Development of the Causal Model of Young Thai Female Adolescents' Sexual Abstinence Intention

Janya Chareonsuk, Rutja Phuphaibul, Nittaya Sinsuksai, Chukiat Viwatwongkasem, Antonia M. Villarruel

Abstract: The purpose of this cross-sectional descriptive study was to develop and test the causal model of the relationships among parent-daughter sexual abstinence communication, behavioral, normative, and control beliefs toward sexual abstinence to influence sexual abstinence intention. The sample consisted of 470 female Thai adolescents aged between 12-16 years in school grades 7-9 in Bangkok, Thailand. Data were collected by the *Demographic Data Questionnaire*, the *Parent-Daughter Behavior Sexual Abstinence Communication Questionnaire*, and the *Sexual Abstinence Intention during the School Years Questionnaire*.

Results indicated that our final Causal Model of Young Thai Female Adolescents' Sexual Abstinence Intention fitted with the empirical data and explained 33% of the variance in sexual abstinence intention. Parent-daughter sexual abstinence communication had significant positive indirect effects on sexual abstinence intention through behavioral beliefs, normative beliefs, and control beliefs. Study findings can be used by nurses and others to design and test interventions to promote sexual abstinence during the school years among young Thai female adolescents. However, further testing of our Model is required in other populations and locations before findings can be generalized elsewhere.

Pacific Rim Int J Nurs Res 2013 ; 17(4) 329-341

Keywords: Females, Adolescents; Intention; Sexual abstinence; Parent-daughter communication; Theory of Planned Behavior

Introduction

Early sexual intercourse has been identified as a major cause of teenage pregnancy and abortion, as wells being implicated in the transmission and acquisition of sexually transmitted diseases (STDs) including human immunodeficiency virus/acquired immunodeficiency syndrome (HIV/AIDS). In the United States, substantial morbidity and social problems also result from teenage pregnancy. Approximately 757,000 pregnancies occur among females aged 15–19 years annually.[1] Similarly,

Correspondence to:* Janya Chareonsuk *RN, PhD. Candidate Assistant Professor, Obstetric and Gynecological Nursing Department, Faculty of Nursing, Mahidol University, 2 Siriraj, Prannok Road, Bangkoknoi, Bangkok 10700, Thailand* ***E-mail:*** *janya.che@mahidol.ac.th*
Rutja Phuphaibul*, DNS Professor, Ramathibodi School of Nursing, Faculty of Medicine Ramathibodi Hospital, Mahidol University 270 Rama VI Road, Ratjavitee, Bangkok 10400, Thailand*
Nittaya Sinsuksai*, RN, PhD Assistant Professor, Obstetric and Gynecological Nursing Department, Faculty of Nursing, Mahidol University, 2 Siriraj, Prannok Road,Bangkoknoi, Bangkok 10700, Thailand*
Chukiat Viwatwongkasem*, PhD Associate Professor, Faculty of Public Heath, Mahidol University 420/1 Ratchawithi Road, Ratchathewi, Bangkok, 10400 Thailand*
Antonia M. Villarruel*, RN, PhD, FAAN Professor, School of Nursing, Michigan University, 400 N. Ingalls, Suite 4320, Ann Arbor, MI 48109-5482*

Thai females under 19 years of age have the highest pregnancy rate.[2] Correspondingly, the trend of mothers giving birth at 10-19years has continuously increased.[3] Thailand ranked second in births among this age group as compared to other Asian countries.[4] Moreover, the trend of early sexual activity has rapidly increased among female adolescents at ages 13.8-16.8 years for students in Bangkok and the lowest age for first intercourse was very low at 10 years of age.[5]

In Thai culture, encouraging sexual abstinence is an accepted health promotion approach among young female adolescents, therefore, it is important to understand the factors associated with abstinence among early female adolescents. The majority of studies in Thailand have focused on factors affecting safer sex behavior in middle and late adolescence[6-8] and only three studies have been conducted on sexual abstinence in female adolescents.[9-11] These findings are insufficient for determining risks and protective factors related to sexual abstinence behaviors. While effective behavioral interventions have a strong theoretical base, many of the studies were not theory driven.[12]

Conceptual Framework and Review of Literature

The conceptual framework underpinning this study is an extension of the Theory of Planned Behavior (TPB) by adding a variable, Parent-daughter sexual abstinence communication (PDSAC), based on Ajzen's guide for adding variables.[13] According to the TPB, a person's intention to perform a behavior is a key determinant of that behavior.[14] The antecedents of the three predictors of intention are corresponding beliefs reflecting the underlying cognitive structure guiding human actions. These include behavioral beliefs, normative beliefs, and control beliefs. The beliefs about the possible outcomes of a behavior and the evaluations of these outcomes are behavioral beliefs. Beliefs regarding normative anticipations of others and the motivation to comply with these anticipations are normative beliefs, whilst those concerned with the existence of factors enabling or hindering the act of a behavior and the perceived power of these factors are control beliefs.[15]

