Social Science & Medicine 150 (2016) 23–30

Contents lists available at ScienceDirect

Social Science & Medicine

journal homepage: www.elsevier.com/locate/socscimed

Women's autonomy and cervical cancer screening in the Lesotho Demographic and Health Survey 2009☆

Laura J. Viens*, Sean Clouston, Catherine R. Messina

Stony Brook University, Department of Preventive Medicine, Stony Brook, NY, USA

ARTICLE INFO

Article history:
Received 9 March 2015
Received in revised form
9 November 2015
Accepted 3 December 2015
Available online 10 December 2015

Keywords:
Lesotho
Cervical cancer
Cancer screening
Cancer awareness
Women's autonomy
Health disparities

ABSTRACT

Rationale: There are vast global disparities in the burden of cervical cancer; 85% of incident cases and 87% of deaths occur in the developing world. There is a growing body of literature asserting that women's autonomy is associated with a broad range of health outcomes.
Objective: This study examined the relationship between women's autonomy and cervical cancer screening to inform interventions in global cervical cancer care.
Methods: A generalized estimating equation approach to logistic regression was used to analyze associations between women's autonomy indicators and both cervical cancer screening knowledge and personal history in a cross sectional sample of 4049 married women in Lesotho.
Results: More than half of the women surveyed (65.2%) had never heard of a pap smear, and only 7.2% had ever had one. Women who participated in all types of household decision-making were 1.4 times more likely to have heard of a pap smear (estimated risk ratio = 1.4, 95% confidence interval: 1.0, 1.8) compared to women with lower participation levels ($p = 0.032$).
Conclusions: This study extends earlier research demonstrating that women's autonomy predicts improved health outcomes, to include cervical cancer screening awareness, but not action. This finding, that augmenting women's autonomy improves cervical cancer screening awareness, adds yet another to the myriad reasons for focusing global attention on issues of gender equity.

1. Background

Each year 528,000 women are diagnosed with cancer of the cervix globally, and 50% of these women will die from the disease (Ferlay et al., 2015). Cervical cancer is caused by the most common sexually transmitted infection, human papillomavirus (HPV) (Hoffman and Schorge, 2012). There are 150 subtypes of the virus; types 16 and 18 account for 70% of all cervical cancer cases worldwide (Hoffman and Schorge, 2012; National Cancer Institute [NCI], 2012). Most women will clear an HPV infection within two years (NCI, 2012); yet, a minority of persistent infections lead to invasive cancer over years or decades. Cellular abnormalities and precursor lesions are detectable on routine clinical screening. Through cytologic screening programs, some countries have decreased cervical cancer incidence and mortality by up to 80% since the widespread implementation of the papanicolaou (pap) smear in the 1960s (Hoffman and Schorge, 2012).

The fundamental cause theory posits that the ability to prevent death and disease is distributed unequally depending on access to resources, including socioeconomic resources and relative power, resulting in health disparities (Phelan and Link, 2005). Consistent with this theory, 85% of cervical cancer cases and 87% of deaths occur in the developing world. In 2012, the age-standardized cervical cancer incidence rate of 4.4 per 100,000 in Western Asia differed greatly compared to the incidence rate of 42.7 in Eastern Africa; the cervical cancer mortality rate of 1.5 per 100,000 in Australia and New Zealand contrasted with a rate of 27.6 in Eastern Africa (Bruni et al., 2014a). Countries with lower levels of human development and higher levels of gender inequality have higher cervical cancer incidence and mortality (Singh et al., 2012). Such inequalities are evident within countries as well: the risk of cervical cancer mortality for women living in the United States (US) is 2.2 times higher among lower socioeconomic groups compared to

☆ This research was partially supported by an American Cancer Society Physician Training Award in Cancer Prevention grant - 98-318-20-PTAPM.
* Corresponding author. Stony Brook University Hospital, Department of Preventive Medicine Health Sciences Center, 101 Nicolls Road, Stony Brook, NY 11794, USA.
E-mail address: ljviens@gmail.com (L.J. Viens).

http://dx.doi.org/10.1016/j.socscimed.2015.12.009
0277-9536/

their wealthier counterparts; Black (compared to White) and rural (compared to urban) US women have higher cervical cancer mortality rates, respectively (Singh et al., 2011, 2012).

Health inequities describe differences in health outcomes that are socially produced, systematically distributed, and unfair; they are also avoidable and remediable (WHO, 2010). A World Health Organization initiative aimed at identifying the roots of health inequities, the pathways that lead from root causes to stark inequalities, and the places to most effectively intervene, led to the creation of "The Conceptual Framework for Action on the Social Determinants of Health." The authors of this framework asserted that to reduce health inequities effectively, we must continue to focus policy on the "intermediary determinants" that directly differentiate between exposure and vulnerability to health compromising conditions, such as access to health care, housing, and lifestyle behaviors. Yet, we must also target the "structural determinants," or those that generate or reinforce the stratifications in society that define an individual's socioeconomic position, including income, social class, race, and gender.

Tsu and Levin assert that improving cervical cancer statistics in low and middle income countries (LMIC) will require policy interventions that can mitigate the effects of the social determinants of health that lead to health inequities (Tsu and Levin, 2008). A recent scoping literature review sought to identify which social determinants of health were associated with cervical cancer screening among women living in LMIC to better inform interventions. They identified a list of relevant factors that included cultural beliefs, shame/stigma, education, income, race, gender roles, geographic factors, age, parity, marital status, recommendations of health care providers, access to health care, belief in healthcare services, and absence of disease symptoms (Williams-Brennan et al., 2012). The authors concluded that no single factor could explain the current cervical screening patterns, and that addressing both intermediary and structural determinants would be essential.

Women's autonomy is one of many intermediary factors linking (structural) gender inequalities to different health outcomes. The concept of women's autonomy, as defined within the study of gender roles in LMIC societies, has a long-held precedent in the human development literature, and in 1995, it was confirmed as a basic human right essential to human dignity by the United Nations Development Programme (Agarwala and Lynch, 2006). The term has been used to capture elements of gender equality in both the household and the community. Women's autonomy is a broad concept that encompasses social status, relative power and decision-making, education, and access to information and resources (Bloom et al., 2001; Dyson and Moore, 1983; Mason, 1997; Woldemicael, 2009). Specifically, autonomy defines the "capacity to manipulate one's personal environment … the ability to obtain information and to use it as the basis for making decisions about one's private concerns and those of one's intimates" (Dyson and Moore, 1983, p. 85). Relative power influences the ability to make decisions that pertain to matters of personal and familial importance, which may potentially be in opposition to the wishes of others (Anderson and Eswaran, 2009; Mason, 1997).

While power is relevant to the achievement of any goal with a behavioral component, much of the research on women's autonomy has focused on reproductive health. Relationships between family planning and autonomy have been studied via exploration of contraceptive use in Oman (Al Riyami et al., 2004) and Eritrea (Woldemicael, 2009), and condom use in Vietnam, Egypt, Bangladesh (Atteraya et al., 2011), and the Philippines (Abada and Tenkorang, 2012). In Nepal and Brazil, autonomy has been examined as a predictor of HIV/AIDS knowledge and behaviors (Atteraya et al., 2011; Chacham et al., 2007). Women's autonomy has also been studied in relation to overall health care utilization in Nepal, child health and nutrition in India and Jordan (Atteraya et al., 2011), mortality in Egypt (Abada and Tenkorang, 2012), and pregnancy care in India (Mistry et al., 2009). Importantly, these varied health-focused explorations all concluded that women with higher levels of autonomy have more favorable health care outcomes.

Lesotho is a mountainous country contained entirely within the borders of South Africa. The Basotho people speak both Sesotho and English. Approximately half of the two million Basotho people live in poverty, and 70% live in rural areas (The World Bank, 2013). The median age of the Basotho people is 23.6 years, and the average life expectancy at birth is 52.7 years (Central Intelligence Agency [CIA], 2014). HIV/AIDS is the major health concern in Lesotho, and the prevalence among adults is the second highest in the world at 23.1% (CIA, 2014). There is only one doctor per 10,000 persons, which is lower than neighboring South Africa (8/10,000) and the US (27/10,000) (Denny and Anorlu, 2012).

In Lesotho, the incidence of cervical cancer (38.4/100,000) is 2.7 times higher than the global incidence rate (14.0/100,000), and the mortality rate (23.3/100,000) is 3.4 times higher than reported globally (6.8/100,000) (Bruni et al., 2014b). Cervical cancer is both the most common type of cancer and cancer-related death among women in Lesotho (Bruni et al., 2014b). There are currently no comprehensive national cervical cancer screening programs in Lesotho, and no cancer treatment facilities (Bruni et al., 2014b).

The global approach to cervical cancer care is rapidly evolving, and these far-reaching changes have the potential to impact women in places with limited access to health care. The first vaccine against HPV, which became available in 2006 in the US, has been provided through the Global Alliance for Vaccines and Immunisation program to women in two of Lesotho's ten districts, with plans to expand to a third (Kingdom of Lesotho Ministry of Health and Social Welfare, 2011). A US non-profit organization, funded by the US Agency for International Development, created national guidelines for cervical cancer screening in Lesotho, and opened a single center capable of providing care using the evidence-based screen and treat approach (Angel, 2015). The most recent update of the Lesotho Ministry of Health and Social Welfare's National Health Sector Strategic Plan now includes cervical cancer screening in their Essential Services Package (Government of Lesotho (2013)).

2. Objective

This study aims to determine if women's autonomy in Lesotho is predictive of cervical cancer screening awareness and the use of pap smear services among women with prerequisite awareness. An understanding of these relationships will inform interventions in the changing context of global cervical cancer care.

3. Methods

3.1. Sample

The Lesotho Ministry of Health and Social Welfare administered the Lesotho Demographic and Health Survey (LDHS) between October 2009 and January 2010. Technical assistance was provided by ICF Macro, the primary contractor for the Measure DHS project funded by the US Agency for International Development. The LDHS is a nationally representative sample that used cluster sampling methodology to select households for participation. The LDHS questionnaire assessed health status, knowledge, and behaviors related to family planning, sexually transmitted infections, maternal and child mortality, nutrition, HIV/AIDS, and tuberculosis (Ministry of Health and Social Welfare [MOHSW] Lesotho, 2010).