**An Association Between Women's Account Ownership and Domestic Violence: Evidence from 15 Countries in Sub-Saharan Africa**

**Abstract**

**Data source**

We use the Demographic and Health Surveys (DHS) data for our empirical analysis. The DHS data structure is hierarchical. The survey begins with a cluster from which households are drawn. This is followed by sampling household members from the household for which women and men are sampled to participate in the survey. We use the women's module for this empirical analysis. The women's module includes questions about women's experience of domestic violence, women's bank accounts ownership, employment status, employment and gender roles and partner's questions such as age, education and occupation. We explored the DHS in Sub-Saharan Africa (SSA) for the availability of the domestic violence module and bank account ownership data. While domestic violence questions exist for many SSA countries, bank account ownership is available for only 16 countries. We exclude Ethiopia to ensure that our sample includes countries with survey years below ten years. Our final selection comprises 65,754 women aged 15 to 49 from the survey year 2015 to 2021.

**Study Variables and Measurement**

**Outcome variable**

The outcome variables are emotional violence, physical violence, and 'abuse,' a combination of physical and emotional violence in the past 12 months[[1]](#footnote-1). *Physical violence* is measured with the following DHS questions: Did your husband/partner push you, shake you, or throw something at you; slap you; twist your arm or pull your hair; punch you with his fist or with something that could hurt you; kick you, drag you or beat you up; threatened with knife/gun or other weapons? The following questions capture *Emotional violence*: Did your husband/partner do any of the following things to you: humiliate you; threaten with harm; insult, or make you feel bad? The *abuse* measures the respondent who reported being physically and emotionally abused by their intimate partners. We exclude sexual violence from the analysis for the following reasons. First, the response rate of sexual violence for the 15 countries is below 10%. Second, sexual violence is usually underreported across the continent. Third, sexual violence OLS results are insignificant.

**Independent variable**

The variable of interest is account ownership. The question which captures this variable in the DHS survey is whether the woman has an account in a bank or other financial institution[[2]](#footnote-2). Women who answered 'yes' represent account ownership. We dropped missing observations from the sample.

**Control variables**

We control for determinants of domestic violence in line with similar studies[[3]](#footnote-3). These include the woman's age and education level measured in years; employment status—dummy variable coded one for currently employed and zero; otherwise, the type of marriage—dummy variable coded one for polygamous marriage and zero for monogamous marriage. We control women's occupations, specifically sales and agriculture. We include a women empowerment indicator—an index bounded between zero and one with the following variables: women's bargaining power, health decision, purchase decision, family visits decision, husband earning decision and her perception of wife's beating. We also control the husband/partner characteristics, such as the age of the husband/partner and the partner's education, measured in years and the partner's occupation (sales, agriculture). Other household characteristics include dummies of wealth quintile (middle, richer and richest), type of residence (urban/rural) and the dummies of countries.

**Data Analysis**

We use the linear probability model (LPM) as the primary estimation method because LPM results are easy to interpret. Again, Timoneda (2021) found that LPM performs better under certain conditions[[4]](#footnote-4). Further, we estimate a logistic regression—a classification model with high accuracy as an additional robustness check. We applied sample weight and cluster standard errors in all our estimations.

**Ethics Approval**

We did not require any additional ethical approval because we used publicly available secondary data for the analysis. Details of the ethical standards are available at <http://goo.gl/ny8T6X>.

Results

**Sample characteristics**

Thirty-two percent of women in the sample reported experiencing 'abuse' (physical and emotional) in the past 12 months (Table 1). Women who experienced physical violence from their intimate partners represented 19%, whereas those who experienced emotional violence represented 26%. We find that 73% of women worked in the past 12 months. Women in polygynous marriage represented about 17%, those in sales and self-employed agriculture represented 8% and 18%, respectively and approximately 71% of the women can be classified as empowered. The average age of the women in the sample is 31, with an average of about five years of education. The average age of the respondent's partner is 38 years, with an average of six years of schooling. Husbands/partners in sales occupation represent about 2% and those in self-employed agriculture represent about 17%. Twenty percent of women are in the middle and richer wealth quintile and about 18% are in the richest quintile. The results also show that about 30% of the women live in urban areas.