Parents are significant people who can influence children and young adolescents particularly in sexual socialization. Sexual decision-making during adolescence can be shaped by the information and messages communicated or not communicated between adolescents and parents.[16] According to the TPB theory, external variables such as PDSAC can be considered.[13] When addressing risky sexual behavior in adolescents, an integration of parents is important and enhances the usefulness of the TPB[17] to address sexual abstinence. Empirical evidence suggests that parents, and particularly the mother, are the most important persons in an adolescent's life; a mother can influence sexual behaviors of her adolescent daughters. Parents exert a lot of power regarding an adolescent's sexual behaviors.[18] Thus, this study examined how PDSAC affects sexual abstinence intention among young Thai female adolescents.

Behavioral beliefs about early engagement in sexual intercourse are concerned with avoiding unintended pregnancy, STDs/HIV infections, and interference with education or educational aims, all of which are advantages of sexual abstinence. Students who perceive that pregnancy is obstacles to their lives usually intend to continue to be sexually inactive.[19] In Thai culture, many parents are supportive of sexual abstinence. They talk about the negative outcomes of early sexual intercourse, especially unwanted pregnancy which would make life difficult or result in loss of educational opportunities.[9, 20] Such communication influences an adolescent's behavioral beliefs toward sexual abstinence during their school years.

Diverse types of subjective norms significantly predict intention for sexual behavior. According to Villarruel and colleagues[19], adolescents may be less likely to become involved in sexual intercourse or condom use when significant others, such as a partners, parents or peers, disagreed with these behaviors more than others agree. Furthermore, Cha *et al*[21] found a correlation between greater perceived disapproval of premarital sexual behavior from peers and a higher intention for sexual abstinence. A number of studies have examined parental, partner and peer norm disapprovals, all of which are influential in decision-making about engaging in sexual behavior in adolescents.[19,21,22]In Thai culture, parental norms are more important in early adolescence, but this influence declines with age; and then peer norms become more important in later adolescence. A recent study[20] revealed that many parents communicate their disapproval of sexual activity to their adolescents. Correspondingly, Rhucharoenpornpanich *et al.*[23]found both sons and daughters reported that their parents disapproved of their children engaging in sexual relations, especially daughters. Thus, the influence of PDSAC on normative beliefs toward sexual abstinence is supported.

Control beliefs toward sexual abstinence are those regarding factors enabling or hindering the performance of a behavior, and the perceived power of these factors on intentions to engage in sexual activity.[24]This is antecedent to perceived behavioral control which reflects the perception that an individual possesses adequate resources and skills to perform the behavior with confidence to do so adequately.[25]According to Thai society, parents teach and monitor the rules of appropriate sexual behaviors for children to delay the transformation from childhood to adulthood.[9]They give messages related to avoiding drinking alcohol, and revealing or wearing tight clothes, behaviors which make sexual abstinence difficult. Thai parents talk about wearing proper apparel suitable for age, sex, timing and place, avoiding risky situations, and maintaining friendships with members of the opposite sex as a way of supporting abstinence behaviors. These messages affect adolescents' perceptions about control beliefs and their perceived power toward sexual abstinence during their school years.

Aim of study

This study examined how PDSAC, and behavioral, normative and control beliefs predicted sexual abstinence intention among Thai female adolescents studying in grades 7-9.

METHOD

Design: A cross-sectional, correlation design was employed using path analysis to describe the causal relationship among PDSAC, behavioral beliefs, normative beliefs and control beliefs on sexual abstinence intention.

Ethical Considerations: Permission to conduct this study was obtained from the Institutional Review Board for the Protection of Human Subjects, Faculty of Medicine, Ramathibodi Hospital, Mahidol University and from the directors of schools involved. The first author gave each potential participant an information sheet explaining the details of the study including objectives. The participants were assured of the maintenance of anonymity and confidentiality throughout the study, and that they could withdraw from the study at any point with no repercussions. Due to the sensitive nature of the study topic, and because young female adolescents are a vulnerable group, the protection of human subjects was a critical issue in this study. To protect the confidentiality of adolescents, permission was sought and given by the IRB for a waiver of written consent from parents.

Sample: The ratio of estimated parameters per number of participants generally was used to calculate the sample size of the Structural Equation Modeling (SEM).[26]Pedhazur and Kerlinger[27] suggested 30 participants per parameter to determine the sample size for the SEM. From the hypothesized model, there were 11 estimated parameters and a sample size of 330 was determined. Due to the extremely sensitive nature of sexual topics, approximately 40% of the attrition rate

has been found in other studies elsewhere.[21] Additionally, about 10% of female students studying in secondary school in Bangkok are sexually active.[5] Thus, increasing the sample size by 50% (165 cases) would ensure an adequate sample of sexually abstinent adolescents. Therefore, the final sample size required was determined to be 495. However, 15 participants returned incomplete questionnaires and 43 who reported sexual experience were excluded; thus the total sample was 470 participants.

