JOGNN

RESEARCH

Protective Factors, Risk Indicators, and Contraceptive Consistency Among College Women

Leslie F. Morrison, Renee E. Sieving, Sandra L. Pettingell, Wendy L. Hellerstedt, Barbara J. McMorris, and Linda H. Bearinger Q10

Correspondence
Leslie F. Morrison, PhD, APRN, CNM, Metropolitan State University, 700 E. 7th St., St. Paul, MN 55106.
leslie.morrison@metrostate.edu

Keywords
contraceptive use
emerging adults
protective factors
risk factors
young women

ABSTRACT

Objective: To explore risk and protective factors associated with consistent contraceptive use among emerging adult female college students and whether effects of risk indicators were moderated by protective factors.

Design: Secondary analysis of *National Longitudinal Study of Adolescent to Adult Health Wave III* data.

Participants: National sample of 18- to 25-year-old women ($N = 842$) attending 4-year colleges. Q1

Methods: We examined relationships between protective factors, risk indicators, and consistent contraceptive use. Consistent contraceptive use was defined as use all of the time during intercourse in the past 12 months. Protective factors included external supports of parental closeness and relationship with caring nonparental adult and internal assets of self-esteem, confidence, independence, and life satisfaction. Risk indicators included heavy episodic drinking, marijuana use, and depression symptoms. Multivariable logistic regression models were used to evaluate relationships between protective factors and consistent contraceptive use and between risk indicators and contraceptive use.

Results: Self-esteem, confidence, independence, and life satisfaction were significantly associated with more consistent contraceptive use. In a final model including all internal assets, life satisfaction was significantly related to consistent contraceptive use. Marijuana use and depression symptoms were significantly associated with less consistent use. With one exception, protective factors did not moderate relationships between risk indicators and consistent use.

Conclusion: Based on our findings, we suggest that risk and protective factors may have largely independent influences on consistent contraceptive use among college women. A focus on risk and protective factors may improve contraceptive use rates and thereby reduce unintended pregnancy among college students.

JOGNN, ■, ■–■; 2016. http://dx.doi.org/10.1016/j.jogn.2015.10.013

Accepted October 2015

Leslie F. Morrison, PhD, APRN, CNM, is an assistant professor and acting Director of Undergraduate and Prelicensure Programs, School of Nursing, Metropolitan State University, St. Paul, MN.

(Continued)

The authors report no conflict of interest or relevant financial relationships.

Although teen pregnancy is a well-recognized problem, the larger challenge of unintended pregnancy among emerging adult women is poorly understood. Among U.S. women ages 20 to 24 years, 64% of pregnancies are unintended (unwanted or mistimed at the time of conception) (Finer & Zolna, 2014). Women ages 18 to 24 years have the highest rate of unintended pregnancy of all age groups (Finer & Zolna, 2014), which suggests that new strategies are needed to understand reproductive health during this transitional period and to help emerging adults maintain reproductive health (Zolna & Lindberg, 2012). Sexual and reproductive health risks vary by environmental exposures (Jaccard, 2009). Colleges and universities are uniquely supportive and challenging environments for emerging adults. Thus, college students are an emerging adult population with distinct risk and protective factors for unintended pregnancy.

In the United States, college students have high levels of sexual activity and variable rates of contraceptive use: 70% reported that they have had sex in the past 12 months, but only 55.6% reported contraceptive use with most recent sex (American College Health Association, 2013). Reasons for nonuse of contraception among college women include cost, lack of insurance, fear of parents finding out, adverse effects, infrequent sex, desire for pregnancy, lack of knowledge about contraception, negative attitudes toward contraception, current pregnancy, living with a sexual partner, and being married (Bryant, 2009; Huber & Ersek, 2009).

FLA 5.4.0 DTD ■ JOGN27_proof ■ 22 January 2016 ■ 3:35 am ■ ce

Emerging adult women have high rates of unintended pregnancy and suboptimal contraceptive use. Little is known about the effects of protective factors on consistent contraceptive use.

Q2

Renee E. Sieving, PhD, RN, FAAN, FSAHM, is a professor in the School of Nursing and Director of the Healthy Youth Development—Prevention Research Center, Division of General Pediatrics and Adolescent Health, Department of Pediatrics, Medical School, University of Minnesota, Minneapolis, MN.

Sandra L. Pettingell, PhD, is a research associate at the University of Minnesota, Minneapolis, MN.

Wendy L. Hellerstedt, MPH, PhD, is an associate professor, Director for the Center for Leadership Education in Maternal and Child Public Health, and Director of the Maternal and Child Health Program, Division of Epidemiology & Community Health, School of Public Health, University of Minnesota, Minneapolis, MN.

Barbara J. McMorris, PhD, is an associate professor in the Center for Adolescent Nursing, School of Nursing, and Division of General Pediatrics and Adolescent Health, Department of Pediatrics, University of Minnesota, Minnesota, MN.

Linda H. Bearinger, PhD, MS, RN, is a professor in Nursing, Medicine, and Public Health and Director of the Center for Adolescent Nursing, School of Nursing, and Faculty Legislative Liaison, University of Minnesota, Minnesota, MN.

In studies of college students, investigators also found racial/ethnic differences in prevalence of contraceptive use (Gaydos, Neubert, Hogue, Kramer, & Yang, 2010).

Most college students are emerging adults (U.S. Census Bureau, 2014), a developmental stage characterized by increased independence, identity development, and exploration of sexuality and sexual relationships (Tanner, 2006). The prevalence of certain risk indicators (e.g., heavy drinking, illicit drug use) increases in emerging adulthood compared with adolescence (Mulye et al., 2009). Researchers who examined relationships between substance use, mental health problems, and poor reproductive health outcomes among college students and emerging adults found mixed results (Dorfman, Trokel, Lincoln, & Mehta, 2010; Ingersoll, Ceperich, Nettleman, & Johnson, 2008; Kim, Rosa, Trepka, & Kelly, 2007). Although researchers have consistently found a negative relationship between depression symptoms and contraceptive use, the associations of alcohol and marijuana use with contraceptive use have been less consistent (Dorfman et al., 2010; Garbers, Correa, Tobier, Blust, & Chiasson, 2010; Ingersoll et al., 2008; Kim et al., 2007; van Gelder, van Reefhuis, Herron, Williams, & Roeleveld, 2011).

In contrast to an exclusive focus on risk, strength-based frameworks such as positive youth development have served as catalysts for research to identify protective factors that support healthy sexual and reproductive behaviors, including consistent contraceptive use (Gavin, Catalano, David-Ferdon, Gloppen, & Markham, 2010). In the positive youth development framework, protective factors include external supports and internal assets (Pittman, Irby, Tolman, Yohalem, & Ferber, 2003). External supports are extrinsic influences (e.g., healthy relationships with family, peers, and adults; role models; resources and networks; and challenging experiences and opportunities; Leffert et al., 1998; Pittman et al., 2003). Internal assets include a diverse range of individual attributes (e.g., social competence, problem-solving skills, sense of independence, sense of purpose, commitment to learning, positive values, positive identity) that encourage success (Leffert et al., 1998; Pittman et al., 2003). Although selected protective factors have been identified as having positive effects on adolescent reproductive health (Gavin et al., 2010), less is known about their role in emerging adult reproductive health.

External supports that may contribute to emerging adult reproductive health include closeness to parents and caring relationships with other adults (Lefkowitz & Gillen, 2006; Tanner, 2006); however, evidence for these associations is mixed (DuBois & Silverthorn, 2005; Gillmore, Chen, Haas, Kopak, & Robillard, 2011; Kogan et al., 2010). Likewise, certain internal assets may promote emerging adult reproductive health (Lefkowitz & Gillen, 2006; Tanner, 2006). Internal assets particularly salient to healthy development among emerging adults include self-esteem, confidence, independence, and life satisfaction (Schwartz, Cote, & Arnett, 2005; Schwartz et al., 2011; Tanner, 2006). Few researchers have explored whether these external supports and internal assets are related to contraceptive behavior among emerging adults.

The purpose of our study, a secondary analysis of Wave III data from the *National Longitudinal Study of Adolescent to Adult Health* (Add Health), was to address important gaps in research on emerging adult contraceptive use with a national sample of sexually active 18- to 24-year-old women attending 4-year colleges. In this emerging adult sample, we examined relationships between protective factors and consistent contraceptive use, relationships between risk indicators and consistent contraceptive use, and whether relationships between selected risk indicators and contraceptive use are altered in the presence of protective factors.

Methods

Design and Participants

In this cross-sectional study, we used data from Add Health Wave III, a nationwide study of adolescent and young adult health. Originally designed to ensure a sample representative of U.S. schools in terms of region of the county, urbanicity, size, and race/ethnicity of students, Add Health has included four waves of data collection. Wave I included in-home surveys of 20,745 7th through 12th grade students. Wave III data (N = 15,170; 76% of Wave I participants) were collected in 2001 and 2002 when participants were 18 to 26 years old.

The sample for the current study included Add Health Wave III female participants ages 18 to 24

FLA 5.4.0 DTD ■ JOGN27_proof ■ 22 January 2016 ■ 3:35 am ■ ce