# Exploring the relationship between intimate partner violence and contraception use by Tanzanian women

# Abstract

Intimate Partner Violence (IPV) can be described as a global epidemic which has long term effects on numerous aspects of life. The effect of IPV on contraception use is also wide-ranging and culturally bound. Among the continents, Africa has the highest IPV prevalence. The relationship between intimate partner violence on contraception use by Tanzanian women is explored in this study as an illustrative case of this relationship. This is a descriptive cross-sectional design study, for which we utilised the Tanzania Demographic and Health Survey Data 2015-16. Data from the responses of 13,266 ever-partnered women were used in this study. The mean age of the respondents was 28.69 years, median 27.63% of respondents used contraceptives. Women with more than three pregnancies were more likely to use contraceptives (OR:1.56, 95% CI, p<0.001). Education levels also correlated with contraceptive use. Notably, contraceptive use was also significantly lower among the Tanzanian women who were exposed to intimate partner violence, suggesting a need for appropriately tailored social interventions and support. The need for interventions relating to intimate partner violence to take into account the multi-factorial nature of a woman’s uptake of contraceptive methods is underlined.

**Keywords:** *Intimate partner violence, Contraception, Women, Gender, Tanzania.*

# Background

The enactment of violence by intimate partners is a major human rights concern for women globally (Tsai, 2016). Violence against partners in a relationship is mostly referred to as intimate partner violence (IPV) which can be in the form of threats and/or physical, sexual and emotional abuse towards a person by a partner or a former partner (Murshid, 2017; Öberg et al., 2014).

The World Health Organization (WHO) defines IPV as ‘behaviours by an intimate partner that cause physical, sexual or psychological harm, including acts of physical aggression, sexual coercion, psychological abuse and controlling behaviours’. It is a public health problem across the worldwide (Tsai, 2016, Öberg et al., 2014; Dalal et al., 2012, Forrest et al., 2017, Gilles, 2015; Maxwell et al., 2015). It is estimated that about one third of women experience a form violence at least once in their lifetime (Murshid, 2017; Chalachala et al., 2016; Forrest et al., 2017, Gilles, 2015; Swan & O’Connell, 2012, Reed et al., 2016) and one in three of ever -partnered adolescent women aged 15 to 19 worldwide had experienced emotional, physical or sexual forms of violence from their spouse or partners (Tsai, 2016; Maxwell et al., 2015). Although women can be perpetrators of IPV, and violence can occur in same-sex relationships, the most common perpetrators are male intimate partners or former partners (Öberg et al., 2014; Chalachala et al., 2016).

IPV can have a lifelong negative impact on the health, wellbeing and development of adolescents and young people (Tsai, 2016; Murshid, 2017; Öberg et al., 2014). It has been associated with depression (Tsai, 2016; Dalal et al., 2012, Gilles, 2015), anxiety (Tsai, 2016; Dalal et al., 2012), post-traumatic stress disorder, suicidality (Tsai, 2016; Dalal et al., 2012; Gilles, 2015), and heightened risk behaviour, such as substance abuse and high-risk sexual behaviour (Tsai, 2016). It can also be detrimental to the reproductive and sexual health of adolescents and young women, resulting in unwanted pregnancies (Tsai, 2016; Murshid, 2017; Öberg et al., 2014; Maxwell et al., 2015) induced abortion (Tsai, 2016; Maxwell et al, 2015), unhealthy eating habits (Dalal et al. 2012), substance abuse (Tsai, 2016; Chalachala et al., 2016; Dalal et al., 2012), alcoholism (Dalal et al., 2012, Gilles, 2015), sexually transmitted infections (Tsai, 2016; Murshid, 2017; Chalachala et al., 2016; Reed et al., 2016), increased risk of HIV infection (Gilles, 2015; Maxwell et al., 2015), injury (Gilles, 2015), gastrointestinal problems (Gilles, 2015), chronic pain (Chalachala et al., 2016; Gilles, 2015) and maternal morbidity and mortality, among others (Tsai, 2016).

Notably, it has been revealed through studies of adult women from several countries that women who experience IPV perceive themselves to have less control over their own fertility (Tsai, 2016). Women in the United States and Colombia who experience violence have been found more likely to report difficulties negotiating contraceptive use, as well as unintended pregnancies, and less likely to select their preferred method of contraception (Tsai, 2016). In contrast, a positive association between IPV and contraceptive use has been found in other studies. For instance, it was discovered in one study of married adult women in the Cebu province in the Philippines that current or previous use of modern contraception was positively associated with experiences of physical partner violence among adult women (Tsai, 2016). Authors of another study of six Sub-Saharan African countries found that women who had experienced some form of IPV used contraception at a significantly higher rate than women who did not report IPV (Tsai, 2016). Further, it has been also documented that women exposed to intimate partner violence were less likely to use contraception, but the evidence that violence consistently constrains contraceptive use is inconclusive (Forrest et al., 2017). These mixed findings underscore a general uncertainty in the literature regarding the relationship between IPV and contraception use (Tsai, 2016).

Though IPV is a global epidemic, its prevalence varies in different areas of the world and ranges from 15% to 71% globally (Chalachala et al., 2016; Gilles, 2015). The highest rates of IPV are found in Africa, the Eastern Mediterranean, and Southeast Asia (Chalachala et al., 2016; Gilles, 2015). In Central Africa, 66% of ever-partnered women report experiencing violence at the hands of their partner (Chalachala et al., 2016) and a recent national study in India, revealed 35% of women reported reporting such violence (Reed et al., 2016). Links have been made between structural factors and intimate partner violence. Structural factors pertain to the socio-economic, policy, political and organisational environments which provide the structure of the context in which intimate partner violence can occur. Women in the developing nations are particularly vulnerable to violence because of unfavourable structural factors such as poverty, political instability, weak institutions which contribute to gender inequality, and patriarchal norms which maintain violence against women in all spheres. including in the home (Murshid, 2017). Other factors which increase a woman’s risk of IPV include early marriage, partner’s alcohol abuse, witnessing domestic violence as a child (Gilles, 2015), unplanned pregnancy (Cripe at al., 2008) and a male partners' control over their reproductive choices (Stephenson et al., 2008).

Due to the aforementioned structural factors in developing African countries potentially contributing to the contextual maintenance of violence towards women, and the link of this with women’s contraceptive behaviour highlighted in this paper, this work is of interest to a global multidisciplinary audience, including healthcare professionals, social scientists, international development experts and policy-makers. We used the case of Tanzania in our study to explore the relationship between IPV and contraception use and to shed light on how a range of socio-economic and demographic factors may play a role in this relationship. There is a clear rationale for exploring the Tanzania case as it was revealed in a recent report that half of women who were or had been in relationships in Tanzania, had experienced some form physical, sexual or emotional violence perpetrated by their spouse or partner (NBS, 2010). Furthermore, it was identified in the report that Tanzania has a high unmet need for contraceptives 25% and a high total fertility (5.4%) and maternal mortality (446 per 100,000) rates (Kidayi et al., 2015). Rural communities in Tanzania have poor knowledge of IPV and there is an attitude towards accepting sexual violence (Abeid et al., 2015). A lifetime prevalence for IPV in Tanzania is as follows: 17.2% of the population experience sexual violence, 39.2% physical violence and 43.6% experience sexual and physical violence combined (UN Women, 2013). Though Tanzanian women make good use of informal social support networks for maternal and childcare but it is still unclear whether such networks act to reduce the risk of exposure to intimate partner violence (Sigalla et al., 2017; Mbekenga et al., 2011).Through analysing the publicly available Tanzania Demographic and Health Survey Data 2015-16, the relationship between intimate partner violence and contraceptive use in Tanzanian women is explored, generating broader learning around the need for tailored socio-economic interventions for women’s contraceptive uptake in order to help overcome the structural barriers that they may face.

Thus, the aim of this research is to explore the relationship between intimate partner violence and contraception use by Tanzanian women of child-bearing age along with its interplay with demographic factors.

# Methods

## Study Measures and Participant Sampling

The research design was a descriptive cross-sectional design in order to quantify a connection of two or more variables at a point in time. Epistemologically, the use of cross-sectional designs assumes that social reality is observable and quantifiable and therefore sits within the realm of positivist approaches. The data used in this research were extracted from the publicly available dataset of the Tanzania Demographic and Health Survey 2015-16 (MoHCDGEC, 2016), carried out in urban and rural areas of mainland Tanzania and Zanzibar (25 regions of Tanzania Mainland and 5 regions from Zanzibar). The Tanzania Demographic and Health Survey is administered approximately every five years by the Tanzania National Bureau of Statistics and is part of a global effort aimed at assessing the interaction of demographics with health. The most recent 2015-16 survey comprises four questionnaires the household questionnaire, the women’s questionnaire, the men’s questionnaire and the biomarker questionnaire (MoHCDGEC, 2016). We analysed responses from the women’s questionnaire segment of the 2015-2016 survey pertaining to the items outlined below.

The study population for this research was women aged between 15 to 49 years. We used multistage cluster sampling to select the sample for this survey. The urban and rural areas of each region form a sampling stratum. Samples were selected independently from each sampling stratum using two stage selections. In the first stage, a total of 59 strata were chosen and samples were selected independently from each sampling stratum. The survey selected 608 clusters (180 EAs from urban areas and 428 from rural areas) standard enumeration areas from the strata. In the second stage, a fixed number of 22 households were selected per cluster and a total of 13376 households were selected. Among these, 3,960 households were from urban areas and 9416 households from rural areas. A total of 16, 780 respondents took part in this survey overall, with 13,266 female respondents and 3,514 males. All women aged between 15 to 49 years old who were either usual residents or visitors in the household on the night before the survey were included. For the purpose of this study, 13,266 women participants age between 15-49 years were included. The detailed survey design, data collection and management have been explained elsewhere (MoHCDGEC, 2016).

Data from the Tanzania Demographic and Health Survey are publicly available and fully anonymised in advance. As publicly available data without identity information have been used in this study, no additional ethical committee approval was sought.

## Data Analysis

Data were analysed using the statistical software SPSS version 20.0. The probability of significance was set at 5% level of significance for all tests with a 95% confidence interval. Frequency distribution, Chi-Square and bivariate logistic regression analyses were carried out using odds ratio analysis as both the dependent variables of this research are categorical. For data analysis purposes, two types of variables were included.

### Dependent and Independent Variables

Contraceptive use was the dependent variable. Participants were asked if they currently use any contraceptives. A “no” response was coded as 0 and a “yes” it was coded as 1.

The first set of independent variables comprised women’s characteristics namely the age of the respondent, wealth index, place of residence, educational attainment, occupational status, number of children aged five and under and number of pregnancies. The wealth index variable included the following five categories - poorer, poorest, middle, richer and richest. The wealth index is calculated by a household’s ownership of selected assets such as televisions and bicycles, materials used for housing construction, and types of water access and sanitation facilities.

The other independent variable was intimate Partner Violence (IPV) and this was operationally defined as a combination of physical violence, sexual violence and emotional violence. Physical violence was determined by respondent having answered “yes” to any of a string of questions about whether her spouse/partner ever did the following: (1) pushed, shook or threw something at her (2) slapped her (3) punched her (4) kicked or dragged her (5) strangled or burnt her (6) threatened or attacked her with a knife, gun or any other weapons. Sexual violence was determined by the respondent having answered “yes” to any of the two following questions: (1) ever been physically forced into unwanted sex and (2) ever been forced into other unwanted sexual acts by their spouse or partner. Emotional violence was determined by respondent having answered “yes” to whether they had ever experienced emotional violence.

# Results

**[Insert Table 1 here]**

The socio-demographic characteristics of the women respondents included in the analysis are presented in Table 1. The following characteristics were more prevalent amongst the sample: 15-24 age group (41.%), rural settlers (69%), primary education (57%), no children (28%), had one to two children (59%), had three to five children (12%). The mean age of the respondents was 28.69 years and median age 27 years. Almost 71% of the respondents were working at the time of completing the survey. Twenty-five respondents were classified as ‘richest’ on the wealth index, with 16% classified as ‘poorest’. Almost 43% women had three or more pregnancies in their lifetime and it was also found that 63% of the respondents were using contraceptives and 36% of women shared that they were not using any kind of contraceptives at the time of the survey. About 31% participants revealed that they faced violence.

**[Insert Table 2 here]**

Chi-square analysis between contraceptive use and socio-demographic variables are presented in Table 2. The proportions of women who used contraceptives were significantly lower among those who experienced IPV (57. %), were aged 35-49 (37%), were uneducated (48%), poorest (58%), economically active (61%), rural settlers (62%), had no children (58%) and had more than three pregnancies (53%). On the other hand, contraceptive use was significantly higher among those who did not experience IPV (66%), were aged 15 to 24 (77%), completed secondary education (77%), richest (67%), not economically active (69%), urban dwellers (62%), had 3-5 children (69%) and had not been pregnant (73%). All the socioeconomic characteristics of the respondents were found to be significantly associated with contraceptive use.

**[Insert Table 3 here]**

The results of the logistic regression analysis highlighted the relationships between contraceptive use and socio-demographic characteristics of women are presented in Table 3. Socio-demographic characteristics, such as age of respondents, educational attainment of women, wealth index, occupational status, number children ever-born and number of pregnancies were found to have significant effects on contraceptive use. However, IPV and place of residence did not show any significant association. Moreover, it is demonstrated in Table 3 that women in the younger age group (15-24 years of age) reported higher rates of contraceptive usage and usage reduced with age. Women aged 35 to 49 were less likely to use contraceptives (Odds ratio: 0.625, 95% CI: 0.553-0.706, P<0.001) than women aged 15 to 24. Similarly, women aged 25 to 34 were less likely to use contraceptives (Odds ratio: 0.185, 95% CI: 0.164-0.208, P<0.001) than women aged 15 to 24.

On the other hand, contraceptive use rose with the increase of education level. Women with higher education levels had higher odds of using contraceptives than those who had no education (Odds ratio: 3.230, 95% CI: 1.830-5.703, P<0.001). Women from a poorer background were more likelihood to use contraceptives than those who were poorest (Odds ratio: 1.413, 95% CI: 1.211-1.649, P<0.001). Contraceptive use was more prevalent among economically active women (Odds ratio: 1.143, 95% CI: 1.026-1.273, P<0.001). Women with one to two children were more likely to use contraceptives (Odds ratio: 1.425, 95% CI: 1.284-1.582, P<0.001) than those who had no children. Similarly, women with three to five children were around 76% more likely to use contraceptives (Odds ratio: 1.762, 95% CI: 1.503-2.065, P<0.001) than those who had no children. Women who had had more than three pregnancies were more likely to use contraceptive (Odds ratio: 1.566, 95% CI: 1.316-1.865, P<0.001) than those whose spouses had no education.

# Discussion

As IPV is a global epidemic and more prominent in the African continent, we aimed to explore the impact of intimate partner violence on contraception use by Tanzanian women. It has been shown through our study that the majority of the Tanzania Demographic and Health Survey 2015-16 respondents were rural residents aged 15-24. About 31% of them experienced violence at the hands of their current or former spouse/partner. Contraceptive use was significantly lower among those who had experienced IPV, were aged between 35 and 49, uneducated, poorest, economically active, rural settlers, primigravida or had more than three pregnancies (Table 2). In contrast, contraceptive use was significantly higher among those who did not experience IPV, were aged between 15-24, had completed secondary education, were better off financially, but not economically active, urban dwellers, and typically had between 3 to 5 children.

To place our findings in the context of the literature, Dalal and colleagues (2012) found similar results fin Bangladesh, where urban residents, higher educated women and women aged 20–44 were more likely to use contraceptives than their peers in rural areas, those with lower education and those in their late forties. It was also found by a study in Nigeria that women with secondary and higher education were between 8.2 and 11.8 times more likely to use contraceptives compared with women with no education (Viswan et al., 2017). Further, in a similar vein to this paper, it was reported in a national study of women in that sexual violence was associated with decreased use of contraceptives (Murshid, 2017).

However, despite a relationship between IPV and reduced contraceptive use being pointed to in the evidence from developing countries, findings in the literature remain mixed, with increased use of contraceptive with experience of IPV being reported in some studies. No association between IPV and contraceptive use in the Democratic Republic of Congo was found in one such study (Chalachala et al., 2016).In addition, the relationship of IPV with contraceptive use was found to be reversed in Bangladesh where women exposed to physical violence were almost two times more likely to use contraceptives compared with their non-abused peers (Murshid, 2017; Dalal et al., 2012). However, researchers in India concluded that there is no direct relationship between physical violence and contraception use, but that there are some certain hidden factors which significantly affect the use of contraception when being exposed to physical violence (Singh & Shukla, 2017).

In terms of contraceptive use more broadly, it has been demonstrated by our Tanzanian study that women in the younger age group (15-24 years of age) were more likely to use contraceptives and this likelihood decreased with age. Contraceptive use rose with the increase in education level. Women with higher education had higher odds of using contraceptives than those who had no education. Women with higher socio-economic status were more likely to use contraceptives than those who were poor. Thus, it can be argued that routine assessment of intimate partner violence along with the provision of educational materials should be included as part of contraceptive counselling sessions for women in low resource settings. It is worth noting that the link between talking about intimate partner violence with health practitioners and making desired contraceptive choices is unknown. However, an assessment may provide the practitioner with more holistic information to be able to advise their patient accordingly and to point them in the direction of help where available. Indeed, there is a breadth of literature globally supporting in consultation screening for intimate partner violence, as well as the provision of education and information (e.g. Davis & Harsh, 2001; Bacchus et al., 2002; Laisser et al., 2011)

The multi-factorial nature of contraceptive use is indicated by the findings of this study and the interplay of these factors is not yet fully understood. However, it is clear that there is a significant association between IPV and contraceptive use and there is an interplay with socio-economic status and therefore structural disadvantage. As health professionals can play a key part in identifying women exposed to IPV and offering support with the aim of breaking the cycle of abuse, the need to ask questions about IPV routinely as part of contraceptive counselling is supported by our findings and prior literature. In order to provide adequate care, systems level issues of referral pathways for IPV and appropriate tailored service provision need to be considered on a national and global policy level. This is a key consideration given that in the developing world practitioners (and their patients) are constricted by broader socio-economic and political structural issues and therefore practitioner ability to influence patient behaviour may be limited. Further research is needed on the extent to which healthcare practitioners can intervene in helping women experiencing IPV to make desirable, autonomous and informed choices about their contraceptive use.

This study is not free from limitations. The quantitative nature of study may lack in depth insights, for instance the binary classification of contraceptive use as ‘yes’ and ‘no’ in the context of IPV may be overly simplistic. Another limitation may be the recall bias of the surveyed participants. It is hoped that through the inclusion of a range of variables within the study, the we remained sensitive to aspects of difference between the participants, such as socioeconomic status and age. However, diversity issues surrounding individual identities and perceptions of socio-cultural factors influencing the potential interaction between IPV and contraceptive use warrant further exploration, through a qualitative, potentially social-constructivist lens.

We have used secondary data and one of the limitations of this is that data were not originally collected with the aim of answering the research question posed here. Furthermore, the analyses did not include additional variables which are known to influence contraceptive use such as- use of contraception in current and previous relationships, experience of multiple relationships and sexual relationships outside marriage.

Capturing and exploring the unique stories of Tanzanian women experiencing IPV would give further crucial recognition to a group underrepresented in research to date. Despite limitations, the main strength of this research is the use of large nationally representative sample and that it explored a broad range factors associated with contraceptive use, contributing to understanding of the relationship between IPV and contraceptive use in the developing world.

# Conclusion

We demonstrated several factors which appear to be associated with contraceptive use in Tanzanian women experiencing IPV. No doubt future qualitative research would help increase the understanding of how educational levels and socioeconomic status affect the complex interaction of circumstances which influence a woman’s contraceptive use, especially when faced with IPV. Further, conducting a comparative study would help to tease out the psychosocial context which may influence the mixed results around contraceptive use and IPV globally. The clear need for a broad range of social interventions relating to IPV to take into account the multi-factorial nature of a woman’s uptake of contraceptive methods has been underlined by this study.

**Conflict of Interest:** There are no conflicts of interest.

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# Table 1: Socio-demographic characteristics of the respondents

|  |  |  |
| --- | --- | --- |
| **Categories** | **Frequency** | **Percentage** |
| **Age of the respondent**  15-24  25-34  35-49  Mean ± SD  Median | 5399  3856  4011  28.69±9.7  27 | 40.7  29.1  30.2 |
| **Type of place of residence**  Urban  Rural | 4145  9121 | 31.2  68.8 |
| **Highest educational level**  No education  Primary  Secondary  Higher | 1998  7640  3487  141 | 15.1  57.6  26.3  1.1 |
| **Occupational Status**  Yes  No | 9489  3773 | 71.5  28.4 |
| **Number of children 5 and under in household**  0  1-2  3-5  6+ | 3714  7821  1569  162 | 28.0  59.0  11.8  1.2 |
| **Wealth index**  Poorest  Poorer  Middle  Richer  Richest | 2144  2166  2438  3108  3410 | 16.2  16.3  18.4  23.4  25.7 |
| **Number of pregnancies**  0  1-2  3+ | 3385  4097  5784 | 25.5  30.9  43.6 |
| **Contraceptive use**  Yes  No | 8451  4815 | 63.7  36.3 |
| **Faced violence by spouse/partner**  Yes  No | 4149  9117 | 31.3  68.7 |

# Table 2 Chi-square analysis of contraceptive use and other independent variables

|  |  |  |
| --- | --- | --- |
| **Variables** | **Contraceptive Use** | ***p*-value** |
| **Experience of IPV**  Yes  No | 57.3%  66.3% | <.001 |
| **Age of the respondents**  15-24  25-34  35-49 | 77.3%  68.0%  37.0% | <.001 |
| **Educational Attainment**  No education  Incomplete primary  Complete primary  Incomplete secondary  Complete secondary  Higher | 48.3%  60.1%  64.4%  70.0%  77.0%  76.9% | <.001 |
| **Wealth index**  Poorest  Poorer  Middle  Richer  Richest | 58.4%  65.5%  60.2%  65.2%  67.6% | <.001 |
| **Working Status**  No  Yes | 68.7%  61.2% | <.001 |
| **Place of Residence**  Urban  Rural | 66.9%  62.4% | <.001 |
| **Number of children 5 and under**  0  1-2  3-5  6+ | 57.8%  65.7%  69.0%  61.0% | <.001 |
| **Number of Pregnancies**  0  1-2  3+ | 73.7%  66.1%  53.5% | <.001 |

# Table 3: Logistic regression analysis showing the relationship between dependent and independent variables

|  |  |  |  |
| --- | --- | --- | --- |
| **Variables** | **Contraceptive Use** | | |
| **Odds ratio** | **95% CI** | ***p*-value** |
| **Experience of IPV**  Yes  No | 1  1.073 | 1  0.969-1.189 | <.17 |
| **Age of the respondent**  15-24  25-34  35-49 | 1  0.625  0.185 | 1  0.553-0.706  0.164-0.208 | <.001  <.00 |
| **Type of residence**  Urban  Rural | 1  0.899 | 1  0.791-1023 | <.10 |
| **Educational attainment**  No education  Incomplete primary  Complete primary  Incomplete secondary  Complete secondary  Higher | 1  1.223  1.672  1.624  2.495  3.230 | 1  1.037-1.442  1.465-1.910  1.357-1.944  2.038-3.055  1.830-5.703 | <.01  <.00  <.00  <.00  <.00 |
| **Wealth index**  Poorest  Poorer  Middle  Richer  Richest | 1  1.413  1.086  1.161  1.080 | 1  1.211-1.649  0.932-1.265  0.991-1.359  0.899-1.297 | <.00  <.28  <.06  <.41 |
| **Occupational Status**  No  Yes | 1  1.143 | 1  1.026-1.273 | <.01 |
| **Number children 5 and under**  0  1-2  3-5  6+ | 1  1.425  1.762  1.077 | 1  1.284-1.582  1.503-2.065  0.744-1.558 | <.00  <.00  <.69 |
| **Number of pregnancies**  0  1-2  3+ | 1  1.006  1.566 | 1  0.875-1.156  1.316-1.865 | <.93  <.00 |