Inclusion criteria were those participants who: a) lived with their parent, mother and/or father (mother or father could be a biological parent or step-parent), and b) were willing to participate in the study and provide written informed consent. Students were excluded if they answered "yes" to having had sex in the demographic questionnaire.

Procedures: Data were collected from June-July, 2012. With permission from the schools, the researcher provided information about the study to the potential participants and the consent forms were distributed. Questionnaires were distributed to participants in their classrooms at a time scheduled by the teachers. The participants were seated far apart to ensure individual privacy, and the researcher was available in the back of the classrooms to provide explanations and answer questions. The participants took approximately 30-45 minutes to complete all of the measures, and after completion participants submitted the questionnaires in a closed box in the front of the class.

A stratified multi-stage random sampling was used to select the participants in this study. According to the Office of the Basic Education Commission, the Educational Service Area in Bangkok Metropolitan can be divided into 3 areas: Bangkok Educational Service Area Offices (BESAO) 1, 2 and 3. Accordingly, three Area offices were selected for participation. Two schools were randomly selected from BESAO. In all, six schools were chosen and from each of these two classrooms from grades 7, 8 and 9 were randomly selected to be included, a total of 36 classrooms. However, when data were collected, some schools had small class sizes (having less than 10-15 female students per classroom), thus additional classrooms were recruited. The total sample was 528.

Instrumentation: Three instruments used in this study were the *Demographic Data Questionnaire* (DDQ), the *Parent-Daughter Sexual Abstinence Communication Questionnaire* (PDSACQ) and the *Sexual Abstinence Intention during the School Years Questionnaire* (SAIQ).

The DDQ was developed by the research team and asked about participants' age, grade, GPA, religious, parental educational level, parental marital status, living situation, family income and sexual experience. The PDSACQ was also developed by the research team based on the findings of focus group discussions and a literature review. This instrument comprised three domains: thoughts, actions and interactions. Thoughts comprised ten items measuring adolescents' perceptions about the negative outcomes of early initiation of sexual intercourse such as: "My parents told me having sex during the school years may cause unwanted pregnancy". Actions comprised seven items measuring adolescents 'perceptions about parent-to-child communication related to proper manners such as dressing, avoiding risky situations, such as: "My parent told me drinking alcohol may lead to sexual intercourse." Interactions consisted of eight items measuring adolescents' perceptions of the parent-to-child communication about the manners of Thai 'good girls' with men such as: "My parent tell me I need to behave properly if I have a boyfriend". The PDSAC was rated by 5-point Likert scales (1= Never to 5=Very Often). The scores were summed; and a higher score meant better parent- daughter sexual abstinence communication.

The SAIQ, developed by Fongkaew and colleagues,[28] was modified in an elicitation study and by pilot testing. This instrument consisted of the four major constructs from the TPB:

a) *Behavioral Beliefs*: These were accessed by two subscales containing 39 behavioral beliefs and 31

outcome evaluations, and were rated on 5-point Likert scales. Behavioral beliefs were measured 1=Strongly Disagree to 5=Strongly Agree. Corresponding outcome evaluations were rated1=Extremely Unimportant to 5=Extremely Important, based on the level of importance toward sexual abstinence during the school years. Item scores were calculated by multiplying the numerical values indicated for each of the 33 behavioral beliefs and numerical values indicated for the corresponding outcome evaluation of each belief. Total scores had a possible range of 33-825where higher scores indicated higher degrees of positive behavioral beliefs. Examples of SAIQ included: "Do you agree that sexual abstinence would prevent unintentional pregnancy?" and "How important are behavioral outcomes of sexual abstinence during the school year on preventing unintentional pregnancy?"

b) *Normative Beliefs:* These were accessed by two subscales containing 12 normative beliefs and 12motivations to comply. The participants rated their perceptions of the strength of influential others' beliefs about whether or not they were sexually abstinent, and their motivation to comply with influential others' beliefs by using 5-point Likert scale (1=Definitely do not do to 5=Definitely do). The adolescents rated their motivation to comply on 5-point scales (1=Very little to 5=Very much). The strength of each normative belief multiplied by the corresponding motivation to comply with the influential others and the product were summed across 12 items on normative beliefs/motivations to comply. Total possible scores ranged from 12-300 where higher scores represented greater influence of others on sexual abstinence behavior. Example questions of normative beliefs and motivation to comply are: "How important your mother's belief about your practicing sexual abstinence during your school years?" and "If your mother wants you to practice sexual abstinence during your school years, how likely are you to do this?"

