Vietnamese women's empowerment in sex negotiation and condom use within marital relationships

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INTRODUCTION

This study examines the relationships between women's empowerment in sex negotiation and condom use among married couple in Vietnam, a country where values have traditionally been placed on women's being subordinate to men, thus underlining women's disadvantaged position with regard to risks for HIV infection and unintended pregnancy.

There has been a growing body of literature on women's empowerment and contraceptive use for the last two decades. Women's power in household decision making has been recognized as an important factor in fertility and family planning practice in many settings (see, for example, Kulczycki, 2008; Mason and Smith, 2000; Schuler and Hashemi, 1994; Higgins and Hirsch, 2008). Where wives' influence on decision-making is limited, some women have to rely on the clandestine use of contraceptives as it may be in the best health interests for them and their children, and the advantages often outweigh the disadvantages (Castle, Konate, Ulin et al., 1999; Biddlecom and Fapohunda, 1998; Wright, 2002).

On the other hand, women's greater vulnerability to sexually transmitted diseases (including HIV) compared to men due to biological and sociological reasons has been well acknowledged since the 1990s (see, for example, UNAIDS, 1999; UN Chronicle, 1994; Segal, 1993; Weiss et al., 2000). Many prevention interventions have since focused on individual-level factors that encourage women to take greater control of their behavior to protect themselves from sexually transmitted infections. Most of these interventions are based on individual behavior change theories, such as the Theory of Reasoned Action, Social Cognitive Theory, and Health Belief Model (Bandura, 1982; Fishbein and Ajzen, 1975; Rosenstock, Strecher and Becker, 1994). These models posit that individuals have control over their behaviors based on a rationale analysis of costs and benefits of such behaviors.

While these models are focused primarily on individual-level factors, recent interventions have recognized that sexual behaviors are also dependent on the interactions between two people. The power dynamics between men and women were an important but neglected aspect of HIV prevention efforts until the last decade. Empowerment theory is one of the efforts which explain how individuals can increase their power through social interactions (Gutiérrez et al., 2000). In a study of American urban youth aged 14-19 years old, Gutiérrez et al (2000) found that young women often reported lower relationship power than young men did, yet self-efficacy related to condom use was associated with relationship power among women but not among men. The

study also suggested that relationship power is a complex concept and has many dimensions, each of which may operate independently and influence behavior differently.

Gender power in sexual relationship was measured in another study among South African women by four questions related to control over whether to have sex and whether to use condoms (Pettifor et al., 2004). The study revealed that the lack of control over relationship was associated with a lower likelihood of consistent condom use and an increase risk of HIV infection among young women aged 15 to 24 (Pettifor et al., 2004). The finding is consistent with a number of studies in both developed and developing countries on the associations between women's multi-dimensional sexual relationship power and the likelihood of condom use and consistent condom use (see, for example, Pulerwitz et al., 2002; Wingwood et el., 1998). Some studies have indicated that these associations seem stronger among women than among men (Blanc and Wolff, 2001). Greig and Koopman (2003) also found that women's negotiating power (including condom use negotiation) is the strongest predictor of condom use among women in Botswana.

Among married and steady couples, it is often found that condom use is negligible (see, for example, Chimbiri, 2007; Wither Osmond et al., 1993). In particular, the perception of marriage as an institution may make it incompatible for couples to talk about condom use (Blanc and Wolff, 2001; Shearer et al. 2005). Women may not ask for using a condom for protection purposes even when they are concerned that their husband might be having an affair (Chimbiri, 2007).

Women's empowerment in Vietnam

Much significant economic development in the last few decades and an advanced legal framework based on gender equality has advanced women's status at the aggregate level in Vietnam – measured by women's income and labor force participation and labor rights, compared to other countries in Asia with the same or higher income level (Chaudhuri, 2010; Hung and Pham, 2006; Summerfield, 1997). Despite such an advancement, at the individual level inegalitarian gender norms have persisted in Vietnam (Schuler et al., 2006). Anthropological studies have shown that traditional socio-cultural norms hold Vietnamese women to a very high standard: they are expected to better themselves and their families socially and economically, yet uphold Confucian norms regarding women's filial piety, obedience to

male family members, and self-sacrifice to maintain harmony in the family (e.g. Tran 1991; Gammeltoft, 1999; Rydstrom, 1998). Many of the current strategies of government and non-government agencies continue to reinforce these expectations (e.g. Schuler et al., 2006).

While many sexual and reproductive behaviors are a result of negotiation processes among couples, research on the impacts of power inequalities between men and women in union on such behaviors in Vietnam is scarce. One recent study found that husband's gender equitable attitude was associated with decreased marital violence and the impact was greater if the wife also expressed equitable attitudes (Luck et al., 2007).

This study aims to fill this gap in the literature by examining women's perceived capability to negotiate sex and condom use with their husbands and its associations with condom use among married couples in Vietnam. It tests the hypothesis that women who reported being able to negotiate sex and condom use with their husbands would be more likely to use a condom at last sex and to consistently use condoms within the last 12 months.

DATA AND METHODOLOGY

Data

Data came from the Vietnam Population and AIDS Indicator Survey (VPAIS) 2005, which was designed to obtain indicators of knowledge, attitudes and sexual behavior related to HIV/AIDS among a sample of men and women aged 15-49. Two-stage cluster sampling was employed to yield a nationally representative sample. A more detailed description of sampling procedures can be found in the survey report (General Statistical Office (GSO) & National Institute of Hygiene and Epidemiology (NIHE), 2006). The sample included 7,289 women and 6,707 men aged 15-49 in 251 clusters throughout the country. For the purpose of this study, only married women who had sex within the last 12 months are included, resulting in a sample of 4,632 women of reproductive age.

Household and Individual Questionnaires were administered to selected households and eligible men and women. The Household Questionnaire covered basic demographic information of household members, while the Individual Questionnaire collected information on reproduction, marriage and sexual activity, knowledge and attitudes toward HIV/AIDS, sexually transmitted diseases and other health issues. Both questionnaires were administered in face-to-face interviews.

Dependent variables

There are three outcomes of interest. The first one is a married woman's capability in sex and condom use negotiation with her partner, or in other words, women's empowerment in sexual activity negotiation. A woman's capability in negotiating sex with her husband comes from yes/no responses to two questions: 1) "…. Please tell me if you think a wife is justified in refusing to have sex with her husband when she knows he has a disease that can be transmitted through sexual contact?"; and 2) "Can you say no to your husband/partner if you do not want to have sexual intercourse?". Condom use negotiation with husband is measured by yes/no responses to two questions: 1) "When a wife knows her husband has a disease that can be transmitted through sexual contact, is she justified in asking that they use a condom when they have sex?" ; and 2) "Could you ask your husband/partner to use a condom if you wanted him to?" Women who responded positive to all four questions are considered completely capable of (or empowered in) negotiating sex and condom use with her husband versus all other women.

Two other outcomes measure condom use practice within the last 12 months: condom use at last sex and consistent condom use in the last 12 months. Women who had sex within the last12 months were asked "The last time you had sexual intercourse [with this person], was a condom use?" and "Did you use a condom every time you had sexual intercourse [with this person] in the last 12 months?" Both outcomes are binary and do not differentiate condom use for family planning or for the prevention of sexually transmitted diseases.

Independent variables

Independent variables include socio-demographic factors that may be associated with women's empowerment and the use of condoms, including: rural/urban residence, women's age, education level, household wealth, and ethnicity. Household wealth was constructed based on ownership of household items and materials of the house; individuals then were grouped into quintiles according to the wealth score of their households. Because of the small number of women in the sample who belonged to an ethnic minority group, ethnicity was dichotomized to the major Vietnamese (Kinh) group versus any ethnic minority group.

Exposure to the media, such as the radio and television, may influence both women's empowerment and condom use. Women who listen to the radio and/or watch TV more

frequently are hypothesized to be more likely to negotiate sexual activity and the use of condoms with their husband (Hadi, 2001; Speizer et al. 2003), as well as more likely to use condoms than those who do not often listen to the radio or watch TV.

In a traditional setting like Vietnam, where son preference is prevalent (Haughton and Haughton, 1995; Johansson et al., 1998; Bélanger, 2003), having at least one son may be likely to give a woman some leverage in negotiation processes, including those related to sexual activities. Couples that already have a son are also theoretically more likely than others to practice family planning, including using condoms. Knowing that condoms can help prevent HIV transmission not only makes couples more likely to use condoms, but also likely gives women a stronger motivation to negotiate condom use with their partners. However, knowledge of condom sources is hypothetically related only to condom use; it has no theoretical associations with women's empowerment.

There are three variables that are theoretically related only to women's empowerment: women's work outside the home, early marriage and the spousal age difference. Women who work outside the home may also have more power to negotiate reproductive choices, including condom use, with their husband compared to women who are housewives (Summerfield, 1997; Kabeer, 2005). We also argue that women who got married early, defined in this study as before the age of 18, are theoretically less likely to be able to negotiate sex and condom use with their husbands compared to those who got married at a later age. Similarly, women who are much younger than their husband (5 years or more) are theoretically less able to participate in decision making processes, including sexual activity negotiation. On the other hand, there are no theoretical, direct associations between work outside the home, early marriage, the spousal age difference and condom use.

Statistical procedures

All analyses in this study are carried out with Stata statistical package, version 10/Special Edition (StataCorp, 2009). Bivariate and multivariate logistic regressions are conducted to explore the associations between the three outcomes and women's characteristics. Structural equation modeling (SEM) is used to test the hypothesis that women who were able to negotiate sex and condom use with their husband would be more likely to use condom at last sex as well as to consistently use condoms within the last 12 months, compared to those unable to negotiate.

The two-equation model examines two potentially endogenous variables, in which one (i.e. women's empowerment in sexual activity negotiation) is a covariate in the equation of the other (i.e. condom use). In this study, it is possible that the same observed and unobserved factors may influence both women's empowerment and the two condom use outcomes. Empirically, tests of exogeneity are performed (Bollen, Guilkey & Mroz, 1995). A biprobit procedure for the test is employed for binary outcomes (Greene, 1993). If the test is passed (rho is not significantly different from zero), women's empowerment in sexual activity negotiation is not endogenous and can be used as a predictor of condom use at last sex and consistent condom use in the last 12 months. In fact, we do not find evidence of endogeneity between women's empowerment and the behavioral outcomes: rho=.26, p=.64 and rho=-.01, p=.98, respectively.

Therefore, women's empowerment can be used as a predictor in equations for condom use at last sex and consistent condom use. A system of two equations requires that the equations can have an overlapped set of independent variables, but each outcome needs to be identified by a separate variable or set of variables that is excluded from the other equation for theoretical and empirical reasons. As mentioned above, women's work outside the home, early marriage, and spousal age difference are excluded from equations for condom use outcomes for theoretical reasons. Empirically, log-likelihood ratio tests confirmed that the exclusion of these variables changes neither the estimation of condom use at last sex (χ^2 = .80, p=.85) nor the estimation of consistent condom use (χ^2 = .47, p=.93).

The exclusion of knowledge of condom sources, on the other hand, does change the estimation of women's empowerment (χ^2 = .90, p<.001). However, we believe that this is more likely an artifact than a true association – there are no apparent explanations for such a direct association; thus knowledge of condom sources is excluded from the women's empowerment equation on theoretical ground.

FINDINGS

Table 1 shows the distribution of the married women sample by women's characteristics (in the first column) and their bivariate associations with the three outcomes (in the rest of the table). Overall, less than a half (47%) of women in the sample stated that they could negotiate sex and condom use with their husband. The majority (80 - 85%) of the sample lived in rural areas and were Kinh. Most (90%) worked outside the home. More than half of the sampled

women were between 25 and 39 years old, a third were in their 40s, and only 13% were less than 25. Nearly a third (32%) of the sample did not have more than primary schooling and 60% had secondary schooling, while only 8% of the sampled women had more than secondary schooling. The majority of the sample were also poor (39%) or of middle class (40%); only 21% can be classified as rich. Three in four women watched TV every day, but 84% of the women did not listen to the radio on a daily basis. The vast majority (95%) of the women already had at least one son. Early marriage was not uncommon: 28% of women in the sample got married before the age of 18. One in four women was married to someone who was at least five years older.

Spontaneous knowledge of condom use for HIV prevention was fairly high: nearly two-thirds (65%) of the women could name condom use as a way to prevent HIV/AIDS. The majority (78%) of women knew at least one source of male condoms.

1. Bivariate results

Women's empowerment in sex and condom use negotiation

The next two columns of Table 1 show the bivariate associations between women's empowerment in sexual activity negotiation and their characteristics. Among women's socio-economic characteristics, education, ethnicity, and everyday exposure to TV and radio were positively associated with women's empowerment. For example, if only 36% of women with primary school education of less could negotiate sexual activity with their husband, as many as 56% of women with more than secondary schooling could do so ($p<.001$). Household wealth did not have a clear association with women's empowerment: compared to the poorest women, those in the middle group were more likely to be able to negotiate sexual activity ($p<.01$), but there were no significant differences between the poorest and the richest women. Women's age and work outside the home were not significantly related to women's empowerment in the bivariate analysis. There were also no differences in women's empowerment in sexual activity negotiation between rural and urban women.

Surprisingly, having a son was not associated with an increase on a woman's ability to negotiate sexual activity with her husband. As predicted, women who got married before the age of 18 were less likely than others to negotiate sexual activity: 41% of women who got married early, compared to 49% of the others, said they could negotiate sex and condom use with their

husband ($p<.01$). On the other hand, the age difference between husband and wife did not make a difference in whether women might be able to negotiate sexual activity with their husband or not.

Knowledge of condom use to prevent HIV and knowledge of condom sources were both related to women's empowerment ($p<.001$ in both cases). More than a half (53%) of married women who knew that condom use could help prevent HIV stated that they could negotiate sex and condom use with their husband, compared to 35% of those who did not know about condom use as a way to prevent HIV. Results were similar for knowledge of condom sources; however, because there are no theoretical connections between knowledge of condom sources and women's empowerment, knowledge of condom source was not included in the women's empowerment equation in the multivariate analysis.

Table 1 about here

Condom use behaviors

The last four columns of Table 1 show the bivariate associations between women's characteristics and two condom use behaviors: condom use at last sex and consistent condom use within the last 12 months. Results are similar for these two behavioral outcomes, hence we will discuss them together.

Table 1 shows that most of the socio-demographic characteristics - except women's age, work outside the home, and having at least one son - were positively associated with both condom use behaviors. Married women in urban areas, women who were more educated, and more wealthy were more likely than others to use a condom at last sex and to consistently use condoms in the last 12 months. Kinh women were also more likely to report positive condom use behaviors than ethnic women; as were women who watched TV or listen to the radio everyday compared to those who did not.

The relationship between women's age and condom use seemed to have an inverse U-shaped pattern: compared to the youngest women, women aged 25-39 were more likely to report both condom use behaviors; however, there were no differences between women aged 40 and above and women aged 15-24. Having a son, surprisingly, also was not related to either condom use behavior. Empirically, early marriage and more than five year difference in the age of spouses were related to condom use; however, there are no theoretical explanations for the

observed correlations. Therefore, besides work outside the home, early marriage and the spousal age difference were also not included in the multivariate models for condom use behaviors.

Both knowledge of condom use to prevent HIV and knowledge of condom sources were strongly related to condom use behaviors. As expected, women who knew about condom use to prevent HIV was significantly more likely than others to use condoms (both at last sex and consistently) ($p<.001$ in both cases). Similarly, women who knew where to get condoms were also more likely than others to report positive condom use behaviors ($p<.001$ in both cases).

2. Factors related to women's empowerment and condom use within the last 12 months

Table 2 presents results of the structural equation models: the first column shows factors associated with women's empowerment, followed by column 2 presenting factors associated with condom use at last sex, and column 3 presenting factors associated with consistent condom use in the last 12 months. As mentioned above, knowledge of condom sources was excluded from the women's empowerment model, while work outside the home, early marriage and the spousal age difference were excluded from the two condom use models – all for theoretical reasons.

Women's empowerment in sex and condom use negotiation

Column 1 shows that as expected, higher education was associated with increased women's capability in sexual activity negotiation with husbands: compared to women with no more than primary schooling, those with secondary education had an increase of 1.39 times ($p<.001$) and those with higher education had an increase of 1.59 times ($p<.01$) in the odds of being able to negotiate sex and condom use with their husband. Women's empowerment was also increased among Vietnamese (Kinh), those who watched TV or listened to the radio everyday, compared to others ($p<.05$, $p<.001$, and $p<.05$, respectively). There is evidence that having a son increased a woman's power to negotiate sex and condom use with her husband (OR=1.19; $p<.05$).

However, it is interesting to note that household wealth did not seem to be important to women's empowerment. In fact, compared to married women in the poorest households, those in the richest households were less likely to report being able to negotiate sex and condom use with their husband (OR=.67; $p<.01$). It is possible that women's empowerment is more dependent on

couple dynamics, including those in financial decision making processes, than on the wealth status of the household (Becker, 1996; Blanc, 2001). Also unexpected is the finding is that women who worked outside the home were actually less likely than those who did not work outside the home to stated that they were able to negotiate sexual activity (OR=.81; p<.05).

Early marriage and the spousal age difference, along with rural versus urban residence and the women's age, did not seem important to women's empowerment. Coupled with the finding that having a son was important, it may suggest that more emphasis may have been put on the fertility roles of women after marriage while being shifted away from the traditional sub-ordinate role of the wife compared to the husband's. Finally, knowledge of condom use to prevent HIV was a strong predictor of women's empowerment (OR=1.76; p<.001). Women who knew that condom use could prevent HIV transmission may be much more motivated and convincing than others to negotiate sex and condom use with their husband. In addition, these women may also be much more empowered in decision making process surrounding issues related to sexual behaviors within marriage.

Table 2 about here

Condom use at last sex

Column 2 of Table 2 shows that several women's characteristics were associated with condom use at last sex. Women who reported being able to negotiate sex and condom use were significantly more likely than others to have used condom at last sex with their husband (OR=1.23; p<.05). This effect is independent of already having a son and other factors that may influence the likelihood of condom use. In addition, women's urban residence, coming from a rich household, and watching TV everyday were all associated with an increased chance that the couple would use condoms at last sex. Knowing a source of condoms also more than tripled the odds that a woman would use a condom at last sex with her husband (OR=3.54; p<.001).

We also observe some unexpected results. Having at least a son did not seem to be important to condom use at last sex: no significant differences in the outcome were seen between women who had at least a son and women who did not. The finding may suggest that condom use in this case may not always necessarily be seen as a way to prevent pregnancy among couples who already had at least one son. There is also no evidence of direct influences of knowledge of condom use to prevent HIV on condom use at last sex.

Consistent condom use in the last 12 months

The last column (column 3) of Table 2 shows factors associated with consistent condom use in the last 12 months. First, it should be noted that while women's empowerment was a predictor for condom use at last sex, it did not seem important to the consistent use of condoms. Women who were empowered were not more likely than others to report consistent use of condoms. Several predictors of consistent condom use are similar to those of condom use at last sex, including: women's urban residence, coming from a rich household, and watching TV everyday. These factors were all positively related to consistent condom use ($p<.05$ in all three cases).

Knowledge of condom use to prevent HIV, as well as knowledge of condom sources, were significantly related to consistent condom use. Compared to others, women who knew that condom use could prevent HIV were 1.44 times more likely to consistently use condoms within the last 12 months ($p<.01$). Knowledge of at least one source of condoms was associated with more than two-fold increase in the odds of women's consistent use of condoms in the last 12 months (OR=2.37; $p<.001$). However, similar to the results from analyses focusing on condom use at last sex, having at least one son did not seem to differentiate between women who consistently used condoms and those who did not.

DISCUSSIONS

This paper examines factors associated with women's empowerment in sexual activity negotiation with their husband and condom use behaviors in the last 12 months (including the use at last sex and consistent use) among married women in Vietnam. The analyses show important findings that are summarized in Figure 1. The bold lines represent statistically significant associations between independent variables and the outcomes; most of the associations were positive, with two exceptions as noted. The light, dotted lines represent associations that were based on theoretically ground but were not statistically significant with our data.

Figure 1 about here

Our findings underline the importance of women's empowerment to condom use behaviors among married couples in Vietnam. While our study only shows a statistically

significant association between women's empowerment and condom use at last sex, the association between women's empowerment and consistent condom use was positive, as expected. It is possible that the importance of women's empowerment to consistent condom use was over-shadowed by the knowledge of condom use to prevent HIV. Indeed, knowledge of condom use to prevent HIV was one of the strongest predictors of consistent condom use among our study sample. It suggests that disease prevention may be a very strong motivation for married women to use condoms consistently. The finding that knowledge of condom sources was important to both condom use behaviors highlights the importance of access and the availability of condoms. Independent of women's empowerment and other women's characteristics, knowledge of at least one source of condoms significantly increased the likelihood of using condoms, either at last sex or consistently within the last 12 months. It is important that condoms should be made widely available, particularly in rural areas as our findings show that rural women were less likely than urban women to use condoms.

Having at least a son was a direct predictor of neither condom use behaviors, although it is related to higher level of women's sex negotiating power. The finding suggests that there may be socio-cultural expectations related to women's role regarding fertility and/or son preference among women themselves. The finding is similar to that of other studies, which found that gender bias was still evident in Vietnam (see, for example, Chaudhuri, 2010; Summerfield, 1997). While these expectations may not be directly related to couples' (and men's) family planning behaviors, the fulfillment of them did seem to give women an increased sense of motivation and empowerment to negotiate sexual activity and condom use with their husband, even if condom use among these couples may not entirely be for the purposes of family planning.

Other unexpected results were also found. Our data show that women's empowerment in sexual activity negotiation was lower among women from rich households, compared to others. It underlines the argument that the household wealth status does not necessarily correlate with women's empowerment. What is important, instead, may be the dynamics among couples as they make household decisions in terms of finance, social activities, etc., and sexual activities. In this study, we are limited by the data available, which do not capture these couple dynamics. Had these dynamics been captured, we would have had a more comprehensive measure of women's empowerment, which is a complex and multi-dimensional concept that is often over-simplified in research studies (Malhotra and Schuler, 2005; Mason, 2005). Some of the other dimensions of

women's empowerment (e.g. in financial decision making, in fertility decisions) may have been important to condom use behaviors, in addition to the dimension of women's empowerment measured in this study.

Also unexpected is the finding that women who worked outside the home was less likely to report being able to negotiate sex and condom use with their husband than did other women. This is in contrast to the common argument that women who work outside the home are more likely to be exposed to new knowledge, new ideas and more advanced social and cultural expectations than those who do not; therefore, they may be more likely to feel empowered than other women. However, when the vast majority of Vietnamese women work outside the home, it may not always be the case. "Work outside the home" may also be a simplified measure of women's work status and may not accurately reflect the degree of financial freedom that women may have. This is consistent with other studies that have found that young women may stay in school longer, while older women may choose to retire earlier (Summerfield, 1997). For those in the workforce, the economic reforms have also resulted in shrinking public sector employment opportunities (where women dominated), whereas gender pay gaps in the private sector may have increased (Liu, 2004). Therefore work outside the home is less likely to accurately measure women's empowerment. Also, as mentioned before, women's empowerment may be more dependent on the couple's dynamics than on the relative socio-economic status of women per se. In this case, perhaps the relative income that women bring home from their jobs is a more important factor influencing their say in decision making processes, including sexual activity negotiation. Unfortunately, neither women's relative income contribution nor couples' financial dynamics were measured in this survey.

Despite limitations related to women's empowerment measurement, the study has important program implications to improve women's empowerment and condom use. Strategies to improve women's empowerment, and subsequently condom use, should include both formal education and mass media interventions via TV and radio. These programs should target women of lower educational level and those of ethnic minority groups, among others. The use of condoms for both family planning and disease prevention purposes should continue to be widely promoted. Condoms should also continue to be made available, particularly in rural areas. Further research is also needed to assess the role of cultural expectations of women's fertility

roles, as well as son preferences, in couples' dynamics and women's empowerment in decision making.

In addition to limitations related to the measurement of women's empowerment, another limitation of this study is that we are not able to differentiate between condom use for family planning and for disease prevention purposes. There were no questions in the survey on reasons and motivations for condom use. However, as discussed above, both having at least one son and knowledge of condom use to prevent HIV had direct and indirect (via women's empowerment) on condom use. Without any information on reasons for condom use, the findings still suggest that condoms should be consistently promoted for both disease prevention and family planning purposes.

During the analysis, we also faced with difficulties in finding instrumental variables for condom use equations. These instrumental variables should be factors that are related to condom use at last sex and consistent condom use in the last 12 months, but not related to women's empowerment, based on both theoretical and empirical grounds. Potential instrumental variables, such as attitudes toward condom use, motivations for condom use, etc. – at both individual and community levels – were not measured in the survey. Therefore, our structural equation models have to rely largely on instrumental variables that are identified on the theoretical ground only. Nevertheless, the models still indicate important pathways between women's characteristics, empowerment in sexual activity negotiation, and condom use behaviors.

Lastly, we cannot rule out in this study the possibility of endogeneity between knowledge of condom sources and condom use behaviors. Because the data come from a cross-sectional survey, it is not possible to pinpoint what might have come first: knowledge of condom sources or condom use. It is possible that knowledge of condom sources increased the chance that women used condoms. It is also plausible that because women had used condoms, they knew a source of condoms through their husband, or by obtaining condoms themselves.

In conclusion, despite several limitations, the study highlights important strategies that may be employed to improve women's empowerment and promote condom use among married couples. Several unexpected findings also indicate areas that need to be further explored, particularly in regard to traditional socio-cultural expectations of gender roles and the multiple dimensional nature of women's empowerment in Vietnam's changing socio-economic context.

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TABLES

Table 1. Bivariate associations among the study sample of married women who had sex within the last 12 months, Vietnam 2005.

Characteristics	Distribution	Women's empowerment		Condom use at last sex		Consistent condom use	
	% (wt.)	%	Odds ratio (s.d.)	%	Odds ratio (s.d.)	%	Odds ratio (s.d.)
Residence							
Rural	80.9	46.46	1.00	7.54	1.00	5.70	1.00
Urban	19.1	47.85	.98 (.13)	14.36	2.40 (.28)***	10.72	2.30 (.30)***
Age							
15 – 24	12.9	45.49	1.00	7.09	1.00	5.01	1.00
25 – 39	53.6	47.20	1.03 (.11)	11.16	1.78 (.31)**	8.34	1.89 (.39)**
40 – 49	33.6	46.43	.99 (.11)	5.80	.94 (.17)	4.61	1.05 (.24)
Education							
No education/primary school	31.5	36.28	1.00	5.41	1.00	3.95	1.00
Secondary school	60.3	50.96	1.85 (.21)***	9.57	2.27 (.36)***	7.23	2.17 (.37)***
Higher	8.2	55.57	2.02 (.34)***	16.59	4.33 (.78)***	12.84	4.20 (.85)***
Household wealth							
Poor	38.6	42.14	1.00	5.02	1.00	3.76	1.00
Middle	40.7	51.01	1.42 (.17)**	9.30	2.06 (.33)***	7.10	2.09 (.37)***
Rich	20.7	46.83	1.18 (.18)	15.09	4.17 (.61)***	11.20	3.76 (.63)***
Ethnicity							
Minority	14.9	33.02	1.00	3.20	1.00	2.51	1.00
Vietnamese (Kinh)	85.1	49.13	1.90 (.40)**	9.83	3.20 (.83)***	7.39	3.02 (.85)***
Watch TV everyday							
No	24.1	36.13	1.00	4.43	1.00	3.13	1.00
Yes	75.9	50.09	1.91 (.24)***	10.24	3.65 (.68)***	7.78	3.59 (.75)***
Listen to the radio everyday							
No	83.8	44.73	1.00	8.01	1.00	6.06	1.00
Yes	16.2	57.04	1.41 (.13)***	13.15	1.58 (.18)***	9.74	1.62 (.20)***
Currently working outside the home							
No	10.0	49.80	1.00	8.58	1.00	7.07	1.00
Yes	90.0	46.38	.89 (.10)	8.87	.97 (.16)	6.61	.84 (.15)

Characteristics	Distribution	Women's empowerment		Condom use at last sex		Consistent condom use	
	% (wt.)	%	Odds ratio (s.d.)	%	Odds ratio (s.d.)	%	Odds ratio (s.d.)
Have at least one living son							
No	5.1	44.91	1.00	9.13	1.00	6.05	1.00
Yes	94.9	47.31	1.11 (.08)	8.75	.86 (.10)	6.86	.91 (.12)
Getting married early							
No	71.6	48.81	1.00	9.37	1.00	7.10	1.00
Yes	28.4	41.46	.79 (.07)**	7.51	.64 (.08)***	5.55	.67 (.09)**
Age difference between spouses							
Less than 5 years	74.4	46.76	1.00	8.06	1.00	5.92	1.00
5 years or more	25.6	46.61	1.06 (.07)	11.12	1.22 (.14)†	8.81	1.29 (.16)*
Know that condom use can prevent AIDS							
No	35.1	34.96	1.00	5.73	1.00	3.62	1.00
Yes	64.9	53.08	2.08 (.21)***	10.52	1.86 (.23)***	8.30	2.37 (.34)***
Know a source of condoms							
No	22.0	33.57	1.00	.20	1.00	.20	1.00
Yes	78.0	50.43	2.18 (.26)***	11.28	55.40 (32.01)***	8.48	39.84 (23.01)***
Women's empowerment		—	—				
No	53.3			7.45	1.00	5.79	1.00
Yes	46.7			10.43	1.43 (.15)***	7.65	1.43 (1.17)**
Total (%)		**46.7**		**8.84**		**6.66**	

† p<.10; * p<.05; ** p<.01; *** p<.001

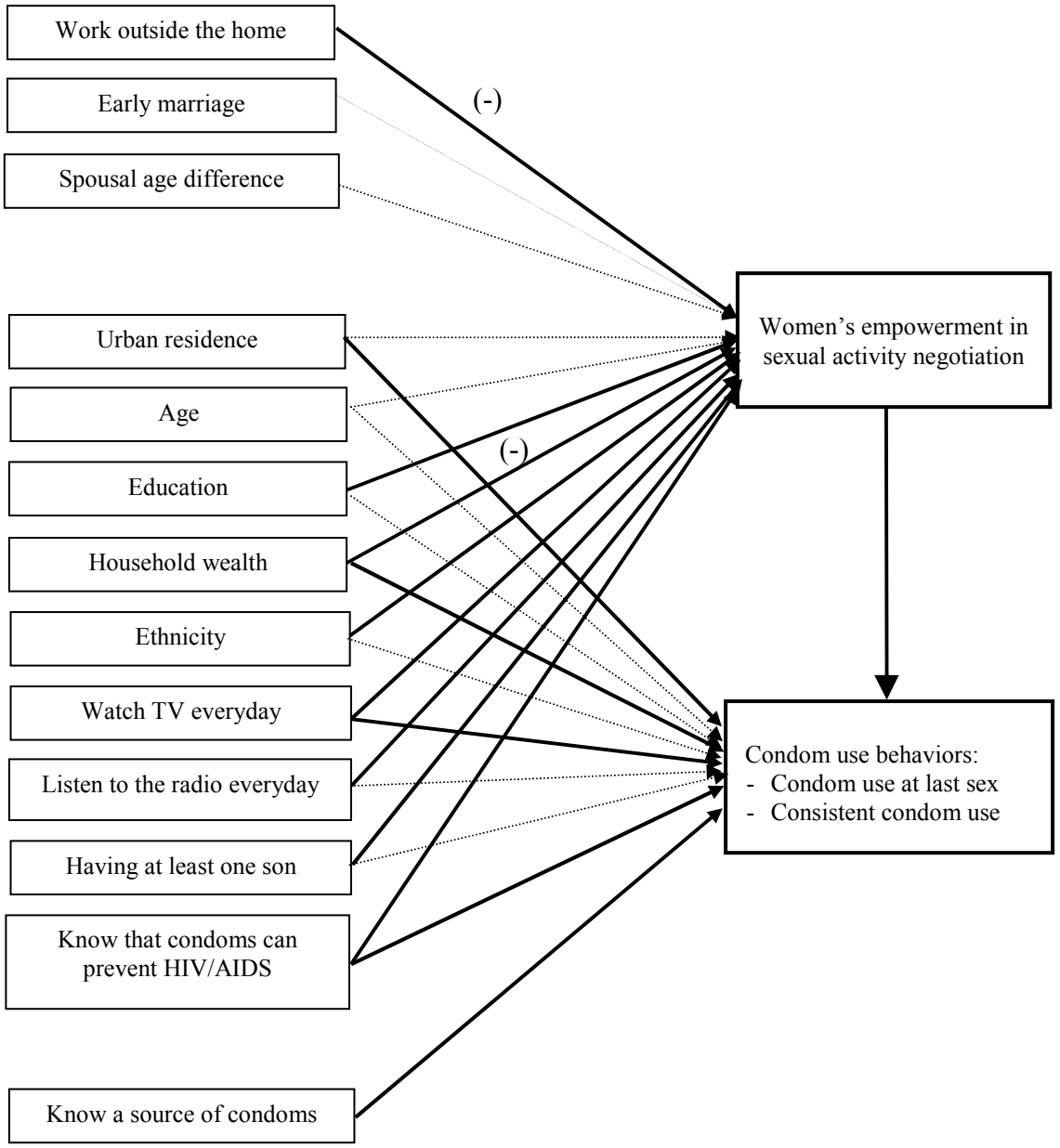
Table 2. Factors associated with women's empowerment in sexual activity negotiation and condom use in the last 12 months among married women, Vietnam 2005.

Characteristics	Women's empowerment (1)	Condom use at last sex (2)	Consistent condom use (3)
	O.R. (s.d.)	O.R. (s.d.)	O.R. (s.d.)
Women's empowerment			
No	–	1.00	1.00
Yes	–	1.23 (.12)*	1.19 (.14)
Residence			
Rural	1.00	1.00	1.00
Urban	.90 (.12)	1.38 (.18)*	1.43 (.21)*
Age			
15 – 24	1.00	1.00	1.00
25 – 39	.91 (.09)	1.35 (.25)	1.44 (.32)
40 – 49	.85 (.09)	.68 (.14)†	.77 (.19)
Education			
No education/primary school	1.00	1.00	1.00
Secondary school	1.39 (.13)***	.99 (.16)	.94 (.17)
Higher	1.59 (.24)**	1.13 (.21)	1.12 (.24)
Household wealth			
Poor	1.00	1.00	1.00
Middle	.89(.09)	1.24 (.21)	1.23 (.24)
Rich	.67 (.09)**	1.86 (.33)***	1.60 (.33)*
Ethnicity			
Minority	1.00	1.00	1.00
Vietnamese (Kinh)	1.45 (.26)*	1.44 (.35)	1.39 (.37)
Watch TV everyday			
No	1.00	1.00	1.00
Yes	1.49 (.16)***	1.66 (.32)**	1.66 (.37)*
Listen to the radio everyday			
No	1.00	1.00	1.00
Yes	1.20 (.11)*	1.18 (.14)	1.22 (.15)
Currently working outside the home			
No	1.00	–	–
Yes	.81 (.09)*	–	–
Have at least one living son			
No	1.00	1.00	1.00
Yes	1.19 (.09)*	1.10 (.14)	1.12 (.16)
Getting married early			
No	1.00	–	–
Yes	.89 (.07)	–	–
Age difference between spouses			
Less than 5 years	1.00	–	–
5 years or more	.98 (.06)	–	–
Know that condom use can prevent AIDS			
No	1.00	1.00	1.00
Yes	1.76 (.16)***	1.09 (.14)	1.44 (.20)**
Know a source of condoms			

Characteristics	Women's empowerment (1)	Condom use at last sex (2)	Consistent condom use (3)
	O.R. (s.d.)	O.R. (s.d.)	O.R. (s.d.)
No	–	1.00	1.00
Yes	–	3.54 (2.02)***	2.37 (1.36)***
Exogeneity test			
Rho		.26	-.01
χ^2		.22	.01
Prob. > χ^2		.64	.98
Log-likelihood ratio test for the exclusion of variables			
χ^2	31.90	.80	.47
Prob. > χ^2	<.001	.85	.93

† p<.10; * p<.05; ** p<.01; *** p<.001

Figure 1. Pathways of factors influencing women's empowerment in sexual activity negotiation and condom use in the last 12 months among married women, Vietnam, 2005.



Notes:

⋯→ denotes an insignificant association.

→ denotes a significant association with women's empowerment and/or at least one of the condom use behaviors.

(-) denotes a negative association. All other associations are positive.