Journal of Adolescent Health 53 (2013) 562–572

ELSEVIER

JOURNAL OF ADOLESCENT HEALTH

www.jahonline.org

Review article

A Review of Risk and Protective Factors for Adolescent Sexual and Reproductive Health in Developing Countries: An Update

Kristin Mmari, Dr.P.H., M.A. *, and Simran Sabherwal, Ph.D. candidate

Department of Population, Family, and Reproductive Health, Johns Hopkins Bloomberg School of Public Health, Baltimore, Maryland

Article history: Received January 28, 2013; Accepted July 13, 2013
Keywords: Risk and protective factors; Developing countries; Adolescent sexual and reproductive health

A B S T R A C T

Purpose: To conduct a literature review of studies that examined risk and protective factors related to adolescent sexual and reproductive health in developing countries.
Methods: A literature search was conducted using multiple databases, including PubMed, PsycINFO, Scopus, JSTOR, and the Interagency Youth Working Group. Review criteria included publications that: were conducted in a low- or middle-income country; had a sample size of at least 100 young people aged 10–24 years, and used multivariate analysis. All studies that were identified were also conducted between 1990 and 2010, a 20-year time frame. The literature search and initial review yielded a total of 244 studies that met the criteria and analyzed risk and protective factors related to the following outcomes: sexual initiation, number of sexual partners, condom use, contraceptive use, pregnancy and early childbearing, human immunodeficiency virus, sexually transmitted infections, and sexual coercion.
Results: Most studies that were conducted on adolescent sexual and reproductive health in developing countries were largely focused in Sub-Saharan African contexts, and primarily examined factors related to sexual initiation and condom use. Most factors that examined an adolescent sexual and reproductive health outcome were also focused on the individual level, although an increasing number of studies within the past 10 years have focused on family-level factors. Few studies examined factors at the community or neighborhood level, which, to date, has largely been ignored in developing country contexts.
Conclusions: The review not only summarizes what is currently known in terms of risk and protective factors that relate to adolescent sexual and reproductive health in developing countries, but also highlights the gaps. Implications for future research are discussed.

IMPLICATIONS AND CONTRIBUTION

The current literature review identified more than 1000 risk and protective factors related to at least one adolescent sexual and reproductive health outcome in developing country contexts. The review demonstrates that while most studies still focus on individual-level factors, there has been improvement in studying factors beyond this level, particularly at the family level. The largest gap in research is examining factors from the community level in relation to adolescent sexual and reproductive health outcomes.

The sexual practices and behaviors of young people can have short- and long-term consequences that can be either positive or negative. Research has repeatedly shown that a wide range of individual, peer, family, school, and community factors influence sexual decisions [1–3]. Within each of these levels, factors can be identified as risk factors if they increase the likelihood of negative behaviors that could lead to pregnancy or sexually transmitted infections (STIs); conversely, factors can be labeled as protective if they either discourage negative behaviors or encourage positive behaviors that might prevent pregnancy or STIs, such as using contraception. Identifying the risk and protective factors for various adolescent sexual and reproductive health behaviors and outcomes is an important strategy for developing effective interventions; if it is known what influences adolescents in a particular country to decide to have sex or not, or to protect themselves against pregnancy and sexually transmitted infections or not, policies and programs can be designed to target factors that are malleable. There is ample evidence for this approach in the United States [4–8]; likewise, it is believed to hold great promise for

* Address correspondence to: Kristin Mmari, Dr.P.H., M.A., Department of Population, Family, and Reproductive Health, Johns Hopkins Bloomberg School of Public Health, 615 N. Wolfe Street, Baltimore, MD 21205.
E-mail address: bnicoter@jhsph.edu (K. Mmari).

1054-139X/$ – see front matter
http://dx.doi.org/10.1016/j.jadohealth.2013.07.018