c) *Control Beliefs:* These were accessed by two subscales containing 17 control beliefs and 17 perceived power items. To obtain the beliefs measure, participants rated beliefs on a 5-point Likert scale (1=Very difficult to 5=very easy) indicating the ease or difficulty of sexual abstinence when facilitating or inhibiting factors were presented. Questions were asked about control beliefs regarding each factor affecting behavioral performance. Perceived power was measured by responses on a 5-point Liker scales (1=Very unlikely to 5=Very likely) regarding the likelihood of sexual abstinence intention when facilitating or inhibiting factors were presented. Scoring involved multiplying each perceived behavioral control by its respective control belief and summing the product across the 17 control belief/perceived power items. Total possible scores ranged from 170-425 where higher scores represented greater perceived ease in sexual abstinence intention. Example questions of control beliefs and perceived behavioral control include: "How difficult is it to practice sexual abstinence when drinking alcohol?" and "How likely are you to have a chance to drink alcohol?".

d) *Sexual Abstinence Intention:* These were accessed by four questions on 5-point Likert scales (1=Absolutely not to 5=Absolutely yes). An example question is: "How possible is it to refuse sex if a boyfriend asks you to have sex?". Total possible score ranged from 4- 20 where higher scores reflected greater sexual abstinence intention.

All three instruments were evaluated for content validity by a panel of five experts comprising a researcher and educator in health and behavioral science, a nursing educator and researcher expert in adolescent reproductive health, two nursing educators expert about the TPB and a faculty member specializing in adolescent-psychiatric nursing. Questionnaires were modified after the experts' comments. The revised PDSACQ and SAIQ were pilot-tested with 30 students who were similar to the participants in this study. The alpha coefficients for the various parts of the PDSACQ and the SAIQ were acceptable. A range was 0.74-0.94.

Data Analysis: Descriptive statistics and bivariate correlations were calculated. Linear Structural Relationship program (LISREL) was used to perform preliminary analysis and principle analysis for model testing. Path analysis was performed to test the causal relationships among the variables within the revised modification of the parent-based expansion of the TPB predicting sexual abstinence intention.

Results

Participants were 470 Thai female adolescents aged between 12-16 years studying in Grades 7-9. As shown in **Table 1**, the majority of the students were: 12-14 years of age (89.6%, n= 421); Buddhists (95.3%, n=448); and living with both parents (69.1%, n= 325). The grade point average (GPA) ranged from 1.25 to 4.00 with an average of 3.4.

Table 1 Demographic Characteristics of the Participants

Demographic Characteristics	n	%
Age		
12-14	421	89.6
15-16	49	10.4
Educational Level		
Grade 7	150	31.9
Grade 7	141	30.0
Grade 9	179	38.1
GPA		
1.01-2.00	2	0.43
2.01-3.00	78	16.54
3.01-4.00	319	67.63
Missing	71	15.05
Religion		
Buddhist	448	95.3
Christian	7	1.5
Muslim	14	3.0
Other	1	0.2
Living Situation		
Both Parents	325	69.1
Father or Mother	81	17.2
Others	64	13.6
Parents' Marital Status		
Living Together	309	65.7
Father/Mother Deceased	29	6.2
Divorced/Separated	129	27.35
Other	3	0.60
Sexual Experience		
No Previous Sexual Experience	470	100.00

Parent-daughter sexual abstinence communication: The mean score of parent-daughter sexual abstinence communication was 86.91 *(SD = 20.18)* with a score ranging from 25 to 125. When the three subscales, i.e. thoughts, actions and interactions, were considered, the mean scores of each subscale were 31.58, 26.75, and 28.59 respectively with the scores ranging from 10-50, 7-35, and 8-40 respectively. The findings indicated the communication related to the set of behaviors used to practice sexual abstinence during the school years between parents and daughter frequently occurred in family.

Behavioral beliefs: The total mean score of the behavioral beliefs toward sexual abstinence was 594.82*(SD=115.15)* with scores ranging from 33 to 825. The results showed the total mean scores of the behavioral beliefs toward sexual abstinence was quite high level. Considering the behavioral beliefs measure, the results demonstrated female adolescents strongly agree that sexual abstinence would prevent unintentional pregnancy (78.9%) and building a bright future(77.4%).These findings identified the female adolescents' belief that sexual abstinence was viewed as an essential method to prevent them from the negative consequences of sexual intercourse, especially concerning unintended pregnancy during the school years and this method also encouraged them to have brilliant prospects. In addition, these findings reflected female adolescents to perceive getting pregnant during the school years as a serious obstacle for their life and bring many troubles in the future.

Normative beliefs: The total mean scores of the normative beliefs toward sexual abstinence was 257.11*(SD = 55.99)* with scores ranging from 12 to 300. The results revealed female adolescents to have a high level of agreement with practicing sexual abstinence during the school years if the belief concurred with the belief of their significant person. The findings of this study demonstrated that beliefs about maternal reaction and support have the highest scores of all normative beliefs (85.1*%)*. This indicates that early Thai female adolescents in this study believed mothers to be significant persons to approve sexual abstinence intention during the school years and adolescents had motivation to comply with their mothers. However, our findings also showed beliefs about boyfriend to have the lowest scores of all normative beliefs (60.4 *%)*, thereby signifying the inferior significance of boyfriends in approving of sexual abstinence intention and motivation to comply sexual abstinence than the others in this study.

