.78	0.59	0.64	0.13	0.31	0.75	0.19
<i>Comparison group mean:</i>	0.50	0.44	0.54	0.01	0.04	0.83	0.08
<i>Difference:</i>	0.29**	0.17	0.09	0.11**	0.28***	-0.08	0.11
	(0.13)	(0.15)	(0.15)	(0.05)	(0.09)	(0.11)	(0.09)
<i>Observations intervention:</i>	83	83	83	83	83	83	83
<i>Observations total:</i>	154	154	154	154	154	154	154

Notes: Standard errors in parentheses; * p<0.1, ** p<0.05, *** p<0.01; PSM estimates are bootstrapped with 1,000 repetitions. All means are calculated after matching.

Table 6.11 presents estimates of how cases of gender-based violence were handled. These estimates confirm that victims are more likely to receive support from paralegals and project's activities have had a positive effect on enabling a better treatment from the police.

Seventy-eight percent of women in the intervention group who reported violence received support from paralegals and almost sixty percent received medical assistance, compared to 50 and 44 percent of women in the comparison group. Activities conducted by YABIKU and APIK seem to be particularly effective in reducing the feeling of feeling blamed by the police while reporting incidences of violence (Appendix 4, Table 10). Moreover, 13 percent in the intervention group were interviewed by women police, compared to one percent in the comparison group. Likewise, 33 percent of women in the project communities answered that the questioning was conducted in a private room, compared to four percent of the comparison group.

Even though it appears from these comparisons that the handling of cases of gender-based violence has improved in the project communities, there is still room for improvement. One issue is the lack of structures or services providing shelter to women victim of violence. From the survey, it appears that three out of four women who reported violence returned home after having reported violence, which can pose the person in a situation of further security hazard. Another issue is that most of the cases of reported violence do not arrive court (81 percent in the intervention group and 91 percent in the comparison group).

6.4.3 Community leaders' engagement

Finally, the project identified agents of change for social norms and engaged with community and religious leaders in promoting messages against GBV and supporting the role of women in the society.

Table 6.12: Discussion of thematic areas by community leaders

	1[Heard community leader talking about budget expenditure in the community]	1[Heard community leader talking about violence against women]	1[Heard community leader talking about the role of men in the society]	1[Heard community leader talking about the fact that women can be leaders]
<i>Intervention group mean:</i>	0.37	0.70	0.61	0.66
<i>Comparison group mean:</i>	0.41	0.56	0.38	0.44
<i>Difference:</i>	-0.03 (0.06)	0.14* (0.07)	0.23*** (0.07)	0.22*** (0.08)
<i>Observations intervention:</i>	294	294	294	294
<i>Observations total:</i>	797	797	797	797

Notes: Standard errors in parentheses; * p<0.1, ** p<0.05, *** p<0.01; PSM estimates are bootstrapped with 1,000 repetitions. All means are calculated after matching.

Table 6.12 summarizes the proportion of women in the intervention and comparison groups who heard their community leaders or religious leaders talking about certain thematic areas covered by the project. It appears that, compared to women in the comparison group, women involved in the project were more likely to report that they have heard community leaders discuss gender-based violence, the role of men in the society and the fact that women can be leaders in their communities. The difference of 13 to 23 percentage points for the women who were involved in the project and the comparison group, respectively, is statistically significant.

7 CONCLUSIONS

7.1 CONCLUSIONS

The Effectiveness Review provides good evidence that the project 'Reducing the occurrence of Gender Based Violence (GBV)' in East Nusa Tenggara had a positive and significant impact on overall women's empowerment. Women in project communities scored 61 percent on the Women's Empowerment Index, compared with 52 percent in comparison communities. The project had overall positive and significant results on various indicators at a personal level (confidence in speaking in public events and knowledge of women's rights), relational level (provide support to and counselling to peers), and environmental level (social norms of women holding leadership positions, likelihood for women holding leadership positions, and in the event of Cases of violence are treated more appropriately by the legal system, police and community support).

As partners conducted a variety of activities, the evaluation estimated differential effects based on the underlying activities carried out by the four partner organizations.

SSP and CIS Timor mainly conducted community engagement activities and sensitising men and youth. Estimates for these two partners provide evidence of a positive and significant impact on women's willingness to report in case of violence, as well as greater support for women victim of violence. Activities conducted by SSP and CIS Timor are also associated with women having a higher confidence to speak in public, as well as greater likelihood to participate in public events and engage in taking important decisions in these events. Finally, in communities where SSP and CIS Timor implemented their activities, it appears that women are more likely to hold a leadership position, as well as finding social norms that consider acceptable for a woman to run for local elections.

YABIKU and LBH APIK focused their activities on supporting women within the legal and judiciary system. Estimates for these two partners suggest a positive and significant effect on indicators measuring services supporting women in case of violence, as well as indicators of the quality of support received by the judiciary system and police. Estimates also suggest that women in communities where YABIKU and LBH APIK are working present higher levels of knowledge of women's rights, and a greater likelihood that women provide support and counselling to peers. Estimates suggest that women from communities where YABIKU and LBH APIK implemented their activities present greater confidence to speak up at public events and are more likely to hold a leadership position. They also present social norms that consider acceptable for a woman to run for local elections. Finally, it is coming as a surprise that women in YABIKU and LHP APIK communities also present greater control over household resources compared with comparison women. This was not part of the indicators that the project was expected to change.

While there is no evidence in a reduction of episodes of gender-based violence attributable to the project, the Effectiveness Review provides evidence that the project had a positive and significant impact on indicators referring to the quality of support women received in the case of such violence.

There is strong evidence that women who were a victim of violence are more likely to receive support from paralegals and medical assistance, especially in communities where YABIKU and LBH APIK conducted their activities. Also, the quality of the assistance from the police seems to be greater among project communities, with a higher likelihood that victims do not feel blamed by the police while reporting, with questioning conducted in private rooms by female police officers. Women in intervention communities (both from YABIKU and LBH APIK as well as from SSP and CIS) are more significantly likely to report the existence in their communities of legal and practical support for survivors of gender-based violence.

