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# Process assessment of a peer education programme for HIV prevention among sex workers in Dhaka, Bangladesh : A social support framework

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ABSTRACT

This study evaluated the process of a peer education program for hotel-based sex workers in Dhaka, Bangladesh, with social support proposed as an organizing framework. Programme outcomes were examined through baseline and follow-up assessments. Sex workers naïve to peer education were assessed on socio-cognitive and behavioural variables; a subsample was reassessed at follow-up 23 weeks later on average. Process was assessed in terms of the content of peer education sessions. These sessions were recorded and coded into percentages of social support types provided by the peer educator to her audience: informational, instrumental, appraisal, emotional, companionship, non-support. Peer educators were classified into three "social support profiles" based on average proportions of emotional and informational support they provided. Seeing more peer educators with a high informational support profile was related to higher sex worker self-efficacy, self-reported STI symptoms, and self-reported condom use at follow-up; the same was true for the high emotional support profile and treatment seeking. Social support constituted a useful framework, but needs further exploration. This study provided a direct, in-depth examination of the process of peer education based on a comprehensive theoretical framework.



## Introduction

One of the most frequently used approaches to HIV prevention is peer education (Population Council, 1999). Several studies have examined the effectiveness of peer education with sex workers, demonstrating some success for the method with this population (Asamoah-Adu et al., 1994; Ford, Wirawan, Suastina, Reed, & Muliawan, 2000; Luchters et al., 2008; Morisky, Stein, Chiao, Ksobiech, & Malow, 2006; Walden, Mwangulube, & Makhumula-Nkhoma, 1999; Welsh, Puello, Meade, Kome, & Nutley, 2001; Williams et al., 2003; Wong, Chan, & Koh, 2004). Increases in knowledge and condom use, and in some cases reduced rates of STI, are the most commonly reported positive outcomes. However, as differing methods all fall under the heading of peer education, it becomes difficult to identify the elements of those peer education interventions that may foster change. To our knowledge, no study has assessed the process of a peer education intervention for sex workers: a description of peer education is usually provided in terms of what peer educators are supposed to do, and peer educators may be monitored; however, the actual content of interactions with peer education recipients is never described. Thus, the process is not measured and related to the outcomes.

The current study aimed to fill this gap by assessing the process of peer education in a programme targeting hotel-based sex workers in Dhaka, Bangladesh. Social support was proposed as a theoretical framework to capture the different functions performed by peer educators.

### *Peer educators as providers of social support*

Social support can be defined as the functional content of relationships divided into four types of supportive behaviours, with an understanding that most relationships will provide more than one type: informational support, the provision of advice, suggestions, and information that a person can use to address problems; instrumental support, the provision of tangible aid and services that directly assist a person in need; appraisal support, the provision of standards for self-evaluation, such as social comparison and norms; and emotional support, namely the provision of empathy, love, trust, and caring (Heaney & Israel, 2008).

In the HIV literature, the positive impact of social support on behaviour has been well established in adherence to drug treatment (DiMatteo, 2004; Malta, Strathdee, Magnanini, & Bastos, 2008); emotional support has been particularly studied (Knowlton et al.,

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2006). Studies have also found a positive relationship between social support and HIV/STI preventive constructs in a variety of populations, for instance, with self-efficacy (Bachanas et al., 2002; Taylor-Seehafer et al., 2007) and condom use (Naar-King et al., 2006) among youth, and HIV testing (Nyamathi, Stein, & Swanson, 2000) and condom use (Gaede et al., 2006) among women.

There are few published studies on the relationship between social support and HIV/STI preventive behaviours for sex workers. In India, lower perceived instrumental and emotional support predicted higher rates of unprotected sex in a sample of over 6000 sex workers (Dandona et al., 2005). In Brazil, a measure of social cohesion reflecting perceived instrumental, appraisal, and emotional support among sex workers was negatively related to unprotected sex (Lippman et al., 2010). In China, a measure of environmental support was significantly associated with condom use and HIV testing in sex workers, though this measure was not limited to social support (Hong, Fang, Li, Liu, & Li, 2008). In the United States, Dalla, Xia, and Kennedy (2003) examined the relationship between instrumental and emotional support and the coping strategies adopted by sex workers. Health-enhancing coping strategies such as taking action and seeking social assistance were predicted by higher instrumental and emotional support respectively.