Control beliefs: The results demonstrated that the measure of control beliefs score was 293.87 (*SD = 60.96)* with scores ranging from 17 to 425. The total mean scores of control beliefs toward sexual abstinence was quite high level. When considered in terms of individual items, the item, "Thinking of my parents makes me adhere to practice sexual abstinence during the school years" very easy, and rated the highest (80.4%). This result indicated female adolescents think of parents as a supportive factor to control over sexual abstinence behavior during the school years. On the other hand, the participants rated "Although I drink alcohol, I adhere to sexual abstinence during school years" very difficult, and at the highest level (30.4%).This finding indicates female adolescents perceive drinking alcohol as an external factor that obstructs them in performing sexual abstinence and influences their own power to practice sexual abstinence during their school years.

Sexual Abstinence Intention: The mean scores of sexual abstinence intention during was 15.94 (SD = 3.36), with a range of 4-20. When considered in terms of individual items, the participants rated the item, "I make sure I never allow a boy to hug, kiss or touch my sexual organs" as attracting the highest score (62.8*%)*.

Model testing: The correlation coefficients for the items measured are shown in **Table 2**. Our modified Thai parent-based expansion of the TPB causal model was tested and revised until a theoretically meaningful and statistically acceptable model was fitted to predict sexual abstinence intention as shown in **Figure I.** Path analysis validated the Causal Model of Young Thai Female Adolescents' Sexual Abstinence Intention, while LISREL revealed a significant fit with

chi-square. This final Model showed that all goodness-of-fit indices of adolescents' sexual abstinence intention predicted by the modified Thai parent-based expansion of the TPB model concurred with the empirical data (X^2= 0.24, *df*= 1, X^2/df= 0.24, p-value = 0.621, RMSEA = 0.000, GFI= 1.00, AGFI= 0.99). As shown in **Table 3**, all three paths from PDSAC to behavioral beliefs, normative beliefs and control beliefs were positive significant parameters. PDSAC has a positive indirect effect on sexual abstinence intention (β = 0.20, p< .001) via behavioral beliefs, normative beliefs and control beliefs (β =.25, β =.17, and β =.22, p< .001, respectively). As predicted, the paths leading from behavioral, normative and control beliefs to sexual abstinence intention were positive significant parameters (β = 0.25, p <.001, β = 0.27, p <.001 and β = 0.41, p <.001, respectively). The final Model accounted for 33% (R^2 = 0.33) of the explained variance in sexual abstinence intention during the school years among early Thai female adolescents.

Table 2 Correlation Matrix of the Study Variables (n= 470)

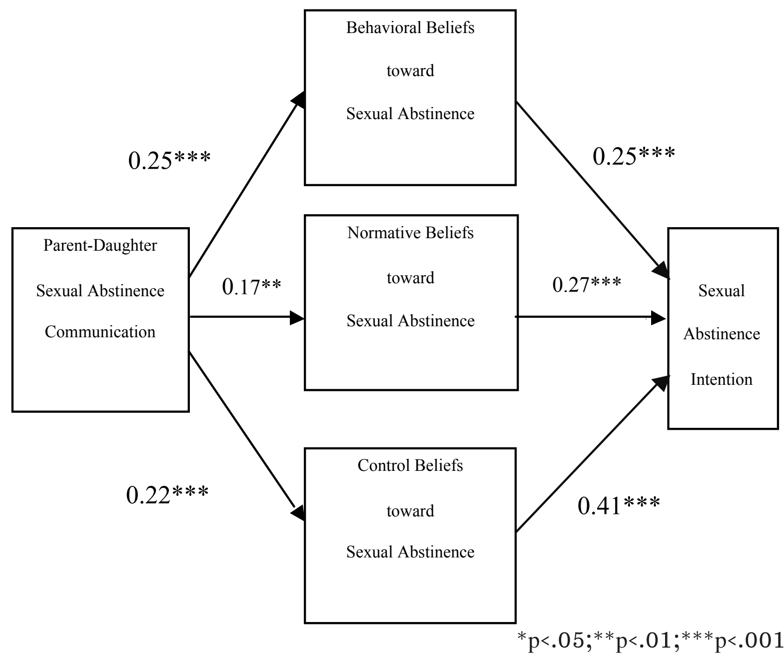
Variable	Parent-daughter sexual abstinence communication	Behavioral beliefs	Normative beliefs	Control beliefs	Intention
1. Parent-daughter sexual abstinence communication	1.00				
2. Behavioral beliefs	.244**	1.00			
3. Normative beliefs	.126**	.534**	1.00		
4. Control beliefs	.209**	.556**	.515**	1.00	
5. Intention	.208**	.279**	.290**	.428**	1.00

**P< .01

Table 3 Effect Decomposition of Predictive Factors in the Modified Model for Overall Sample (n=470)