Despite these positive effects, evidence of higher willingness to denounce in the case of violence is present in communities where community engagement activities were conducted by SSP and CIS, but not in communities where the project supported women in the legal system with YABIKU and LBH APIK activities.

The project was successful in increasing women's knowledge of women's rights, and awareness of gender-based violence. In intervention communities, local leaders reported talking more frequently about issues such as violence against women, the role of men in the society. However, there is no evidence supporting differences in social

norms around the acceptability of gender-based violence, which remains high both in intervention and comparison communities (40% of women considering acceptable violence, and 75% of men perceived to consider acceptable violence).

7.2 PROGRAMME LEARNING CONSIDERATIONS

1 Consider introducing complementary interventions to increase women's willingness to report violence.

The evaluation findings raise questions about whether working mainly with paralegals is sufficient to increase women's willingness to report violence. Results on a positive and significant impact on willingness to report cases of violence were found in communities where the project conducted engagement activities, while were not observed within those communities where the project supported women within the legal and judiciary system. This does not suggest that work with paralegals and within the legal and judiciary system should be interrupted. Rather, that future programmes may want to complement work to strengthen the awareness and capacities of paralegals with other community-level activities. The evaluation found that community engagement activities (including working with community and cultural leaders and sensitising men and youth) seemed to be more effective in supporting women's willingness to report cases of violence.

2 Invest more in mitigating the risks to women who experience violence and decide to report their perpetrator.

The project was successful in improving some aspects related to quality of the assistance received in cases of violence (e.g. support by paralegals and interactions with the police). However, there still seems to be a lack infrastructures and services providing shelter to women victim of violence. From the survey, it appears that three out of four women who reported violence returned home after having reported violence. There is a need to better understand why women return and how programmes can help to address the ongoing and additional risks such women may face. The project could consider partnering with local government and others to provide adequate and safe infrastructure to support women who experience violence and decide to report it to the authorities.

3 Use high violence prevalence rates to improve targeting in future projects

The project may want to concentrate its effort in areas with high prevalence and acceptability of violence and low willingness to report. Estimates from the survey suggest that women in the districts of Timor Tengah Selatan and Timor Tengah Utara (regardless of whether they are in intervention or comparison communities) are on average more exposed to violence, less willing to report violence, and more willing to accept violence than those women living in Kupang.

4 Consider identifying evaluation questions during programme design

In future projects, the team could consider including an evaluation framework in the project design. Evaluation is a key tool for learning -it can help to strengthen theories of change and sharpen project design, enable evidence informed adaptation, and support projects and programmes to capture and communicate their effectiveness. When designing a project, the programme team is encouraged to consider and define key evaluation questions to be addressed and to plan for sufficient budget, time and resources. Different evaluation designs and methodologies provide different types of evidence, with different levels of confidence.

5 Invest more in understanding how working with men may lead to intended outcomes

The current evaluation rigorously assessed the impact of the project on women as the final intended beneficiary of the project. It provided evidence of positive impact on women across a range of empowerment indicators. However, considering the project's explicit intent to work with men, it would be important to also invest in understanding if and how men's views were influenced by the project. The country team is advised to consider undertaking further research or evaluation exercises to better understand this intended change pathway.

APPENDIX 1: THRESHOLDS FOR CHARACTERISTICS OF WOMEN'S EMPOWERMENT

Level	Characteristic	Threshold: a woman scores positively if she...
Personal	Considers violence unacceptable	...reports it to be unacceptable for a man to hit his wife in any of the following 5 circumstances: <ul style="list-style-type: none"> • If she disobeys her husband or other family members. • If he suspects that she has been unfaithful. • If she neglects the children. • If she spends money without permission. • If she is not supporting her husband in livestock and agricultural activities. • If she goes to see her family without the permission of her husband.
	Willingness to denounce cases of violence	...would be willing to denounce a man if he did any of the actions to the listed above.
	Able to make decisions for her own	...can make her personal decisions individually or her husband or other family members jointly for both of the following areas: <ul style="list-style-type: none"> • Whether she personally can travel to visit relatives outside the community. • Whether she personally can participate in community group activities or meetings.
	Positive opinion of women taking up leadership positions	...'partly agrees' or 'strongly agrees' with all of the following statements: <ul style="list-style-type: none"> • I think it is acceptable for women to have a leadership role in the community. • There should be more women in leadership positions in the community.
	Confidence to speak up at public events	...'partly disagrees' or 'strongly disagrees' with <ul style="list-style-type: none"> • It is difficult for a woman like you to stand up in a public meeting held in your community and voice any concerns AND 'partly agrees' or 'strongly agrees' with <ul style="list-style-type: none"> • If a decision were made in public meetings/events which might negatively affect your life and the lives of your children, you would not hesitate to stand up and protest despite the possible negative consequences.
	Access to economic resources	...reports contributing to the household as being greater than 30 percent of the household consumption with her independent income.
	Access to information (knowledge of their rights)	...knows any of the following regulations that protects women and children <ul style="list-style-type: none"> • Laws on child protection. • Elimination of domestic violence. • Law against trafficking. • Community regulation on women's protection.
Relational	Household decision making	...makes decisions in all of the 11 types of decisions taken within the household individually or her husband or other household member jointly.
	Control over resources	...has decision making power over all of the 16 types of strategic assets listed in the questionnaire which are owned by the household.