**The difference in account ownership by the dependent and independent variables**

Table 2 shows the difference in account ownership by the dependent and independent variables and tests for statistical significance. We note that the abuse, physical and emotional violence are higher for women with no bank account ownership. Specifically, about 32% of abused women had no bank account compared to about 27% that had a bank account. Twenty percent of the women who experienced physical violence had no bank account, compared to 15% that had a bank account. About 26% of women who experienced emotional violence had no bank account, compared to 22% that had a bank account. We note that the number of empowered women with bank accounts is higher than those without. We note that the difference in account ownership by age is negligible for both women and their partners.

On the other hand, years of education correlate with higher bank account ownership for both women and their partners. Currently employed women have a higher bank account. Many women in polygamous marriages have no bank account compared to those with a bank account. Women in sales occupations have a higher bank account ownership, but for those in self-employed agriculture, the difference is minimal and this result also holds for their partners. Account ownership is higher in the richer and richest quintiles; however, the reverse is true for women in the middle wealth quintile. Also, a higher percentage of women in urban areas have bank accounts.

**Correlation between Account Ownership and Domestic Violence**

Figure 1 shows the correlation between account ownership and domestic violence. There are three notable points. First, account ownership is surprisingly low in SSA. Seven out of 15 countries have bank account ownership rates below 10%. Three countries with the highest account ownership in the sample are Rwanda (24.8%), Nigeria (24.6%) and Tanzania (23.1%). Second, regions with higher account ownership have a lower incidence of physical violence (Nigeria, Rwanda, Gambia). However, the incidence of emotional violence remains higher. Third, on average, regions with higher account ownership (deep blues) have a lower share of domestic violence. This finding confirms the negative correlation coefficient between abuse and account ownership, physical violence and account ownership and emotional violence and account ownership. The correlation coefficient is significant at 1% in all three domestic violence measures.

**OLS regression of account ownership and Domestic violence**

Table 2 shows the OLS regression of account ownership on domestic violence. We present the results for abuse, physical and emotional violence with their disaggregation by the woman's residence (rural/urban). Account ownership is associated with a 1.9 percentage point reduction in abuse (column 1). The association is even more pronounced if the woman resides in an urban area (about a three percentage point reduction) which is all significant at 1%. However, this does not hold for women in rural areas. When abuse is sub-sampled into physical and emotional violence, we find that account ownership is associated with a 1.2 percentage point reduction in physical violence and about two percentage points for women who live in urban areas.

Similarly, bank account ownership is associated with a 1.8 percentage point reduction in emotional violence and a 3.4 percentage point for women living in urban areas. The control variables displayed consistent signs. For example, women empowerment is associated with a 22.8 percentage point reduction in abuse, a 23.3 percentage points reduction for women in rural areas and a 20.9 percentage point reduction for women in urban areas (columns 1-3). An additional year of education is associated with increased abuse which holds for the woman's employment status. We find that sales occupation is associated with a reduction in abuse. However, self-employed agricultural occupation is associated with higher abuse. Also, belonging to a higher wealth quintile (middle, richer and richest) is associated with reduced abuse compared to women in the poorest/poorer quintile. Living in an urban area is associated with abuse compared to rural areas.

References

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1. According to the World Health Organization (2021), women who reside in low- and lower-middle-income nations are disproportionately affected by violence. Estimates from WHO shows that about 37% of women in the world's poorest countries have reportedly experienced physical and/or sexual intimate partner violence at some point in their lives. [↑](#footnote-ref-1)
2. Women's World Banking's (2015) findings from qualitative research conducted in Colombia shows that if a woman is able to save money securely in a bank and achieve sufficient financial security, she can increase her sense of independence and ultimately empower herself to lead better lives. [↑](#footnote-ref-2)
3. McDougal, Klugman, Dehingia, Trivedi, & Raj (2019) found that financial inclusion was associated with lower levels of recent physical/sexual violence. Our study differs significantly from McDougal et al. (2019) in two ways. First, we used the most current DHS data. The survey periods are between 2015-2021. The data also allowed us to measure physical violence and emotional violence separately. Second, we control for partner/husband characteristics such as age, education and occupation. The husband/partner characteristics are directly linked with the woman experiencing abuse and thus must be accounted for in the model. Third, we disaggregated the data into the place of residence of the women. This disaggregation provides more insight at the rural and urban settings. [↑](#footnote-ref-3)
4. Timoneda (2021) demonstrated that when the proportion of observed events in the data is between 25 and 75 percent, Linear Probability (LPM) yields outcomes similar to Maximum Likelihood specifications. However, the LPM is highly accurate in relation to the observed probability for true rare events (i.e., those occurring at a rate of 1% or less). [↑](#footnote-ref-4)