Path			Standardized Value		
			DE	IE	TE
Behavioral beliefs	→	Intention	0.25***	-	0.25***
Normative beliefs	→	Intention	0.27***	-	0.27***
Control beliefs	→	Intention	0.41***	-	0.41***
Parent-daughter sexual abstinence communication	→	Behavioral beliefs	0.25***	-	0.25***
Parent-daughter sexual abstinence communication	→	Normative beliefs	0.17**	-	0.17**
Parent-daughter sexual abstinence communication	→	Control beliefs	0.22***	-	0.22***
Parent-daughter sexual abstinence communication	→	Intention	-	0.20***	0.20***

Note: t> |1.96|, *p< .05; t >|2.58|, **p< .01 t >|4.00|, ***p< .001 TE = Total Effect; IE = Indirect Effect; DE = Direct Effect



X^2= 0.24, *df* = 1, p-value = 0.621, RMSEA = 0.000, GFI= 1.00, AGFI= 0.99

Figure I - A Modified Thai Model of Sexual Abstinence Intention during the School Years (n=470)

Discussion

The findings indicated PDSAC frequently occurred in Thai families, and this was congruent with previous findings.[20, 29, 30] These described that for Thai women, sexuality is socially constrained within the marital relationship. Virginity at marriage continues to be highly valued in traditional Thai society. Hence, remaining sexually abstinent during adolescence is common and socially desired. Therefore, Thai parents rigorously support their daughters in virginity and strictly oppose premarital sex.[8, 9] They are concerned about the consequences of premarital sex and talk to their adolescents' daughter about the negative outcomes of early initiation of sexual intercourse. Then, female adolescents perceive that practicing sexual abstinence during the school years would have many advantages, especially in terms of supporting their bright futures and prevent unintentional pregnancy. Female adolescents perceive pregnancy and early parenthood created problems regarding continuation of their education[31]. Thus, PDSAC influenced adolescents' behavioral beliefs toward sexual abstinence during their school years in this study.

Because engaging in premarital sexual intercourse is considered culturally wrong in Thailand, even kissing, hugging or holding hands between sexes remains unacceptable behaviors.[32] Thai girls are required to be docile, submissive, modest and disinterested in sex until marriage.[33] They are raised to *Ruk-Nuan-Sa-Nguan-Tau*, meaning to take pride in being "untouched" and "sexually reserved" since childhood. Additionally, *Suphasit-Son-Ying* (a Thai proverb) affirms that a good woman is required to live within traditional frameworks and to remain limited regarding sexuality[9] so many parents communicate their disapproval of sexual activity to their adolescents.[8, 20, 23] Thus, the influence of PDSAC on normative beliefs toward sexual abstinence is supported.

According to Thai society, parents teach and monitor the rules of appropriate sexual behaviors for children to delay the transformation from childhood to adulthood.[9] They give messages related to avoiding drinking alcohol, and revealing or wearing tight clothes, behaviors which make sexual abstinence difficult. They talk about wearing proper apparel suitable for age, sex, timing and place, avoiding risky situations, and maintaining friendships with members of the opposite sex as a way of supporting abstinence behaviors. These messages affect adolescents' perceptions about control beliefs and their perceived power toward sexual abstinence during their school years.

When considering each variable from TPB, behavioral beliefs had a significant positive direct effect on sexual abstinence intention. This finding was congruent with other studies[19, 21, 30] and thus can be used to contribute to an increase in behavioral among young Thai female adolescents resulting in enhancing their sexual abstinence intention. As expected, normative beliefs had a significant positive direct effect on sexual abstinence intention. This indicates that female adolescents who had high levels of normative beliefs also had an increase in sexual abstinence intention and confirms the idea that the normative beliefs are significant predictors of sexual abstinence intention. Adolescents may be less likely to become involved in sexual intercourse or condom use when significant others, such as partners, parents or peers, disagreed with these behaviors more than others agree[19]. Corresponding with Thai culture, parents are the main people influencing young adolescents' decisions about their sexual debut but their influence declines with age; when peer norms become more important in later stages of adolescence. The salient referents in this study were mothers, grandfathers/grandmothers, parents, families, fathers and relatives, respectively. Our finding is consistent with several studies[19, 21-23] in that parental disapprovals are influential in decision-making about engaging in sexual behavior such as delaying the onset of initiating adolescent sexual behavior.

Finally, in this study control beliefs were found to have a significant positive high and direct effect on sexual abstinence intention. In other words, female adolescents who had high levels of control beliefs also had an increase in sexual abstinence intention, a finding consistent in previous studies[22, 34- 36] Thus control beliefs and perceived behavioral control are predictors of sexual abstinence intention. As control beliefs are an important determinant of intention, knowledge of the effects of control beliefs concerning each facilitator or constraint factor would be useful in promoting healthy sexual behavior of adolescents.

