

Intimate Partner Violence and Discontinuation of Contraceptive Use

Kerry L.D. MacQuarrie¹

Lindsay Mallick¹

Sunita Kishor²

For submission to

Population Association of America annual meetings

Chicago, IL, April 27-29, 2017

Session 117: Gender, Power, and Fertility

Session 103: Patterns and Determinants of Contraceptive Use and Non-Use

¹ The DHS Program (Avenir Health)

² The DHS Program (ICF)

Corresponding author: Kerry L.D. MacQuarrie, The DHS Program, c/o ICF, 530 Gaither Road, Rockville, Maryland, USA; phone: 301-572-0282; fax: 301-407-6501; email: kerry.macquarrie@icf.com

Short Abstract

This study explores the relationship between intimate partner violence (IPV) and contraceptive discontinuation using data from 11 Demographic and Health Surveys. It uses detailed reproductive calendar data and the domestic violence module to co-locate contraceptive and IPV experience in the same 12-month observation period. It examines the odds of discontinuation while still in need (DWSIN) among contraceptive users in relation to the experience of IPV and compares this to discontinuation due to no further need and total discontinuation. The study examines three forms of violence separately—emotional, physical, and sexual violence—and any IPV combined. It finds limited evidence of association between IPV and DWSIN. Associations are often weakly significant, of small magnitude, or inconsistent in direction and vary by form of IPV. Emotional violence is associated with greater odds of DWSIN in Egypt. Sexual violence is positively associated with DWSIN in Jordan and negatively associated with DWSIN in Tajikistan.

Extended Abstract

Introduction

Intimate partner violence (IPV) and other forms of gender-based violence, in their own right, present significant public health concerns and gross violations of women's human rights. In addition, IPV is also associated with a number of adverse sexual and reproductive health outcomes (2007; Hasstedt and Rowan 2016). These include sexual risk taking (Collins et al. 2005; Silverman et al. 2001); sexually transmitted infections, or HIV (Kishor 2012; MacQuarrie, Winter, and Kishor 2013; Singh, Singha, and Jain 2015); pregnancy loss, miscarriage, or abortion (Garcia-Moreno et al. 2006; Hasstedt and Rowan 2016; Kishor and Johnson 2006; Okenwa, Lawoko, and Jansson 2011; StÖckl et al. 2012); unmet need for family planning (Gomez 2011; Kaneda and Smith 2015; Ogunjuyigbe, Akinlo, and Oni 2010); unintended, mistimed, or unwanted pregnancy (Azevêdo et al. 2013; Cripe et al. 2008; Hasstedt and Rowan 2016; Rahman et al. 2012; Raj and McDougal 2015).

These findings indicate that women who experience IPV may have greater difficulty controlling their reproduction in ways that align with their fertility aspirations. An association between IPV and a lack of self-efficacy is well established; IPV is an expression of power and attempt to exert control. Although conceptually distinct from women's agency, IPV and the disempowerment of women have been found to covary, at both an individual and community level (MacQuarrie 2009). Women's lack of self-efficacy may prevent them from being able to engage in health-promoting behaviors such as adopting contraception or sustaining contraceptive use effectively without interruption.

While there is a robust demographic literature examining contraceptive dynamics such as contraceptive discontinuation (e.g., Ali and Cleland 2010; Ali, Cleland, and Shah 2012; Blanc et al. 2009; Bradley, Schwandt, and Khan 2009; Castle and Askew 2015; Haddad et al. 2013; Jain et al. 2013; Staveteig, Mallick, and Winter 2015), this literature seldom addresses experience of IPV. Literature on gender-based violence, meanwhile, more frequently investigates the association of IPV with current use of contraception, rather than the adherence to contraceptive use over time.

Prior studies using longitudinal data, in which IPV and contraceptive events are temporally ordered, suggest that the experience of IPV leads to less contraceptive use among women experiencing violence (Maxwell et al. 2015; Stephenson, Koenig, and Ahmed 2006; Stephenson et al. 2008). Meanwhile, studies emerging from the literature on reproductive control and coercion indicate that women who experience IPV and a partner's controlling behaviors face interference in their contraceptive practices and greater difficulty avoiding unintended pregnancy. Based on this extant literature, the authors of this study hypothesize that women who experience intimate partner violence would be more likely to experience interruptions in their contraceptive use, namely, that they would be more likely to experience discontinuation while still in need of contraception.

Methods

This study takes advantage of detailed data in the reproductive calendars (ICF International 2012, 2015) and psychometrically tested measures of various forms of IPV (ICF International 2016; Straus 1979; Straus et al. 1996) found in The DHS Program surveys to test this hypothesis in 11 countries. For inclusion in the study, we required that surveys meet the following conditions: conducted since 2010; survey has a two-column reproductive calendar; survey has a domestic violence module with a full complement of items assessing emotional, physical, and sexual violence; and, to ensure a sufficient

number of cases for analysis, a minimum sample size of 2,000 women completing the domestic violence module and a modern contraceptive prevalence rate of at least 25%. The DHS surveys included in the analysis are: Cambodia 2014, Egypt 2014, Honduras 2011-12, Jordan 2012, Kenya 2014, Kyrgyz Republic 2012, Rwanda 2014-15, Tajikistan 2012, Uganda 2011, Zambia 2013-14, and Zimbabwe 2011-12.

We co-locate contraceptive behavior and IPV experience in the same 12-month observation period. More specifically, we examine discontinuation in the 12 months preceding the survey among samples of contraceptive users in relation to the experience of IPV following the start of their contraceptive use. We examine the odds of discontinuation while still in need (DWSIN) and compare this to discontinuation due to no further need and total discontinuation. We examine the effects of three forms of violence separately—emotional violence, physical violence, and sexual violence—and the experience of any of these forms of violence on discontinuation in the preceding 12 months.

Multivariate models are estimated separately for each of the aforementioned forms of IPV and control for individual socio-demographic characteristics, which are known correlates of discontinuation¹, method type (LARC or non-LARC method) and duration of contraceptive use prior to the observation period.

Results

The countries chosen for this analysis all present with a modern contraceptive prevalence rate greater than 25% but with a range of contraceptive methods, some long-acting, reversible contraception (LARC) and some non-LARC, dominating the method mix. The prevalence of IPV (any form) ranges from 24% (Tajikistan) to 59% (Uganda). There is no difference in the method type (LARC or non-LARC method) based on experience of violence, except in Kenya. Here, women who experience IPV are more likely to be using a LARC method compared to women with no experience of IPV in the preceding 12 months. In the other 10 countries, regardless of IPV experience, LARC use exceeds non-LARC use in Egypt, Jordan, the Kyrgyz Republic, and Tajikistan while non-LARC use exceeds LARC use in Cambodia, Honduras, Rwanda, Uganda, Zambia, and Zimbabwe.

In contrast to our expectations, we find limited evidence of association between the experience of violence and discontinuation while still in need. Where associations are found, they are often weakly significant or of small magnitude. Additionally, they are inconsistent across countries in the direction of the association. For example, the experience of emotional violence in the previous 12 months is associated with a greater likelihood of discontinuation while still in need in the preceding 12 months in Egypt (where IUDs are the most common method). This same association is of borderline significance in Honduras and Kenya, where injections are the most common reversible method². In the Kyrgyz Republic, however, where IUDs are also common, the experience of emotional violence is nearly significantly associated with a lower likelihood of discontinuation while still in need. No association is detected with emotional violence in the remaining seven countries.

Findings also vary with the form of violence assessed. Associations between emotional violence and discontinuation while still in need are more commonly detected than other forms or any IPV combined. Sexual violence in the preceding 12 months is positively associated with discontinuation while still in

¹ These include: age, household wealth quintile, residence, religion, education, employment status, number of children, and marital duration.

² Injections are the second most common method in Honduras and follow female sterilization, however, women who use sterilization as their contraceptive method are excluded from this study.

need in Jordan and negatively associated with discontinuation while still in need in Tajikistan (where IUDs dominate the method mix). Positive associations between physical violence (Egypt) or any form of violence (Egypt and Honduras) are of borderline significance. No other associations are observed in the other countries.

In contrast to the varying direction of association with IPV and discontinuation while still in need, associations with discontinuation due to no further need are consistently negative where they are detected. However, these associations are not frequently observed. Women who experience emotional violence have significantly lower odds of discontinuing due to no further need in Kenya and the Kyrgyz Republic (and nearly significantly lower odds in Honduras), as do women who experience physical violence in Kenya, sexual violence in Cambodia (where the pill is the most common method) and the Kyrgyz Republic, or any IPV in Honduras, Kenya, and Tajikistan. These associations are not observed elsewhere.

For many countries, using a non-LARC method is independently and positively associated with both discontinuation while still in need and due to no further need, and the magnitude of the effect (where it exists) is generally larger than that of experience with IPV. This finding reinforces results of previous studies indicating that discontinuation rates vary across methods (Ali and Cleland 1995; Ali, Cleland, and Shah 2012; Bradley, Schwandt, and Khan 2009; Maslyanskaya et al. 2016; Modey, Aryeetey, and Adanu 2014; Steele and Curtis 2003). No clear pattern emerges across countries with regard to other characteristics. For example, age, duration of contraceptive use prior to the observation period, and household wealth quintile are associated with discontinuation while still in need in some countries, but not in others. These findings would suggest that, like IPV, the factors influencing discontinuation while still in need (or due to no further need) are country-specific.

This study attempts to fill a gap in the separate demographic literatures on contraceptive dynamics and on gender-based violence to explore the relationship between IPV and contraceptive discontinuation. Our primary finding is that these associations are generally modest and weak and are country-specific, rather than global in nature. This overall finding suggests that the approach to screening for IPV and tailoring family planning programs to meet the needs of clients who may be at risk of IPV should likewise take a country-specific approach. Furthermore, service providers should be mindful of the potential for other forms of abuse—marital control, emotional violence, and sexual violence—and not only physical violence, as our findings indicate that discontinuation may be associated with one form of violence and not all forms equivalently. While the pertinent form of violence or direction of association is context-specific, this study contributes to existing studies that, globally, IPV in some form impacts women's behaviors and outcomes.

Table 1. Adjusted odds of emotional, physical, sexual, and any intimate partner violence predicting discontinuation while still in need, discontinuation due to no further need, and total discontinuation in the 12 months prior to the survey among currently married women age 15-49: Odds ratios from logistic regression models controlling for contraceptive method type and socio-demographic controls

	DWSIN	Discontinuation because no longer in need	Total discontinuation
Emotional violence in last 12 months (ref=no emotional violence in last 12 months)			
Cambodia 2014	0.65	0.77	0.63
Egypt 2014	1.60†	0.82	1.13
Honduras 2011-12	1.24	0.78	1.08
Jordan 2012	1.26	1.10	1.19
Kenya 2014	2.11**	0.46	1.33
Kyrgyz Republic 2012	0.22*	0.26*	0.24**
Rwanda 2014-15	1.31	0.76	1.08
Tajikistan 2012	1.03	0.37	0.68
Uganda 2011	0.83	0.50	0.65
Zambia 2013-14	0.67†	0.84	0.71*
Zimbabwe 2010-11	1.04	1.01	1.02
Physical violence in last 12 months (ref=no physical violence in last 12 months)			
Cambodia 2014	0.85	0.55	0.67
Egypt 2014	1.22	1.14	1.21
Honduras 2011-12	1.19	0.93	1.10
Jordan 2012	1.27	1.03	1.17
Kenya 2014	1.49	0.37**	0.93
Kyrgyz Republic 2012	0.55	0.86	0.74
Rwanda 2014-15	0.79	0.77	0.76
Tajikistan 2012	0.97	0.37	0.69
Uganda 2011	0.92	0.60	0.79
Zambia 2013-14	0.78	0.82	0.78†
Zimbabwe 2010-11	1.18	1.12	1.16
Sexual violence in last 12 months (ref=no sexual violence in last 12 months)			
Cambodia 2014	1.41	0.02**	0.74
Egypt 2014	1.86	1.42	1.74
Honduras 2011-12	1.31	1.69	1.51
Jordan 2012	2.54*	0.98	1.81†
Kenya 2014	2.01†	0.83	1.52
Kyrgyz Republic 2012	0.37	0.11*	0.18*
Rwanda 2014-15	1.07	0.85	0.99
Tajikistan 2012	0.06*	0.57	0.22†
Uganda 2011	0.70	0.71	0.59
Zambia 2013-14	1.28	0.60*	1.06
Zimbabwe 2010-11	0.83	1.19	1.06

Continued

Table 1—Continued

	DWSIN	Discontinuation because no longer in need	Total discontinuation
Any IPV in last 12 months (ref=no IPV in last 12 months)			
Cambodia 2014	0.72	0.75	0.67
Egypt 2014	1.35	1.02	1.18
Honduras 2011-12	1.25†	0.75	1.06
Jordan 2012	1.43	1.10	1.29
Kenya 2014	1.87*	0.47*	1.13
Kyrgyz Republic 2012	0.65	0.76	0.71
Rwanda 2014-15	1.01	0.55	0.76
Tajikistan 2012	1.01	0.34*	0.65
Uganda 2011	0.63	0.85	0.61
Zambia 2013-14	0.92	0.81	0.87
Zimbabwe 2010-11	0.96	1.14	1.09

Notes:

† p<0.10, * p<0.05, ** p<0.01, *** p<0.001

Models control for method type (LARC/non-LARC), duration of contraceptive use before observation period, age, household wealth quintile, place of residence, religion (except Jordan, Kyrgyz Republic, and Tajikistan), employment status (except Jordan), education, and number of living children. Full model results available in Appendix Table 4-15.

Discontinuation is defined as the interruption of contraceptive use for one month or longer.

Discontinuation while still in need is defined as discontinuing for reasons other than wanting to become pregnant or no longer at risk of becoming pregnant (e.g. health concerns/side effects, method inconvenience, wanted a more effective method, cost, lack of access, or husband opposition).

Discontinuation due to no further need is defined as women who discontinue because they want to become pregnant or for other fertility-related reasons (e.g. infrequent sex/husband away, marital dissolution/separation, difficult to get pregnant).

Method switching is not considered to be an interruption to contraceptive use for the purposes of this study so long as a method of contraception is being used continuously.

Women who experience contraceptive failure (became pregnant while using a contraceptive method) are excluded from this analysis.

Data on religion was not collected in the Jordan 2012, Kyrgyz Republic 2012, or Tajikistan 2012 DHS surveys and are excluded from regression models for these countries.

Data on employment status was not collected in the Jordan 2012 DHS and are excluded from these regression models.

References

- Ali, M.M., and J. Cleland. 1995. "Contraceptive Discontinuation in Six Developing Countries: A Cause-Specific Analysis." *International Family Planning Perspectives* 21(3):92-97.
- Ali, M.M., and J. Cleland. 2010. "Contraceptive Switching after Method-Related Discontinuation: Levels and Differentials." *Studies in Family Planning* 41(2):129-133.
- Ali, M.M., J.G. Cleland, and I.H. Shah. 2012. *Causes and Consequences of Contraceptive Discontinuation: Evidence from 60 Demographic and Health Surveys*. Geneva, Switzerland and Egypt: World Health Organization.
- Azevêdo, A.C.d.C., T.V.B.d. Araújo, S. Valongueiro, and A.B. Ludermir. 2013. "Intimate Partner Violence and Unintended Pregnancy: Prevalence and Associated Factors." *Cadernos de Saúde Pública* 29:2394-2404.
- Blanc, A.K., A.O. Tsui, T.N. Croft, and J.L. Trevitt. 2009. "Patterns and Trends in Adolescents' Contraceptive Use and Discontinuation in Developing Countries and Comparisons with Adult Women." *International Perspectives on Sexual and Reproductive Health* 35(2):63-71.
- Bradley, S.E.K., H.M. Schwandt, and S. Khan. 2009. *Levels, Trends, and Reasons for Contraceptive Discontinuation*. DHS Analytical Studies No. 20. Calverton, Maryland, USA: ICF Macro. Available at <http://dhsprogram.com/pubs/pdf/AS20/AS20.pdf>.
- Castle, S., and I. Askew. 2015. *Contraceptive Discontinuation: Reasons Challenges and Solutions. 2016: FP 2020 and Population Council*.
- Coker, A.L. 2007. "Does Physical Intimate Partner Violence Affect Sexual Health?: A Systematic Review." *Trauma, Violence, & Abuse* 8(2):149-177.
- Collins, R.L., P.L. Ellickson, M. Orlando, and D.J. Klein. 2005. "Isolating the Nexus of Substance Use, Violence and Sexual Risk for Hiv Infection among Young Adults in the United States." *AIDS and Behavior* 9(1):73-87.
- Cripe, S.M., S.E. Sanchez, M.T. Perales, N. Lam, P. Garcia, and M.A. Williams. 2008. "Association of Intimate Partner Physical and Sexual Violence with Unintended Pregnancy among Pregnant Women in Peru." *International Journal of Gynecology & Obstetrics* 100(2):104-108.
- Garcia-Moreno, C., H.A. Jansen, M. Ellsberg, L. Heise, and C.H. Watts. 2006. "Prevalence of Intimate Partner Violence: Findings from the Who Multi-Country Study on Women's Health and Domestic Violence." *The Lancet* 368(9543):1260-1269.
- Gomez, A.M. 2011. "Sexual Violence as a Predictor of Unintended Pregnancy, Contraceptive Use, and Unmet Need among Female Youth in Colombia." *Journal of Women's Health* 20(9):1349-1356.
- Haddad, L., K.M. Wall, B. Vwalika, N. Htee Khu, I. Brill, W. Kilembe, R. Stephenson, E. Chomba, C. Vwalika, A. Tichacek, and S. Allen. 2013. "Contraceptive Discontinuation and Switching among Couples Receiving Integrated Hiv and Family Planning Services in Lusaka, Zambia." *AIDS (London, England)* 27(0 1):S93-103.
- Hasstedt, K., and A. Rowan. 2016. "Understanding Intimate Partner Violence as a Sexual and Reproductive Health and Rights Issue in the United States." *Guttmacher Policy Review* 19:37-45.
- ICF International. 2012. *Demographic and Health Survey Interviewer's Manual, Measure DHS Basic Documentation No. 2*. Calverton, MD: ICF International.
- ICF International. 2015. *Questionnaires: Household, Woman's, and Man's, Demographic and Health Surveys Methodology*. Rockville, MD: ICF International.

- ICF International. 2016. *Demographic and Health Surveys Domestic Violence Module, Demographic and Health Surveys Methodology*. Rockville, MD: ICF International.
- Jain, A.K., F. Obare, S. RamaRao, and I. Askew. 2013. "Reducing Unmet Need by Supporting Women with Met Need." *International Perspectives on Sexual and Reproductive Health*:133-141.
- Kaneda, T., and R. Smith. 2015. *Intimate Partner Violence and Unmet Need for Family Planning: Findings among Women of Different Ages from Six Sub-Saharan African Countries, PRB Research Brief*. Washington, DC: Population Reference Bureau.
- Kishor, S. 2012. "Married Women's Risk of STIs in Developing Countries: The Role of Intimate Partner Violence and Partner's Infection Status." *Violence Against Women* 18(7):829-53.
- Kishor, S., and K. Johnson. 2006. "Reproductive Health and Domestic Violence: Are the Poorest Women Uniquely Disadvantaged?" *Demography* 43(2):293-307.
- MacQuarrie, Kerry L.D. 2009. "The Unfolding of Women's Empowerment over the Life Course in Madhya Pradesh, India: The Influence of Family Formation and Early Empowerment Resources" Paper for the XXVI IUSSP International Population Conference, September 2009, Marrakech, Morocco.
- MacQuarrie, K.L.D., R. Winter, and S. Kishor. 2013. *Spousal Violence and HIV: Exploring the Linkages in Five Sub-Saharan African Countries*. DHS Analytical Studies No. 36. Calverton, Maryland, USA: ICF International. Available at <http://dhsprogram.com/pubs/pdf/AS36/AS36.pdf>.
- Maslyanskaya, S., S.M. Coupey, R. Chhabra, and U.I. Khan. 2016. "Predictors of Early Discontinuation of Effective Contraception by Teens at High Risk of Pregnancy." *Journal of Pediatric and Adolescent Gynecology* 29(3):269-275.
- Maxwell, L., K. Devries, D. Zions, J.L. Alhusen, and J. Campbell. 2015. "Estimating the Effect of Intimate Partner Violence on Women's Use of Contraception: A Systematic Review and Meta-Analysis." *PLoS ONE* 10(2):e0118234.
- Modey, E.J., R. Aryeetey, and R. Adanu. 2014. "Contraceptive Discontinuation and Switching among Ghanaian Women: Evidence from the Ghana Demographic and Health Survey, 2008." *African Journal of Reproductive Health* 18(1):84-92.
- Ogunjuyigbe, P., A. Akinlo, and G. Oni. 2010. "Violence against Women as a Factor in Unmet Need for Contraception in Southwest Nigeria." *Journal of Family Violence* 25(2):123-130.
- Okenwa, L., S. Lawoko, and B. Jansson. 2011. "Contraception, Reproductive Health and Pregnancy Outcomes among Women Exposed to Intimate Partner Violence in Nigeria." *The European Journal of Contraception & Reproductive Health Care* 16(1):18-25.
- Park, J., S.K. Nordstrom, K.M. Weber, and T. Irwin. 2016. "Reproductive Coercion: Uncloaking an Imbalance of Social Power." *American Journal of Obstetrics and Gynecology* 214(1):74-78.
- Rahman, M., T. Sasagawa, R. Fujii, H. Tomizawa, and S. Makinoda. 2012. "Intimate Partner Violence and Unintended Pregnancy among Bangladeshi Women." *Journal of Interpersonal Violence* 27(15):2999-3015.
- Raj, A., and L. McDougal. 2015. "Associations of Intimate Partner Violence with Unintended Pregnancy and Pre-Pregnancy Contraceptive Use in South Asia." *Contraception* 91(6):456-463.
- Silverman, J.G., A. Raj, L.A. Mucci, and J.E. Hathaway. 2001. "Dating Violence against Adolescent Girls and Associated Substance Use, Unhealthy Weight Control, Sexual Risk Behavior, Pregnancy, and Suicidality." *JAMA* 286(5):572-579.

- Singh, A.K., R.K. Singha, and R. Jain. 2015. "Examining Nonconsensual Sex and Risk of Reproductive Tract Infections and Sexually Transmitted Infections among Young Married Women in India." In *Gender-Based Violence: Perspectives from Africa, the Middle East, and India*, edited by Yanyi K Djamba and Sitawa R Kimuna. Switzerland: Springer International.
- Staveteig, S., L. Mallick, and R. Winter. 2015. *Uptake and Discontinuation of Long-Acting Reversible Contraceptives (LARCs) in Low-Income Countries*. DHS Analytical Studies No. 54. Rockville, Maryland, USA: ICF International. Available at <http://dhsprogram.com/pubs/pdf/AS54/AS54.pdf>.
- Steele, F., and S. Curtis. 2003. "Appropriate Methods for Analyzing the Effect of Method Choice on Contraceptive Discontinuation." *Demography* 40(1):1-22.
- Stephenson, R., M.A. Koenig, R. Acharya, and T.K. Roy. 2008. "Domestic Violence, Contraceptive Use, and Unwanted Pregnancy in Rural India." *Studies in Family Planning* 39(3):177.
- Stephenson, R., M.A. Koenig, and S. Ahmed. 2006. "Domestic Violence and Contraceptive Adoption in Uttar Pradesh, India." *Studies in Family Planning* 37(2):75-86.
- Stöckl, H., L. Hertlein, I. Himsl, M. Delius, U.W.E. Hasbargen, K. Friese, and D. Stöckl. 2012. "Intimate Partner Violence and Its Association with Pregnancy Loss and Pregnancy Planning." *Acta Obstetrica et Gynecologica Scandinavica* 91(1):128-133.
- Straus, M.A. 1979. "Measuring Intrafamily Conflict and Violence: The Conflict Tactics (CT) Scales." *Journal of Marriage and Family* 41(1):75-88.
- Straus, M.A., S.L. Hamby, S. Boney-McCoy, and D.B. Sugarman. 1996. "The Revised Conflict Tactics Scales (CTS2) Development and Preliminary Psychometric Data." *Journal of Family Issues* 17(3):283-316.