Level	Characteristic	Threshold: a woman scores positively if she...
	Free from violence	... does not experience any of the 8 listed psychological, physical or sexual types of violence.
	Men in household help with care responsibilities	... reports men in the household increased time spend doing at least one of the listed unpaid care works including care of children or other household members, cooking and washing clothes since 2011. She answered this question only if she was from the household with men and her household has been involved in the following housework since 2011 .
	Participates in public events, meetings, forums	... participates in at least one of seven public events in the last 12 months.
	Influence at public event, meetings, forums	... is "to some extent" or "to a large extent" involved with in managing and taking important decisions at least one of the seven public events.
	Woman provides support and counselling to peers	... supports women who are close to them within their community who have experienced violence in the previous 12 months.
Environmental	Social norms on women's role	... reports she thinks other people in their community considers that a woman can be a leader just like a man.
	Women take up leadership positions	... reports that a woman takes up at least one of the following positions in her community: <ul style="list-style-type: none"> • Head of community. • Member of community structure. • Board member of the church/mosque. • Board of member of farmers' (or another livelihood-related) group. • Other position of leadership.
	Violence is not accepted in the community	...believes that men in the women's communities consider violence against women unacceptable in any of the following 5 circumstances: <ul style="list-style-type: none"> • She disobeys her husband or other family members. • He suspects that she has been unfaithful. • If is she neglects children. • If she spends money without permission. • Any other case not mentioned above.
	Cases of violence are treated appropriately (by legal apparatus and policemen)	...reports the authorities deal with the cases appropriately in the cases of gender-based violence. All woman in a community scored positively for this indicator if, among the women in the communities who had experienced violence in the past 12 months and had reported it to the police, more than half had experienced at least one of the following: <ul style="list-style-type: none"> • Received support from paralegals. • Received any medical assistance. • Did not feel blamed by the police while reporting. • Was interviewed by a woman police officer. • Was interviewed in a private room.
	Community social support for survivors of gender-based violence	... reports her community takes at least one of the following actions for victims of violence: <ul style="list-style-type: none"> • Supports her for what has happened • Supports her with involving the authorities. • Supports her by giving her counselling. • Supporting her in the hospital. • Supporting her to go to the police • Supporting her with legal aid or paralegals. • Providing shelter.

APPENDIX 2: METHODOLOGY USED FOR PROPENSITY-SCORE MATCHING

The analysis of outcome variables presented in Section 5 of this report involved group mean comparisons using propensity-score matching (PSM). The basic principle of PSM is to match each participant with a non-participant that was observationally similar at baseline and to obtain the treatment effect by averaging the differences in outcomes across the two groups after project completion. Unsurprisingly, there are different approaches to matching, i.e. to determining whether or not a household is observationally 'similar' to another household. For an overview, we refer to Caliendo and Kopeinig (2008).⁶ This appendix describes and tests the specific matching procedure followed in this Effectiveness Review.

Estimating propensity scores

Given that it is extremely hard to find two individuals with exactly the same characteristics, Rosenbaum and Rubin (1983) demonstrate that it is possible to match individuals using a prior probability for an individual to be in the intervention group, naming it *propensity score*. More specifically, propensity scores are obtained by pooling the units from both the intervention and comparison groups and using a statistical probability model (e.g. a probit regression) to estimate the probability of participating in the project, conditional on a set of observed characteristics.

Table A2.1 presents the probit regression results used to estimate the propensity scores in our context. To guarantee that none of the matching variables were affected by the intervention, we only considered variables related to baseline, and only those variables that were unlikely to have been influenced by anticipation of project participation (Caliendo and Kopeinig, 2008).

Table A2.1: Estimating the propensity score

	Marginal effect	Standard error	p-value
<i>Type of respondent:</i>			
Ethnicity = Timor	0.02	0.06	0.72
Religion = Muslim	0.48***	0.11	0.00
Respondent's age	0.00	0.00	0.16
Respondent has more than primary education	0.05	0.04	0.21
Marital status = Married	0.00	0.05	0.97
Woman's share of household income >= 30% in 2011	0.01	0.04	0.71
Respondent personally engage in farming in 2011	-0.12'	0.05	0.02
Household wealth 2 nd quintile 2011	-0.01	0.06	0.87
Household wealth 3 rd quintile 2011	-0.01	0.06	0.86
Household wealth 4 th quintile 2011	-0.00	0.06	0.97
Household wealth 5 th quintile 2011	0.09	0.06	0.13
Household size	0.03**	0.01	0.00
Respondent involved in groups in 2011	0.04	0.04	0.32
Respondent involved in groups in 2011	0.06	0.07	0.35
District = Timor Tengah Selatan	0.01	0.05	0.80
District =Timor Tengah Utara	0.02	0.05	0.68
Observations	800		

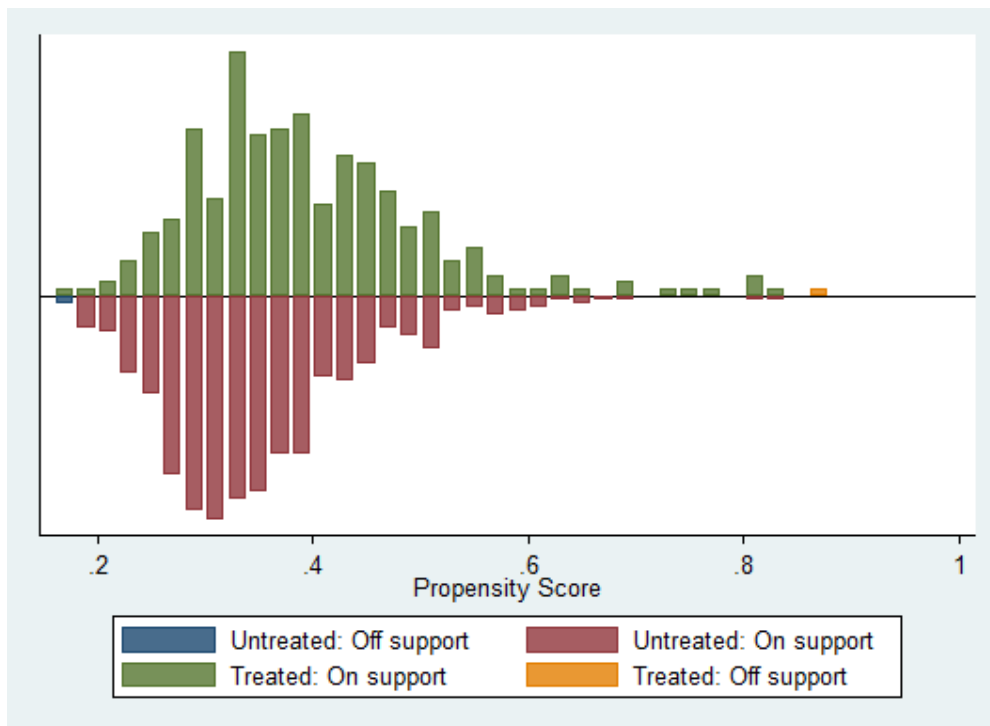
Marginal effects. The construction of the wealth index is described in Section 5. Variables dated 2011 are estimates, based on recall data. Dependent variable is binary, taking 1 for women living in project communities, and 0 otherwise. * p < 0.1, ** p < 0.05, *** p < 0.01.

Defining the region of common support

After estimating the propensity scores, the presence of a good *common support area* needs to be checked. The area of common support is the region where the propensity score distributions of the treatment and comparison groups overlap. The common support assumption ensures that 'treatment observation have a comparison observation "nearby" in the propensity score distribution' (Heckman, LaLonde and Smith, 1999). Since some significant differences were found between the intervention and comparison groups in terms of their baseline characteristics (as detailed in Section 4.2), some of the women in the intervention group were too different from the comparison group to allow for meaningful comparison. We used a minima and maxima comparison, deleting all observations whose propensity score is smaller than the minimum and larger than the maximum in the opposite group (Caliendo and Kopeinig, 2008). Only 5 of the 295 women interviewed in the project communities were dropped because they lay outside the area of common support. Therefore, there are few consequences regarding the sample being representative of the intervention population.

Figure A2.1 illustrates the propensity scores and shows the proportion of women lying on and off the areas of common support, by treatment group.

Figure A2.1: Propensity score on and off area of common support



Matching intervention and comparison households

Following Rosenbaum and Rubin (1983), after estimating the propensity scores and defining the area of common support, individuals are matched on the basis of their propensity score. The literature has developed a variety of matching procedures. For the main results presented in this Effectiveness Review we chose to employ the method of kernel matching. Kernel matching weights the contribution of each comparison group member, attaching greater weight to those comparison observations that provide a better match with the treatment observations. One common approach is to use the normal distribution with mean zero as a kernel, and weights given by the distribution of the differences in propensity score. Thus 'good' matches are given greater weight than 'poor' matches.

The *psmatch2*⁷ module in Stata (Leuven and Sianesi, 2003) was used with a bandwidth of 0.06 and with the analysis restricted to the area of common support.

When using PSM, standard errors of the estimates were bootstrapped using 1,000 repetitions, to account for the additional variation caused by the estimation of the propensity scores and the determination of the common support.⁸

Check balancing

For PSM to be valid, the intervention group and the matched comparison group need to be balanced, in that they need to be similar in terms of their observed baseline characteristics. This should be checked. The most straightforward method to do this is to test whether there are any significant differences in baseline covariates between the intervention and comparison group in the matched sample, as reported in Table A2.2. None of the variables implemented for the matching are statistically significant in the matched sample.

Table A2.2: Balancing test

Variable	Unmatched Matched	Treated Mean	Comparison mean	% bias	% reduction bias	t	p> t	V_e(T) / V_e(C)
<i>Ethnicity = Timor</i>	U	.85374	.86282	-2.6		-0.36	0.722	1.05
	M	.85374	.85253	0.3	86.7	0.04	0.967	0.99
<i>Religion = Muslim</i>	U	.02381	.00398	17.0		2.5	0.011	4.64**
	M	.02381	.01876	4.3	74.5	0.42	0.672	0.98
<i>Respondent's age</i>	U	37.639	37.151	3.8		0.52	0.601	0.98
	M	37.639	37.808	-1.3	65.5	-0.16	0.875	0.92
<i>Respondent has more than primary education</i>	U	.53401	.47117	12.6		1.7	0.087	1.06
	M	.53401	.5401	-1.2	90.3	-0.15	0.883	1.00
<i>Marital status = Married</i>	U	.72109	.72565	-1.0		-0.14	0.890	1.01
	M	.72109	.72311	-0.5	55.6	-0.05	0.956	1.00
<i>Woman's share of household income >= 30% in 2011</i>	U	.59864	.5825	3.3		0.4	0.656	0.99
	M	.59864	.59905	-0.1	97.4	-0.01	0.992	1.00
<i>Respondent personally engage in farming in 2011</i>	U	.7619	.8171	-13.6		-1.87	0.062	1.25*
	M	.7619	.76658	-1.1	91.5	-0.13	0.894	0.98
<i>Household wealth 2nd quintile 2011</i>	U	.18367	.20875	-6.3		-	0.393	0.90
	M	.18367	.19247	-2.2	64.9	-0.27	0.785	0.97
<i>Household wealth 3rd quintile 2011</i>	U	.18367	.20875	-6.3		-0.85	0.393	0.91
	M	.18367	.18186	0.5	92.8	0.0	0.955	1.01

<i>Household wealth 4th quintile 2011</i>	U	.19048	.20676	-4.1		-0.55	0.580	0.93
	M	.19048	.19662	-1.5	62.2	-0.1	0.851	0.93
<i>Household wealth 5th quintile 2011</i>	U	.2585	.167	22.5		3.13	0.002	1.57*
	M	.2585	.24665	2.9	87.0	0.3	0.741	1.03
<i>Household size</i>	U	4.8299	4.4314	23.5		3.2	0.001	1.35*
	M	4.8299	4.8339	-0.2	99.0	-0.03	0.978	0.92
<i>Respondent involved in groups in 2011</i>	U	.7551	.71769	8.5		1.15	0.251	0.96
	M	.7551	.76167	-1.5	82.5	-0.1	0.853	0.99
<i>Respondent involved in public events in 2011</i>	U	.71429	.71571	-0.3		-	0.966	1.00
	M	.71429	.70767	1.5	-366.0	0.18	0.860	0.99
<i>District = Timor Tengah Selatan</i>	U	.2517	.2505	0.3		0.04	0.970	0.98
	M	.2517	.2234	6.5	-2251.5	0.81	0.421	1.12
<i>District = Timor Tengah Utara</i>	U	.2517	.25249	-0.2		-	0.980	0.99
	M	.2517	.2672	-3.6	-1876.0	-0.43	0.669	1.00

* if 'of concern', i.e. variance ratio in [0.5, 0.8) or (1.25, 2]

** if 'bad', i.e. variance ratio <0.5 or >2

Sample	Ps R2	LR chi2	p>chi2	MeanBias	MedBias	B	R	% concern	% bad
<i>Unmatched</i>	0.033	34.57	0.005	7.9	5.2	43.2*	1.33	19	6
<i>Matched</i>	0.002	1.24	1.000	1.8	1.4	9.2	1.36	0	0

* if B>25%, R outside [0.5; 2]

APPENDIX 3: ROBUSTNESS CHECKS

In order to address the validity of the results presented in Section 5, a series of robustness checks were carried out to check if the preferred matching algorithm is the one that best performs the matching between intervention and comparison groups. This section presents a number of alternative matching algorithms used to test the robustness of the estimates presented in Section 5.

1. Multivariate regression

The first basic specification for estimating the impact of project participation is an OLS model (when the dependent is continuous) or probit model when the dependent is binary.

$$Y_i = \alpha + \beta_1 Project\ participation_i + \delta' X_i + \varepsilon_i$$

Where Y_i is the dependent variable; X_i is a vector of household covariates used in the model in table A2.1; finally, the variable of interest is the dummy variable *Project Participation* that assumes value equal to one when the household is enrolled in the project, zero otherwise. When the dependent variable Y_i is binary variable, a probit model replaces the OLS specification. It is important to note that in the absence of randomised allocation of the project among the population in our sample, OLS and probit models fail to identify the causal effect of the programme, and can only account for observable differences between intervention and comparison groups. Only the estimate of β_1 will be reported.

2. Propensity Score Weighting

Following the example of Hirano and Imbens (2001)⁹ we implemented a regression adjustment with weights based on the propensity score. The average treatment effect can be estimated in a parametric framework as follows:

$$Y_i = \alpha + \beta_1 Project\ participation_i + \delta'_2 Z_i + \delta'_1 X_i + \varepsilon_i$$

Where Y_i represents the outcome of interest; *Project participation_i* is a dummy binary variable equal to one if an individual/household is enrolled into the programme and zero otherwise; X_i is a vector of matching covariates used to estimate the propensity score match; and Z_i is a vector of control variables which were not used for the matching as they were assumed not to influence project participation. The regression is estimated with weights equal to one for the treated units and $\hat{e}(x)/(1 - \hat{e}(x))$ for control units. This parametric regression analysis framework has the advantage of exploring heterogeneity in the treatment effect. Moreover, it allows controlling for variables that cannot be included in the propensity score equation. The robustness check tables will only report β_1 .

3. Propensity Score Matching – Nearest Neighbour

The Nearest Neighbour (NN) matching algorithm finds an observation from the comparison group to be matched with an observation from a treated individual that is closest in terms of their propensity score.¹⁰ In this robustness check we apply the NN method estimating the average treatment effect on the treated, with one match per observation, using Abadie-Imbens standard deviations and exact match on the partner organization.

Table A3.1: Overall women's empowerment index

	1 Women's Empowerment Index	2 Women's Empowerment Index (ToC)
<i>OLS</i>	0.09*** (0.01)	0.07*** (0.01)
<i>N</i>	799	799
<i>Propensity Score Weighting</i>	0.09*** (0.01)	0.07*** (0.01)
<i>N</i>	796	796
<i>Nearest neighbour</i>	0.10*** (0.01)	0.08*** (0.01)
<i>N</i>	796	796

Standard errors in parentheses; * p < 0.1, ** p < 0.05, *** p < 0.01.

Table A3.2: Women's empowerment by power dimensions

	1 Women's Empowerment Index (Personal)	2 Women's Empowerment Index (Relational)	3 Women's Empowerment Index (Environmental)
<i>OLS</i>	0.05*** (0.01)	0.04** (0.01)	0.20*** (0.01)
<i>N</i>	799	799	799
<i>Propensity Score Weighting</i>	0.05*** (0.01)	0.04*** (0.01)	0.20*** (0.01)
<i>N</i>	796	796	796
<i>Nearest neighbour</i>	0.08*** (0.02)	0.03* (0.02)	0.21*** (0.02)
<i>N</i>	796	796	796

Standard errors in parentheses; * p < 0.1, ** p < 0.05, *** p < 0.01.

Table A3.3: Indicators of empowerment at a personal level

	1 1[Respondent does NOT accept violence]	2 1[Respondent willing to denounce a man in case of violence]	3 1[Personal decision making]	4 1[Self-confidence in taking up leadership positions]
<i>OLS</i>	-0.01 (0.04)	0.14*** (0.04)	0.02 (0.03)	-0.02 (0.03)
<i>N</i>	799	799	799	799
<i>Propensity Score Weighting</i>	-0.00 (0.04)	0.12*** (0.04)	0.02 (0.03)	-0.03 (0.03)
<i>N</i>	796	796	796	796
<i>Nearest neighbour</i>	0.09* (0.05)	0.12** (0.05)	0.02 (0.04)	0.01 (0.05)
<i>N</i>	796	796	796	796

Standard errors in parentheses; * p < 0.1, ** p < 0.05, *** p < 0.01.

Table A3.4: Indicators of empowerment at a relational level (Power with)

	1 1[Household decision making]	2 1[Control over household assets]	3 1[Free from violence]	4 1[Time men in household spend on care responsibilities increased since 2011]
<i>OLS</i>	0.02 (0.03)	-0.01 (0.03)	0.01 (0.03)	0.01 (0.03)
<i>N</i>	799	799	799	799
<i>Propensity Score Weighting</i>	0.02 (0.03)	-0.00 (0.03)	0.01 (0.03)	0.02 (0.03)
<i>N</i>	796	796	796	796
<i>Nearest neighbour</i>	0.03 (0.05)	-0.00 (0.04)	0.01 (0.04)	0.02 (0.04)
<i>N</i>	796	796	796	796

Standard errors in parentheses; * p < 0.1, ** p < 0.05, *** p < 0.01.

Table A3.5: Indicators of empowerment at a relational level (Power over)

	1 1[Respondent involved in public events]	2 1[Respondent is involved in making decisions in organising public events]	3 1[Respondent provided support or advice to a woman victim of violence]
<i>OLS</i>	0.02 (0.02)	0.09** (0.03)	0.12*** (0.03)
<i>N</i>	799	799	799
<i>Propensity Score Weighting</i>	0.03 (0.02)	0.10*** (0.03)	0.13*** (0.03)
<i>N</i>	796	796	796
<i>Nearest neighbour</i>	0.00 (0.04)	0.04 (0.05)	0.12*** (0.03)
<i>N</i>	796	796	796

Standard errors in parentheses; * p < 0.1, ** p < 0.05, *** p < 0.01.

Table A3.6: Indicators of empowerment at an environmental level

	1	2	3	4	5
	1[Respondent lives in a community where other people consider that a woman can be a leader just like a man]	1[Respondent lives in a community where women have leadership positions]	1[Respondent considers that other men in her community do NOT accept violence]	1[Case handled properly]	1[Community social support for survivors of gender-based violence]
<i>OLS</i>	0.18*** (0.04)	0.05** (0.02)	0.02 (0.03)	0.38*** (0.03)	0.37*** (0.03)
<i>N</i>	799	799	799	799	799
<i>Propensity Score Weighting</i>	0.17*** (0.04)	0.06*** (0.02)	0.01 (0.03)	0.38*** (0.03)	0.38*** (0.03)
<i>N</i>	796	796	796	796	796
<i>Nearest neighbour</i>	0.23*** (0.05)	-0.00 (0.02)	0.06 (0.04)	0.38*** (0.05)	0.40*** (0.05)
<i>N</i>	796	796	796	796	796

Standard errors in parentheses; * p < 0.1, ** p < 0.05, *** p < 0.01.

Table A3.7: Gender-based violence against respondents

	1	2	3	4
	1[Received violence (any) – you]	1[Received violence (psychological) – you]	1[Received violence (physical) – you]	1[Received violence (sexual) – you]
<i>OLS</i>	-0.01 (0.03)	0.01 (0.02)	-0.03 (0.02)	-0.01 (0.02)
<i>N</i>	793	793	793	793
<i>Propensity Score Weighting</i>	-0.01 (0.03)	0.00 (0.02)	-0.03 (0.02)	-0.01 (0.02)
<i>N</i>	790	790	790	790
<i>Nearest neighbour</i>	-0.01 (0.03)	-0.02 (0.03)	-0.03 (0.03)	-0.01 (0.02)
<i>N</i>	790	790	790	790

Standard errors in parentheses; * p < 0.1, ** p < 0.05, *** p < 0.01.

Table A3.8: Gender-based violence in the community

	1	2	3	4
	1[Received violence (any) – wclose]	1[Received violence (psychological) – wclose]	1[Received violence (physical) – wclose]	1[Received violence (sexual) – wclose]
<i>OLS</i>	0.19*** (0.04)	0.15*** (0.04)	0.17*** (0.04)	0.08** (0.03)
<i>N</i>	793	793	793	793
<i>Propensity Score Weighting</i>	0.19*** (0.04)	0.14*** (0.04)	0.17*** (0.04)	0.08*** (0.03)
<i>N</i>	790	790	790	790
<i>Nearest neighbour</i>	0.18*** (0.04)	0.14*** (0.04)	0.16*** (0.05)	0.10*** (0.03)
<i>N</i>	790	790	790	790

Standard errors in parentheses; * p < 0.1, ** p < 0.05, *** p < 0.01.

Table A3.10: Indicators of how cases of gender-based violence were handled (1/2)

	2	3	4	5
	1[Received support from paralegals]	1[Received medical assistance]	1[Did not feel blamed by the police while reporting]	1[A woman police officer interviewed her]
<i>OLS</i>	0.28** (0.08)	0.13 (0.09)	0.10 (0.08)	0.06 (0.05)
<i>N</i>	155	155	155	155
<i>Propensity Score Weighting</i>	0.26*** (0.08)	0.11 (0.09)	0.09 (0.08)	0.06 (0.05)
<i>N</i>	154	154	154	154
<i>Nearest neighbour</i>	0.46*** (0.11)	0.18 (0.12)	0.17 (0.12)	0.05 (0.10)
<i>N</i>	154	154	154	154

Standard errors in parentheses; * p < 0.1, ** p < 0.05, *** p < 0.01.

Table A3.10: Indicators of how cases of gender-based violence were handled (2/2)

	6	7	8
	1[Questioning was conducted in a private room]	1[Woman had to go back to her house after having reported violence]	1[The case arrived at court]
<i>OLS</i>	0.23*** (0.06)	-0.06 (0.07)	0.07 (0.06)
<i>N</i>	155	155	155
<i>Propensity Score Weighting</i>	0.23*** (0.06)	-0.08 (0.08)	0.08 (0.06)
<i>N</i>	154	154	154
<i>Nearest neighbour</i>	0.18* (0.11)	0.06 (0.11)	0.08 (0.10)
<i>N</i>	154	154	154

Standard errors in parentheses; * p < 0.1, ** p < 0.05, *** p < 0.01.

Table A3.11: Discussion of thematic areas by community leaders

	1	2	3	4
	1[Heard community leader talking about budget expenditure in the community]	1[Heard community leader talking about violence against women]	1[Heard community leader talking about the role of men in society]	1[Heard community leader talking about the fact that women can be leaders]
<i>OLS</i>	-0.03 (0.03)	0.14*** (0.03)	0.23*** (0.03)	0.21*** (0.03)
<i>N</i>	799	799	799	799
<i>Propensity Score Weighting</i>	-0.03 (0.04)	0.15*** (0.03)	0.23*** (0.03)	0.22*** (0.03)
<i>N</i>	796	796	796	796
<i>Nearest neighbour</i>	-0.06 (0.05)	0.09* (0.05)	0.25*** (0.05)	0.19*** (0.05)
<i>N</i>	796	796	796	796

Standard errors in parentheses; * p < 0.1, ** p < 0.05, *** p < 0.01.

APPENDIX 4: SUBGROUP ANALYSIS

In this appendix, we consider whether project had differential effects depending on the organization and therefore the type of activities implemented.

To assess whether different activities had different effects on the outcome of interest, we run a propensity score weighting, similar to the robustness checks in Appendix 3.

However, in addition to project participation (τ_i), we add (D_i) which is a variable that takes the value 1 if the woman lived in communities where YABIKU or APIK conducted their interventions or in communities identified as potential comparisons, zero otherwise, and finally we added a so-called 'interaction' variable, which is simply the intervention status (τ_i) multiplied by the dummy variable referring to legal support activities (D_i).

The regression model also includes the set of matching variables described in Appendix 2 as covariates (X_i), to control for observable baseline differences between the project and non-project households when estimating the effects of the project. The regression is estimated with weights equal to one for the treated units and $\hat{e}(x)/(1 - \hat{e}(x))$ for control units.

$$Y_i = \alpha + \beta_1\tau_i + \beta_2D_i + \beta_3(\tau_i \times D_i) + X_i'\delta + \varepsilon_i$$

What we are interested is in the coefficient β_1 which is telling us the effect of the project for CIS and SSP and $\beta_1 + \beta_3$ which is telling us the effect of the project for YABIKU and APIK. The coefficient β_3 is suggesting whether there have been differential effects of YABIKU/APIK compared with SSP and CIS Timor.

Tables in this appendix will just report estimates for β_1 (project's effect for SSP and CIS) and $\beta_1 + \beta_3$ (project's effect for YABIKU and APIK).

Table A4.1: Differential effects on women's empowerment by type of intervention.

	1	2	3	4
	Women's Empowerment Index	Women's Empowerment Index (Personal)	Women's Empowerment Index (Relational)	Women's Empowerment Index (Environmental)
<i>SSP and CIS</i>	0.05*** (0.01)	0.05** (0.02)	0.02 (0.02)	0.08*** (0.02)
<i>YABIKU and APIK</i>	0.12*** (0.01)	0.06*** (0.02)	0.06*** (0.02)	0.31*** (0.02)

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

Table A4.2: Differential effects on women's empowerment by type of intervention.

	1[Personal decision making]	1[Positive aptitude for women in taking up leadership positions]	1[Respondent would stand up and speak in public]	1[Household income share >= 30%]	1[Respondents knows her rights]
<i>SSP and CIS</i>	0.01 (0.05)	-0.06 (0.05)	0.29*** (0.06)	-0.01 (0.04)	0.06 (0.04)
<i>YABIKU and APIK</i>	0.03 (0.03)	0.03 (0.04)	0.12* (0.05)	-0.06 (0.03)	0.15** (0.05)

Table A4.3: Differential effects women's empowerment by type of intervention.

	1[Respondent does NOT accept violence]	1[Respondent willing to denounce man in case of violence]
<i>SSP and CIS</i>	-0.07	0.17***
	(0.05)	(0.06)
<i>YABIKU and APIK</i>	0.05	0.07
	(0.05)	(0.05)

Table A4.4: Differential effects women's empowerment by type of intervention.

	1[Free from violence]	1[Household decision making]	1[Control over household assets]	1[Time men in household spend on care responsibilities increased since 2011]
<i>SSP and CIS</i>	0.05	-0.01	-0.10**	0.05
	(0.04)	(0.04)	(0.04)	(0.04)
<i>YABIKU and APIK</i>	-0.02	0.05	0.09*	-0.00
	(0.04)	(0.04)	(0.04)	(0.04)

Table A4.5: Differential effects women's empowerment by type of intervention.

	1[Respondent involved in public events]	1[Respondent is involved in making decisions in organizing public events]	1[Respondent provided support or advice to a woman victim of violence]
<i>SSP and CIS</i>	0.03	0.13**	0.04
	(0.03)	(0.04)	(0.04)
<i>YABIKU and APIK</i>	0.02	0.07	0.22***
	(0.03)	(0.04)	(0.04)

Table A4.6: Differential effects on women's empowerment by type of intervention.

	1[Respondent lives in a community where other people consider that a woman can be a leader just like a man]	1[Respondent lives in a village where women have leadership positions]	1[Respondent considers that other men in village do NOT accept violence]	1[Case handled properly]	1[Community social support for survivors of VAW]
<i>SSP and CIS</i>	0.15**	0.04**	-0.04	-0.07	0.34***
	(0.05)	(0.01)	(0.04)	(0.04)	(0.05)
<i>YABIKU and APIK</i>	0.20***	0.09**	0.05	0.80***	0.41***
	(0.05)	(0.03)	(0.05)	(0.03)	(0.04)

Table A4.7: Differential effects on women’s empowerment by type of intervention.

	1[Received violence (any) – you]	1[Received violence (psychological) – you]	1[Received violence (physical) – you]	1[Received violence (sexual) – you]
<i>SSP and CIS</i>	-0.05	-0.01	-0.05	0.01
	(0.04)	(0.03)	(0.03)	(0.02)
<i>YABIKU and APIK</i>	0.03	0.02	-0.01	-0.03
	(0.04)	(0.04)	(0.04)	(0.03)

Table A4.8: Differential effects on women’s empowerment by type of intervention.

	1[Received violence (any) – woman close respondent]	1[Received violence (psychological) – woman close respondent]	1[Received violence (physical) – woman close respondent]	1[Received violence (sexual) – woman close respondent]
<i>SSP and CIS</i>	0.18***	0.12*	0.17**	0.13**
	(0.05)	(0.05)	(0.05)	(0.04)
<i>YABIKU and APIK</i>	0.21***	0.17***	0.17***	0.05
	(0.05)	(0.05)	(0.05)	(0.04)

Table A4.9: Differential effects women’s empowerment by type of intervention.

	1[Received support from paralegals]	1[Received medical assistance]	1[Did not feel blamed by the police while reporting]	1[A woman police officer interviewed her]	1[Questioning was conducted in a private room]	1[Woman had to go back to her house after having reported violence]
<i>SSP and CIS</i>	0.10	0.05	0.00	0.07	0.24**	-0.18*
	(0.10)	(0.11)	(0.10)	(0.05)	(0.08)	(0.09)
<i>YABIKU and APIK</i>	0.71***	0.34*	0.35**	0.05	0.19	0.22
	(0.13)	(0.16)	(0.13)	(0.12)	(0.13)	(0.18)

Table A4.10: Differential effects women’s empowerment by type of intervention.

	1[Heard community leader talking about budget expenditure in the village]	1[Heard community leader talking about violence against women]	1[Heard community leader talking about the role of men in society]	1[Heard community leader talking about the fact that women can be leaders]
<i>SSP and CIS</i>	-0.10	0.19***	0.30***	0.32***
	(0.05)	(0.05)	(0.05)	(0.05)
<i>YABIKU and APIK</i>	0.02	0.10*	0.17***	0.14**
	(0.05)	(0.05)	(0.05)	(0.05)

APPENDIX 5: DETERMINANTS OF VIOLENCE

In this appendix, we explore the characteristics of women who reported to have experienced violence. We also investigate which characteristics are correlated with a woman who reported not accepting any form of violence and reporting being willing to report a man in case of violence are. This is not meant to provide any estimate on the project's impact, but rather provide useful information to support future project's targeting those women that are more likely to be exposed to violence.

Table 5.1: Determinants of violence

	1[Received any violence]	1[Respondent does NOT accept violence]	1[Respondent willing to report man in case of violence]
1[Religion = Catholic]	-0.0472 (-0.69)	-0.0942 (-0.96)	0.0964 (1.06)
1[Religion = Muslim]	0.0733 (0.53)	-0.513*** (-6.58)	-0.138 (-1.01)
Respondent's age	-0.0110 (-1.65)	0.0220* (2.32)	0.0271** (2.94)
Respondent's age (squared)	0.000108 (1.40)	-0.000252* (-2.28)	-0.000323** (-3.01)
1[Primary education]	0.0122 (0.41)	0.110** (2.59)	0.0852* (2.06)
1[Marital status = married]	0.0109 (0.32)	0.0865 (1.69)	-0.0783 (-1.58)
Wealth index normalized	0.0449 (1.70)	-0.0594 (-1.54)	0.00884 (0.31)
Wealth index normalized (squared)	-0.0130 (-1.05)	0.00784 (0.38)	-0.00227 (-1.26)
1[Engaged in farming activity]	0.00296 (0.07)	-0.166*** (-3.39)	0.0509 (0.98)
Share household income	0.000328 (0.49)	0.00316*** (3.55)	-0.00199* (-2.23)
1[District = Timor Tengah Selatan]	0.0895* (2.08)	-0.280*** (-5.60)	0.00516 (0.11)
1[District = Timor Tengah Utara]	0.315** (2.63)	-0.133 (-1.23)	-0.207* (-2.54)
Observations	794	800	800

Marginal effects; t statistics in parentheses
(d) for discrete change of dummy variable from 0 to 1
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

These estimates are based on a probit model conducted on the entire sample, both intervention and comparison observations.

Estimates from the first column in Table 5.1 suggest that women living in the districts of Timor Tengah Selatan and Timor Tengah Utara are significantly more likely to report being exposed to violence compared with women living in the Kupang¹¹. It appears that no other observable variable is significantly correlated with the probability for a woman to experience violence.

Estimates from column two in Table 5.1 suggest that Muslim women appear to be less likely to not accept violence. Not acceptability of violence is also positively correlated with education and independent income. Characteristics such as working in the farming sector and living in the Timor Tengah Selatan district are negatively correlated with non-acceptability of violence. Finally, age is following an inverted U-shaped curve, with women aged 43 that are most likely not to accept violence.

Finally, estimates from column three in Table 5.1 confirm a positive correlation between education and willingness to report a man in case of violence. Strangely this correlation is of opposite sign for the share of independent income. Women living in the Timor Tengah Utara district are on average less likely to willing to report a man in case of violence compared with women living in Kupang. Age is also in this case following a trend of an inverted U-, with women aged 42 -on average- more likely to be willing to report a man in case of violence.

NOTES

- 1 Community names have been anonymized in order to reduce the risk of identifying respondents when raw data is made available.
- 2 The evaluation originally attempted to measure self-confidence in taking up leadership positions. However, during the interpretation stage, concerns were raised on the cultural virtue of humility, which may create issues in the measurement component of self-confidence. It was then later decided to focus the analysis on an indicator investigating opinions of women taking leadership positions.
- 3 In order to collect data on violence, this evaluation employed the *Ethical and Safety Guidelines for Implementing the DHS Domestic Violence Module*. https://dhsprogram.com/topics/gender-Corner/upload/DHS_Domestic_Violence_Module_Ethical_Guidelines.pdf
- 4 Investigating estimates by type of intervention it appears that women in the intervention are on average more likely to participate in church socialisation events and religious meetings.
- 5 Measuring violence against women is notoriously challenging. Responses may be influenced by the level of trust the respondent has of the enumerator. We investigated responses reporting violence, and it appears there are two enumerators, out of 15, that are significantly more likely to interview respondents reporting violence.
- 6 Caliendo, M. and Kopeinig, S. 2008. Some Practical Guidance for the Implementation of Propensity Score Matching, *Journal of Economic Surveys*, Wiley Blackwell, vol. 22(1), pages 31–72.
- 7 Leuven, E. and B. Sianesi. (2003). PSMATCH2: Stata Module to Perform Full Mahalanobis and Propensity Score Matching, Common Support Graphing, and Covariate Imbalance Testing. Version 4.0.11. Retrieved 20 April 2017, from <https://ideas.repec.org/c/boc/bocode/s432001.html>
- 8 Bootstrapping is a statistical procedure where repeated samples are drawn from the original sample with replacement. This results in a statistical distribution of parameter estimates (the sampling distribution). The bootstrapped standard error is the standard deviation of this sampling distribution and it can be shown that as the number of repeated samples becomes large, provided certain technical conditions are met, this is a good estimate for the standard error of the estimate.
- 9 Hirano, K. and Imbens G.W. (2001), Estimation of Causal Effects using Propensity Score Weighting: An Application to Data on Right Heart Catheterization. *Health Services & Outcomes Research Methodology*, vol. 2, pp. 259–278.
- 10 Several variants of NN matching are possible, e.g. NN matching ‘with replacement’ and ‘without replacement’. In the former case, an untreated individual can be used more than once as a match, whereas in the latter case it is considered only once. Matching with replacement involves a trade-off between bias and variance. If we allow replacement, the average quality of matching will increase and the bias will decrease. This is of particular interest with data where the propensity score distribution is very different in the treatment group and the control group (Caliendo and Kopeinig, 2008).
- 11 These should not be considered indications of success of the different organizations working on different geographic areas, as these analyses are including both intervention and comparison women.

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