Conclusions

This cross-sectional descriptive study tested the causal relationships among PDSAC, behavioral beliefs, normative beliefs, control beliefs and sexual abstinence intention during the school years among early Thai female adolescents. The hypothesized model was developed on the parent-based expansion of the TPB. The findings contribute to an increasing body of theory-driven research examining sexual abstinence intention and psychological factors associated with this variable. Results will contribute to the design of culturally specific interventions and sex education programs to promote sexual abstinence behaviors among early Thai female adolescents.

Limitations and Recommendations for Future Research

This study had some limitations. The first related to the modified SAIQ. Although this instrument was modified from the Sexual Intercourse Behavior Scale[28] which had been developed from adolescent control beliefs toward sexual intercourse during the school years, some items did not correspond with the structure or content of control beliefs as defined by Ajzen.[24] Second, sexual behavior is a sensitive issue not generally discussed or disclosed in Thai culture. Hence, making inquiries of young participants by

questionnaires is always a concern because the responses may not accurately reflect real behavior. Third, the SAIQ contains items with several double negatives in the questions which might have led to misunderstanding of the participants when responding to these items. Finally, the questionnaire was long. Overall, the measures contained 168 items and required approximately 45 minutes to complete and this might have affected participants' responses.

Further replications of this study are recommended in various settings and populations to try to increase the generalizability of the findings. Although the family is viewed as one of the most proximal and significant influences on adolescent sexual behaviors, there are other norms and expectations from communities, schools and society at large which may also exert influence through effects on the beliefs of parents or adolescents. Therefore studies regarding the effect of these macro level influences are also needed using parent-based expansion of the TPB. Moreover, additional studies should be conducted from the perspective of parents and the dyad viewpoint on PDSAC for the holistic views capable of enhancing the body of knowledge on adolescent sexual abstinence behavior. Finally, there is also a need to revise and minimize the weaknesses of the modified SAIQ to be used for measuring the sexual abstinence intention as demonstrated in the limitations while strengthening the quality of this instrument.

Nurses should persuade and help empower parents' abilities, especially mothers, as these people influence behavioral, normative, and control beliefs of female adolescents regarding sexual abstinence intention. Parents should also be reassured that they can provide essential information about abstinence behavior and reinforce the refusal skill of their adolescent daughters regarding engagement in intercourse.

Acknowledgements

Special recognition goes to the Faculty of Nursing, Mahidol University and the Thailand Nursing and Midwifery Council for the scholarship and research funding provided, as well to our study participants.

References

1. Center for Disease Control and Prevention. Youth Risk Behavior Surveillance – United States, 2009. Surveillance Summaries, [2010 June 4]; MMWR 2010; 59(No SS-5 [Online]. 2013[cited 2013 April 27]. Available from: http://www.cdc.gov/mmwr/preview/mmwrhtm/ss5905a1.htm.
2. Thai Health Promotion Foundation. Risky Sexual Relationship: Teenage Values and Sexual Behavior at Risk. [Online].2011[cited 2011Febuary 24]. Available from: http://en.thaihealth.or.th
3. Bureau of Reproductive Health, Ministry of Public Health. Sexual and reproductive health situation among adolescents and youth [online]. 2011[cited 2011October 29]. Available from: URL: http: //rh.anamai.moph.go.th/home.html.
4. Adolescent Birth Rates, per 1,000 women aged 15-19. [Online]. 2011[cited 2011Febuary 24] Available from: http: // foweb.unfpa.org/ SWP 2011/ reports/ EN-SWOP 2011-FINAL.pdf
5. Srivanichakorn S,Thepthien B, Tasee P, Wongsawass S. The behavioral surveillance survey of 5 target groups in Bangkok, 2010. Nakorn Prathom (Nakorn Prathom), ASEAN Institute for Health Development, Mahidol Univ; 2010. [Thai]
6. Khumsaen N, Gary A. Determinants of actual condom use among adolescents in Thailand. J Assoc Nurse AIDS Care. 2009; 20(3): 218-29.
7. Rasamimari A, Dancy B, Talashek M, Park G. Predictors of sexual behaviors among Thai young adults. J Assoc Nurse AIDS Care. 2007; 18(6): 13-21.
8. Wayuhuerd S, Phancharoenworakul K, Avant C, Sinsuksai N, Vorapongsathorn T. Using the Theory of Planned Behavior to predict condom use behavior among Thai adolescents. Pacific Rim Int J Nurs Res.2010; 14(4): 315- 329.
9. Supametaporn P, Stern N, Rodcumdee B, Chaiyawat W. Waiting for the right time: how and why young Thai women manage to avoid heterosexual intercourse. Health Care Women Int. 2010; 31(8): 737-54.
10. Panurat S. Factors related to sexual abstinence among Thai female middle adolescents. [dissertation]. Bangkok (Bangkok): Chulalongkorn Univ.; 2009.[in Thai]
11. Bencharat S. Factors influencing sexual abstinence behavior among secondary school students in Samutprakan province, Thailand. [thesis]. Bangkok (Bangkok): Mahidol Univ.; 2010. [in Thai]

12. Jemmott JB, Jemmott LS, Braverman P, Fong GT. HIV/STD risk reduction interventions for African American and Latino adolescent girls at an adolescent medicine clinic. Arch PediatrAdolesc Med. 2005; 159: 440-9.
13. Ajzen I. Frequently asked questions about the TPB. 2005. [cited 2011 January 18] available from http://www.people.umass.edu/aizen/faq.html.
14. Ajzen I. Attitude structure and behavior. In: Pratkanis R, Breckler J, Greenwald G, editors. Attitude structure and function. New York (NY): Springer Publisher; 1989. p.11-39.
15. Ajzen I. The theory of planned behavior.Organ Behav and Hum Decis Process.1991; 50: 179-211.
16. Di Iorio C, Pluhar E, Belcher L. Parent-child communication about sexuality : a review of the literature from 1980-2002. Journal of HIV/AIDS Prevention and Education for Adolescents and Children. 2003; 5:7-32.
17. Hutchinson MK, Wood B. Reconceptualizing adolescent sexual risk in a parent-based expansion of the theory of planned behavior. J Nurs Sch. 2007: 39(2); 141-6.
18. Jemmott JB, Jemmott LS, Fong GT. Abstinence and safer sex HIV risk-reduction interventions for African American adolescents.JAMA.1998; 27, 1529-36.
19. Villarruel AM, Jemmott JB, Jemmott LS, Ronis DL. Predictors of sexual intercourse and condom use intentions among Spanish-dominant Latino youth: a test of the Planned Behavior Theory. Nurs Res. 2004; 53(3): 172-81.
20. Fongkaew W, Cupp P, Miller B, Atwood K, Chamratrithirong A, Rhucharoenpornpanich O, et. al. Do Thai parents really know about the sexual risk taking of their children? A qualitative study in Bangkok. Nurs Health Sci. 2012: 14; 391-7.
21. Cha S, Doswell M, Kim H, Charron-Prochownik D, Patrick E. Evaluating the Theory of Planned Behavior to explain intention to engage in premarital sex among Korean college students: a questionnaire survey. IntJ Nurs Stud. 2007; 44: 1147-57.
22. Bazargan M, West K. Correlates of the intention to remain sexually inactive among underserved Hispanic and African American high school students. J SchHealth. 2006; 76(1): 25-32.
23. Rhucharoenpornpanich O,Chamratrithirong A, Fongkaew W, Rosati M, Miller B, Cupp P. Parenting and adolescent problem behaviors: a comparative study of sons and daughters in Thailand. J Med Assoc Thai. 2010: 93(3); 293-300.
24. Ajzen I. Perceived behavioral control, self-efficacy, locus of control, and the Theory of Planned Behavior. J ApplSoc Psychol. 2002; 32: 665-83.26.
25. Ajzen I. Attitude structure and behavior. In: Pratkanis R, Breckler J, Greenwald G, editors. Attitude structure and function. New York (NY): Springer Publisher; 1989. p.11-39.
26. Hair JF, Black WC, Babin BJ, Anderson RE, Tatham RL. Multivariate data analysis 7th ed. Englewood Cliffs (NJ): Prentice Hall; 2010.
27. Pedhazur JE, Kerlinger FN. Multiple Regression in Behavioral Research: Explanation and Prediction. New York (NY): Holt, Rinehart, and Winston Press.1973.
28. Fongkaew W, Lertmulikaporn S, Thongvichian S, Chanprasit C, Baosoung C, Puphaibul R. Development Planning Program in order to Prevent and Reduce Risk Behavior in Adolescents: Phrase I Instrument development and Behavioral survey. Bangkok (Bangkok): Mahidol Univ.; 2006. [in Thai]
29. Siriarunrat S, Lapvongwatana P, Powwattana A, Leerapan P.Development of a model for parent-adolescent daughter communication about sexuality. Southeast Asian J Trop Med Public Health.2010; 41:961-72.
30. Butcharoen W, Pichayapinyo P, Pawwattana A. The factors related to sexual risk behavior among Thai secondary school students. Public Health.2012; 42: 30-40.
31. Chaikoolvatana C, Powwattana A, Lagampan S, Jirapongsuwan A, Bennet T. Development of a School-based Pregnancy Prevention Model for Early Adolescent Female Thais. Pacific Rim Int J Nurs Res. 2013; 17(2):131- 146.
32. Gray A, Punpuing S. Gender, sexuality, and reproductive health in Thailand. Bangkok, Thailand: Institute for Population and Social Research, Mahidol Univ.; 1999.
33. Vuttanon U, Greenhalgh T, Griffin M, Boynton P. "Smart boys" and "Sweet girls" -Sex education needS in Thai teenagers: A mixed-method study." Lancet 2006; 368: 2068-80.
34. Buhi ER, Goodson P, Neilands TB, