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Gender relations and sexual communication among female students in the Mekong River Delta of Vietnam

Thanh Cong Bui[a,*], **Pamela M. Diamond**[a], **Christine Markham**[a], **Michael W. Ross**[a], **Thanh-An Nguyen-Le**[b], and **Ly Hai Thi Tran**[c]

[a]School of Public Health, University of Texas at Houston, USA

[b]Division of Health Policy and Administration, University of Illinois at Chicago, USA

[c]Pham Ngoc Thach University of Medicine, Ho Chi Minh City, Vietnam

Abstract

Young women's ability to pursue a safer-sex life in line with their wishes is crucial to their sexual health. Although some previous observations have suggested that young women's lack of ability to negotiate safer sex is due to gender power imbalances in the culture of Vietnam, studies that have tested this hypothesis explicitly and quantitatively are few and far between. The present study aimed to test the association between perceived gender relations and perceived self-efficacy in communicating sexual matters among undergraduate female students in the Mekong River Delta of Vietnam. The analysis involved secondary data from 260 subjects from a larger survey regarding gender equity. Structural equation modeling was used to examine the study's hypothesis. Results showed that adherence to traditional gender roles and norms was significantly associated with female students' reduced self-efficacy to communicate on safer-sex matters, such as refusing unwanted sex or requesting condom use. This association remained invariant in the cross-validation process between partnered and unpartnered groups. Programmes that aim to promote safer-sex negotiation and practices for this population may need to address the influence of gender relations and power.

Keywords

gender relations; sexuality; self-efficacy; young women; Vietnam

Introduction

Given the recent increase in premarital sex among young people aged 14–25 years in Vietnam (Ghuman et al. 2006; Ministry of Health, Vietnam et al. 2005; World Health Organisation 2005) the practice of safer sex is unarguably important. Nevertheless, contraceptive and condom use among young unmarried couples in Vietnam is low (Ministry of Health, Vietnam et al. 2005; World Health Organisation 2005). For sexually active young

*Corresponding author. thanh.c.bui@uth.tmc.edu and thanh.bui@aya.yale.edu.

people, the highest documented rate of contraceptive use is around two-thirds (World Health Organisation 2005). The Survey Assessment of Vietnamese Youth (Ministry of Health, Vietnam et al. 2005) showed that contraception is commonly used by married couples but is irregularly used by single people, although 97% of those surveyed reported knowing of at least one contraceptive method.

It has been reported in Vietnam that unmarried young women were half as likely to protect themselves when engaging in sex compared to unmarried young men (Teerawichitchainan 2007). Contraceptive use by undergraduate female students at first sexual intercourse may be as low as 30% (Mensch and Clark 2000; World Health Organisation 2005). Having sex without contraceptive or condom use places young people at increased risk for many health problems, including early and/or unwanted pregnancy, early child-bearing and child-rearing, abortion and sexually transmitted infections.

One of the most important risk factors for lack of contraceptive or condom use, highlighted in numerous studies worldwide, is women's lack of power to negotiate safer sex (Francisco, Dixon-Muller, and d'Arcangues 2007; Klingberg-Allvin 2007; Wellings et al. 2006; World Health Organisation 2005, 2006). This lack of power is thought to result from a number of structural factors rooted in gender relations, including societal expectations, responsibilities and norms for men and women. A patriarchal culture exists in Vietnam characterized by both patrilineality and patrilocality (Bryant 2002; Gupta et al. 2002). Patrilineality places a large emphasis on the continuity of the family line and the performance of funerary and cult rituals. The patrilocal norm requires a woman to live in her husband's home upon their marriage. Men are usually regarded as the bread-winners in families. In contrast, women are supposed to perform unpaid housework and childcare. A traditional saying goes: 'the woman's duty lies in the kitchen'. Together with this economic dependence, the societal expectation that women should be submissive to their husbands has lessened women's power in negotiating with their husbands and making decisions related to family life.

Previous research in Vietnam has suggested that gender inequality, cultural norms and societal double standards heavily constrain young women's capability to negotiate safer sex and to control their own sexual activity, making them vulnerable to sexual health risks (Consultation of Investment in Health Promotion 2005; Santillan et al. 2002; Vu 2008; World Health Organisation 2005). Unmarried young women, for example, are impeded by traditional norms from initiating conversation with their boyfriends about contraceptive or condom use. One reason for this is that showing their knowledge, skills or experience related to contraceptive use may call their virginity into question or result in contempt from their boyfriends (Khuat 2003). Among married women, refusing unwanted sex and asking their husbands to use a condom or to undergo sterilisation would violate cultural norms (Santillan et al. 2002).

While the literature on young people's sexual health in Vietnam has suggested that there is an association between unequal gender relations and young women's inability to negotiate safer sex, studies that have tested this hypothesis explicitly and quantitatively are scarce. The few studies that do exist mainly target married women and women living in the north or the central of Vietnam (Belanger and Hong 1999; Consultation of Investment in Health Promotion 2005; Santillan et al. 2002; World Health Organisation 2005). To our knowledge, there has not been any published quantitative report on this issue in the Mekong River Delta of Vietnam, whose culture is somewhat dissimilar. Similarly, most sexual health programmes for young people focus on information provision, sex education, life-skills education and service provision (World Health Organisation 2005). Few existing sexual health promotion programmes explicitly incorporate work on gender relations and power

differentials. As recently recommended by the World Health Organisation and the Global Forum for Health Research:

> Sexuality research must go beyond concerns related to behaviour, numbers of partners and practices, to the underlying social, cultural and economic factors that make individuals vulnerable to risk and affect the ways in which sex is sought, desired and/or refused by women, men and young people. (Francisco et al. 2007, 24)

As a first step in investigating the influence of gender relations on young women's power and sexual behaviours in the south of Vietnam, this preliminary study sought to examine the relationship between perceived gender relations and self-efficacy to communicate safer sex practices among undergraduate female students. It was hypothesised that female students who perceive conformity to traditional sociocultural gender expectations, which were assumed to bestow young women a lower level of gender power in relation to male, would have lower self-efficacy to communicate safer-sex matters with their boyfriends, such as refusing unwanted sex or asking for condom use.

Methods

Data in this analysis came from a larger study regarding female students' perceptions of gender equity and higher education, conducted by faculty at Can Tho University. This cross-sectional survey involved 260 first- and second-year female students at Can Tho University and Dong Thap University of Pedagogy. Data were collected between June and July 2007. The larger study was approved by the appropriate scientific and ethical review authorities in the relevant universities and was in line with national standards. The data given to us were anonymous and did not contain any potential identifiers. The survey employed a mixed method of sampling. On certain days convenient for the researchers, all classes that met during these days were listed. The researchers then purposively chose five classes that included students from various university departments. This deliberate selection helped to incorporate students with diverse perceptions of gender relations. In each selected class, all female students were invited to participate. The participation rate overall was about 95%.

Since we were interested in the relationship between perceived gender relations and self-efficacy in sexual communication, we only extracted items from the survey that measured these constructs in a relevant fashion. The assorted items are listed in Table 1. The selection of items for the latent construct 'perceived gender relations' was informed by Connell's (1987) work on gender power. An item was considered relevant to perceived gender relations if it reflected any aspect of the three principal structures of gender power: the division of labour, the division of power and the division of cathexis (Connell 1987; Wingood and DiClemente 2000). The theory was chosen because most of the determinants or dimensions of gender relations that have been examined in widely used gender analysis tools can be traced back to the three constructs highlighted by this theoretical perspective (Horizons 2006; World Health Organisation 2003). In the analysis, because all eight selected items (items 1–8) denoted students' levels of agreement with traditional gender roles and norms, we named the latent construct loaded by these items 'adherence to traditional gender relations.'

Items 9–13, on the other hand, entailed students' self-belief in their ability to talk through sexual matters. We judged these adequately matched the general concept of self-efficacy (Bandura 1990). Thus, these items were loaded onto a latent construct named 'sexual self-efficacy'. The stem question for all assorted items was 'How much do you agree with these statements?' and the response scale included: 1 = strongly disagree, 2 = disagree, 3 = agree and 4 = strongly agree. The word 'sex' in the questionnaire and also in this report was

defined as penile-vaginal sexual intercourse. Other socio-demographic variables included in our analysis were participants' age, departments of study, reported religion and relationship status.

Using AMOS 6.0, we first performed a confirmatory factor analysis to assess the factorial validity of measurement and theoretical constructs. Then, we employed structural equation modeling (SEM) to examine our hypothesis. However, because there were only two latent constructs in this case, the measurement model was equivalent to the structural model and the estimated parameters were similar. Therefore, only structural models were reported here. Structural equation modeling offers a potential advantage over traditional statistical procedures such as multiple regression because it provides a convenient and straightforward way to handle observable and unobservable (i.e. latent) variables. The relatedness between an observable and a latent variable, which means how well an unobservable construct (e.g. adherence to traditional gender relations) is measured by an observable item (e.g. item 3), is directly estimated and visualised via the regression path between them. Additionally, SEM offers the ability to assess measurement error and imperfect score reliability.

The models' parameters were estimated by maximum likelihood procedures. Among 13 items used in models, two of them had one missing value; six items contained two missing values; and one item had four missing values. Given the very small number of missing values, we decided to impute them with series medians. The use of SEM requires the satisfaction of two critical assumptions: a continuous scale in measures and a multivariate normal distribution. There has been a great deal of debate regarding the appropriateness as well as the practicality of treating self-rating categorical responses as continuous scale measures. It seems to be an acceptable practice for variables with four or more categories to be treated as continuous, especially when maximum likelihood estimation is used to analyze covariance (Byrne 2001). Given the four-scale responses in our data and the use of a covariance matrix in our analyses, we judged the issue of non-continuous variables to be minimised. Nevertheless, data assessment revealed evidence for the violation of multivariate normality. We therefore decided to use bootstrap technique, which is recommended as an appropriate way to deal with this problem (Byrne 2001; Loehlin 2004).

As regards model assessment, it is recommended that a number of different goodness-of-fit statistics should be reported on so that the readers can evaluate the models presented. Here, the inclusion of a variety of goodness-of-fit statistics, including minimum discrepancy (CMIN), relative fit index (RFI), Tucker-Lewis Index (TLI), comparative fit index (CFI), root mean square error of approximation (RMSEA) and consistent Akaike's information criterion (CAIC) were felt to be appropriate and sufficient. Minimum discrepancy, which represents the chi-square statistic, assesses divergence of a covariance matrix created by a theorised model and the observed covariance matrix. A non-significant or high probability value appended with the chi-square indicates that the model adequately fits the observed data. The closer to 1 the RFI, TLI and CFI are, with a suggested cut-off point of .95, the better the model's fit (Byrne 2001). For RMSEA, a value of < .08 is acceptable and values < .05 are evidence of very good fit (Byrne 2001). Consistent Akaike's information criterion is helpful when comparison between or among models is desired; the smaller the value of CAIC, the better the model's fit. When these statistics independently corroborate goodness-of-fit, the model is considered more reliable.

Results

Descriptive statistics showed that respondents had an average age of 20.8 years (range = 18–27, *SD* = 1.3). Participants were widely dispersed across 14 academic departments, including both the natural and social sciences. Seventy-seven percent of participants

reported having no religion, 15% were Buddhists and 6% were Catholic. Among those who currently had a boyfriend (57%) the average time they had been in this relationship was 16.8 months (*SD* = 15.3). Table 1 shows the distributions of items. Reliability analyses resulted in Cronbach's alpha values of .578 and .715 for adherence to traditional gender relations and sexual self-efficacy, respectively. Cronbach's alpha values with each item removed ranged from .525–.577 for adherence to traditional gender relations and from .660–.693 for sexual self-efficacy. Since a modest reliability of > .5 is commonly acceptable in preliminary research, we proceeded to modeling.

Our initial model was similar to the model shown Figure 1 without the double-headed arrow correlating e11 and e12. The goodness-of-fit indices (Table 2) signified a good fit for this model. All regression paths among latent and observed variables (e.g. between 'sexual self-efficacy' and 'i10') were statistically significant (Table 3). Nevertheless, the outlying modification index (8.278), which lay in between the error terms e11 and e12, suggested that there might be a slight mis-fit and there was a chance to improve the model fit. Although model re-specification by correlating error terms should not be a common practice (Byrne 2001), we had a substantive rationale of doing so in this case. Items 11 and 12, which related to talking about condom and contraceptive use with subjects' boyfriends or future husbands, were still sensitive inquiries for young unmarried woman in the culture of Vietnam. In addition, the initiation of this kind of discussion was traditionally neither a responsibility nor a role of women. Therefore, these two items might have been exposed to the same or similar variances in the way study subjects responded. The allowance for e11 and e12 to be correlated resulted in our final model (Figure 1).

The final model, with results shown as model 2, had a very good fit. All factor loading estimates between latent and observed variables were statically significant. It should be noted that this model is also equivalent to a measurement model, which serves as a confirmatory factor analysis. The statistical significance of all regression weights between observed and latent variables in Table 3 attests that these items significantly measure the two hypothesised constructs: adherence to traditional gender relations and sexual self-efficacy. The magnitude of estimates in Table 3, which are similar to regression coefficients, show how much the latent variable is reflected and is measured by each item. The higher the estimate, the stronger the relevance of the corresponding item. From these statistical results, we can conclude that all items are important to the latent variable and to the model. Thus, the validity of these measures is affirmed. All factor loading parameters remained highly significant across 500 bootstrap samples. This outcome suggested that estimated parameters were highly stable and reliable across the target population. The regression weight (−.121) between the adherence to traditional gender relations and sexual self-efficacy was statistically significant ($p < .001$).

Given the inclusion of data regarding current partner status, we were interested in testing for the invariance of the structural pathway between two sub-samples: partnered and unpartnered students (i.e. those who currently had a boyfriend and those who did not). After removing three cases with missing values for the variable of relationship status, the sample sizes of partnered and unpartnered groups were 148 and 109 respectively. The final model with errors e11 and e12 correlated was used for testing. At the initial run with no equality constraint across two groups, the chi-square value was 148.28, with 126 degrees of freedom. This number was employed as our comparison point for cross-validation. In order to test for the invariance of the regression pathway between adherence to traditional gender relations and sexual self-efficacy, equality constraint was specified to the regression path between these two latent constructs. This constrained model resulted in a chi-square value of 149.17, with 127 degrees of freedom. The difference in chi-square values was .89, with 1 degree of freedom. This difference is not statistically significant ($p = .33$), implying the constrained

model was equivalent to the original model. Thus, the association between adherence to traditional values and sexual self-efficacy was the same for partnered and unpartnered females. The CFI of the constrained model was .936 and the RMSEA was .026.

Discussion and conclusions

The results of the final model revealed that the more a female student concurred with traditional gender roles and norms, the less confident she felt in communicating about sexuality. Results from the cross-validation process indicated that this structural relationship held across partnered and unpartnered groups. This model replication within the sample also underpinned the validity of findings. Our study's outcomes suggest that further large and rigid systematic investigations into the effect of gender relations and power on Vietnamese women's sexual self-efficacy are likely to be worthwhile. On the other hand, since only a small proportion of variance in sexual self-efficacy was attributable to perceived gender relations, the roles of other determinants of sexual communication or negotiation should be further explored.

Although the young women in this study were probably more educated, more empowered and less adherent to traditional values than other young women who are not enrolled in universities, the association between their perceived gender relations and lower self-efficacy in sexual communication was still apparent. Non-communication of safer-sex practices has been found to be a key contributor to the likelihood of unsafe sexual behaviors and sexual health risks such as sexually transmitted infections or pregnancy (Edwards 1994). Therefore, in the interim, intervention programmes that aim to promote safer-sex negotiation and practices among young women populations may want to examine and address the issue of gender relations and power in order to achieve the highest possible programme effectiveness. Another factor for consideration in future interventions is the issue of '*perceived* gender relations'. Students' perception of traditional gender relations or gender power may not necessarily be similar to reality. More importantly, a change in perceptions perhaps can be brought about more rapidly and more easily than a change in the reality of gender relations, particularly among the population of undergraduate students. Future research may find it useful to examine the enhancement of sexual communication or negotiation ability after shifting students' perceptions regarding gender equity and power.

This study contributes quantitative evidence to the knowledge of gender relations and sexual communication in Vietnam. This evidence was strengthened by the use of SEM, which enables the incorporation of both observed variables and latent factors and allows for the assessment of both factorial validity of measurements and validity of the hypothesised directional relationship between perceived gender relations and sexual self-efficacy. Nevertheless, our study was not without its limitations. First, the design and the results of this study are insufficient to serve as a strong evidence of causality. Although the inverse direction – self-efficacy was a direct cause of perceived gender relations – was implausible, several possible equivalent models related to the two examined constructs cannot yet be ruled out. It might be the case that, for example, both perceived gender relations and self-efficacy are isolated consequences of a certain unidentified cause. Nevertheless, in accordance with other literature (Wellings et al. 2006; World Health Organisation 2005) and Wingood's et al. (2006) report of an increase in protected sex subsequent to the enhancement of gender pride and power among African-American young women, the directional relationship in our findings was trustworthy to a certain degree.

Second, due to the use of secondary data, some latent constructs, such as perceived gender relations, were not developed using a theory-based approach and thus might be inadequately measured. Some theoretically important dimensions of gender relations, such as gender-

based employment, were not assessed. This omission might have led to sub-optimal reliability for selected scales. In future research, a qualitative study to elicit the salient dimensions of gender relations within a specific population may be needed prior to a large quantitative study. Finally, the mixed method of sampling in the original study may limit our findings' generalisability.

In conclusion, this preliminary analysis suggested that female students' perception of gender relations was associated with their self-efficacy to communicate sexual matters. This directional relationship remained constant regardless of female students' relationship status. These findings contribute evidence to the hypothesis that imbalances in gender relations constrain women's capacity to negotiate and practice safer or desired sexual behaviours.

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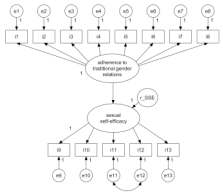

Figure 1.
Model graphic.

Table 1

Descriptive statistics for items.

Item	Description	Mean	*SD*
Adherence to traditional gender relations			
i1	After marriage, a wife must reside in her husband's house.	2.24	.702
i2	A wife should not argue on a par with her husband on something right or wrong.	1.90	.707
i3	A husband should be the one who decides how to reasonably spend household income.	1.74	.614
i4	It is acceptable for a husband to make important decisions in the family without asking for his wife's opinion.	1.44	.512
i5	It is acceptable for a husband to beat his wife sometimes when he gets angry.	1.70	.695
i6	A wife must have her husband's permission when visiting her relatives or friends without her husband's company.	2.39	.819
i7	A wife cannot request her husband to prepare a meal for her.	1.53	.671
i8	If a husband wants his wife not to go out for paid work but to stay at home in order to take care of the children and housework, the wife should follow this decision.	1.67	.620
Sexual self-efficacy			
i9	I am confident that I can discuss or negotiate anything with my boyfriend without breaking our relationship.	3.12	.698
i10	If my boyfriend wants to have sex with me but I do not want to, I can easily refuse.	3.36	.755
i11	In the future, I can request my boyfriend (or my husband) to use a condom if I want him to do so.	2.93	.739
i12	In the future, I can decide on my own to use a contraceptive method which is the best for me regardless of my boyfriend's (or husband's) acceptance.	2.86	.769
i13	I am confident that I can ask my boyfriend whether he has ever had sex with anyone else.	3.25	.654

Note: The stem question for these items was: 'How much do you agree with these statements?' Responses were on 4-point scale: 1 = strongly disagree, 2 = disagree, 3 = agree and 4 = strongly agree.

Table 2

Model goodness-of-fit indices.

	CMIN							RMSEA		
Model	**CMIN**	**df**	***p***	**CMIN/df**	**RFI**	**TLI**	**CFI**	**RMSEA**	**90%CI**	**CAIC**
1	83.042	64	.055	1.298	.736	.924	.938	.034	.000 – .053	260.180
2	71.281	63	.222	1.131	.770	.966	.973	.023	.000 – .045	254.981

Note: CMIN = minimum discrepancy; df = degrees of freedom; *p* = probability value; RFI = relative fit index; TLI = Tucker-Lewis Index; CFI = comparative fit index; RMSEA = root mean square error of approximation; 90%CI = 90% confidence interval; CAIC = consistent Akaike's information criterion.

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Table 3

Parameter estimates of models.

		Model 1		Model 2			
		Estimate	**SE**	**Estimate**	**SE**	**Lower bound[a]**	**Upper bound[a]**
Unstandardised regression weights							
Sexual self-efficacy	← Adherence to traditional gender relations	−.117**	.033	−.121**	.035	−.190	−.061
i1	← Adherence to traditional gender relations	.250**	.054	.247**	.054	.147	.351
i2	← Adherence to traditional gender relations	.315**	.054	.313**	.054	.209	.434
i3	← Adherence to traditional gender relations	.272**	.047	.271**	.047	.181	.353
i4	← Adherence to traditional gender relations	.238**	.039	.238**	.039	.159	.308
i5	← Adherence to traditional gender relations	.291**	.053	.294**	.054	.192	.381
i6	← Adherence to traditional gender relations	.200*	.064	.198*	.064	.061	.339
i7	← Adherence to traditional gender relations	.266**	.052	.268**	.052	.166	.354
i8	← Adherence to traditional gender relations	.212**	.048	.213**	.048	.136	.301
i9	← Sexual self-efficacy	1.000		1.000			
i10	← Sexual self-efficacy	1.308**	.277	1.296**	.264	.904	1.823
i11	← Sexual self-efficacy	1.483**	.296	1.208**	.253	.905	1.788
i12	← Sexual self-efficacy	1.372**	.287	1.069**	.246	.744	1.611
i13	← Sexual self-efficacy	1.467**	.285	1.506**	.289	1.107	2.129
Covariances							
e11	↔ e12			.113	.034	.055	.180
Variances							
	Adherence to traditional gender relations	1.000		1.000			
	r_SSE	.072*	.025	.081*	.027	.039	.145
	i1	.429**	.041	.430**	.041	.375	.507
	i2	.398**	.041	.400**	.041	.331	.481
	i3	.302**	.031	.302**	.031	.235	.381
	i4	.205**	.022	.205**	.022	.163	.239

	Model 1		Model 2			
	Estimate	SE	Estimate	SE	Lower bound[a]	Upper bound[a]
i5	.396**	.040	.394**	.040	.325	.466
i6	.629**	.057	.629**	.057	.551	.724
i7	.378**	.038	.377**	.038	.276	.513
i8	.338**	.032	.338**	.032	.287	.408
i9	.355**	.041	.405**	.043	.316	.491
i10	.421**	.044	.408**	.044	.299	.584
i11	.399**	.039	.389**	.039	.323	.478
i12	.426**	.045	.479**	.048	.402	.569
i13	.241**	.032	.209**	.036	.130	.289

Note: SE = standard errors;

* $p < .01$;

** $p < .001$;

[a] 90% bias-corrected confidence intervals for estimates obtained from the 500 bootstrap samples.

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