Some studies of interventions for sex workers have touched upon social support. The successful Sonagachi programme in Kolkata, India (Basu et al., 2004), aimed to foster a sense of community and mutual support among intervention participants (Jana, Basu, Rotheram-Borus, & Newman, 2004), and was found to increase helpful interactions (Swendeman, Basu, Das, Jana, & Rotheram-Borus, 2009). Compared to a peer education intervention providing the usual information, condoms, and health care, this project yielded better outcomes including increased condom use and emotional support; however, the relationship between emotional support and behaviour change was not specifically examined. In Brazil, the assessment of a programme modelled on the Sonagachi Project included a measure of social cohesion and mutual aid (Kerrigan, Telles, Torres, Overs, & Castle, 2008). This measure included instrumental and emotional support and was significantly associated with condom use at baseline; however it did not increase following intervention, and did not predict post-intervention condom use. In Thailand, informational and emotional support for AIDS related issues and for sex work issues more generally was measured in the evaluation of a sex worker HIV prevention intervention (van Griensven, Limanonda, Ngaokeow, Ayuthaya, & Poshyachinda, 1998). No relationship was found between social support and condom use at pre- or post-intervention. In their assessment of a successful HIV prevention programme for sex workers in Singapore, Wong, Chan, Lee, Koh, and Wong (1996) discussed the importance of peer and manager support for condom use, and described intervention groups as an opportunity for participants to offer each other support. However, this aspect of the intervention was not formally assessed.

Thus, there are indications of a potentially positive relationship between social support and HIV/STI preventive behaviours in sex workers. However, in some cases, social support is included into a broader measure, not allowing its specific role to be evaluated. In others, various types of social support are not evaluated distinctly, preventing the examination of their differential impact. Finally, no study has examined the specific role of peer educators as providers of social support. Current knowledge on this topic is therefore promising but limited.

HIV peer education interventions generally may be conceptualized as providing different forms of social support, though most do not state this explicitly. From this perspective, informational support is most commonly provided in the form of information on HIV and related topics. All interventions can be seen as doing this. Many interventions also increase access to condoms and/or health care, thus providing instrumental support to recipients (e.g., Luchters et al., 2008; Ford et al., 2000; Walden et al., 1999; Asamoah-Adu et al., 1994). Appraisal support is provided by interventions where health-promoting behavioural norms are explicitly or implicitly communicated (e.g., Morisky et al., 2006; Welsh et al., 2001; Wong et al., 1996). Finally, interventions can provide emotional support through contact with trustworthy and caring peer educators, or by fostering more supportive relationships among recipients themselves (e.g., Kerrigan et al., 2008; Jana et al., 2004; van Griensven et al., 1998; Wong et al., 1996).

As an example, a peer education intervention evaluated by Brieger, Delano, Lane, Oladepo, and Oyediran (2001) among West African youth can be described in terms of the provision of four types of social support. Informational support was provided through group presentations, drama, and distribution of printed information. The distribution of condoms and referrals for STI testing and treatment reflect instrumental support. Peer educators' use of drama and facilitated discussions provided appraisal support by communicating behavioural norms. Finally, emotional support was provided through one-on-one counselling. A peer education intervention for sex workers in Kenya (Luchters et al., 2008) provided similar informational and instrumental supports. Peer educators communicated safe sex norms through drama, role playing, and leadership of community gatherings, thus providing appraisal support. Emotional support came in the form of help in overcoming fear and lack of confidence regarding negotiation with clients. Thus, while social support is not explicitly discussed or measured in these interventions, it provides a useful framework for understanding the process of peer education by encompassing the many different functions of peer educators. Furthermore, by including emotional support, it may acknowledge an important function of peer educators which often remains unrecognized.

In the current study, peer educators were thus conceived as providers of different types of social support. The purpose of the study was to analyse the peer education sessions in terms of social support provided to recipients, and to relate this to outcomes among recipients following the intervention. It was hypothesized that the provision of different types of social support would differentially influence socio-cognitive and behavioural constructs such as self-efficacy, knowledge, condom use and treatment seeking.

### *Study context and programme*

The population targeted by the study consisted of hotel-based sex workers in Dhaka, the capital city of Bangladesh. Prevalence of HIV remains below 1% in this population (Bangladesh National AIDS/STD Programme, 2005). However, STI are highly prevalent, with studies finding 32–36% of participants positive for gonorrhoea, 27–44% positive for Chlamydia, and 3–9% positive for syphilis (FHI, 2007; Nessa et al., 2004). Reported rates of condom use vary among hotel-based sex workers in Dhaka; for example, one study reported condom use rate at last commercial sexual intercourse as 19% with regular clients and 30% with new clients (Bangladesh National AIDS/STD Programme, 2007) while another reported that between 56% and 61% used a condom at last intercourse (FHI, 2007).

#### *Programme*

In light of these risk factors, several non-governmental organizations (NGO) implemented prevention interventions for hotel-based sex workers. The peer education programme examined here started a year prior to the beginning of the study, in 2004. It