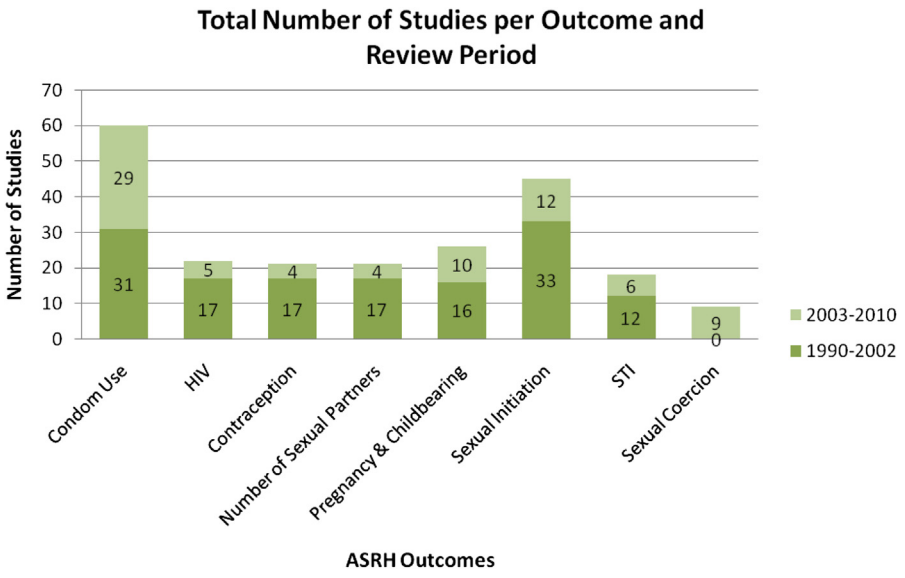

Figure 1. Total number of studies per outcome and review period.

effective adolescent sexual and reproductive health programming in developing countries [8,9].

In 2005, the first literature review on risk and protective factors that related to adolescent sexual and reproductive health in developing countries was published by the World Health Organization [10,11]. The review analyzed peer-reviewed studies published between 1990 and 2002 that examined risk and protective factors related to sexual initiation, number of sexual partners, condom use, contraceptive use, pregnancy and early childbearing, human immunodeficiency virus (HIV), and STIs. Review criteria included publications that were conducted in a low- or middle-income country (LMIC); had a sample size of at least 100 young people aged 10–24 years, and used multivariate analysis. A total of 158 articles were analyzed and synthesized for the 1990–2002 review.

Because it has been a decade since the last review, a second review was conducted and merged with the original to provide a more comprehensive and current picture of the risk and protective factors that influence adolescent sexual and reproductive health in LMICs. Specifically, the main objectives of the review were to: (1) provide a description of the studies that have examined risk and protective factors in relation to adolescent sexual and reproductive health; (2) identify the key risk and protective factors associated with one or more adolescent and sexual reproductive health outcomes; and (3) provide recommendations that address the current gaps in the reviewed literature.

Methods

For the present review, additional studies on risk and protective factors were retrieved using PubMed, PsycINFO, Scopus, JSTOR, and the Interagency Youth Working Group database. Literature searches were conducted using the following terms: "pregnancy," "childbearing," "contraception," "condom use," "HIV," "STIs," "sexually transmitted diseases," "abortion," "pregnancy termination," "sexual coercion," "sexual violence," "sexual abuse," "commercial sex work," "sexual initiation," "sexual

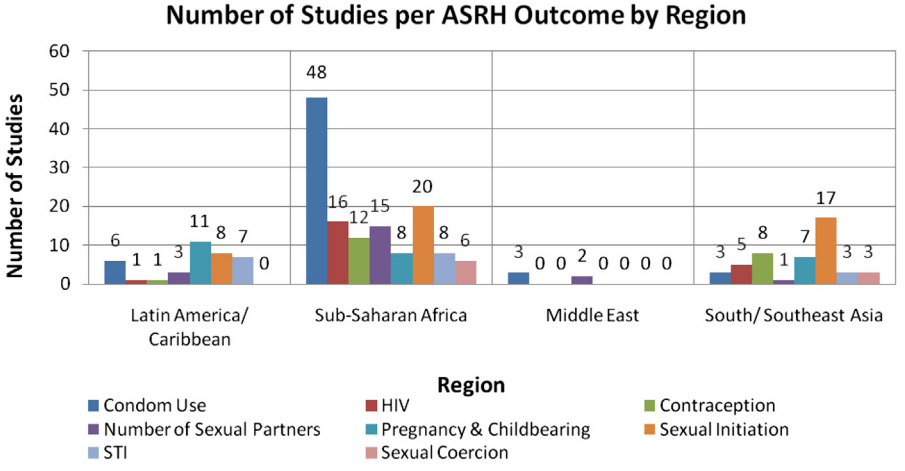

Figure 2. Number of Studies per ASRH outcome by region.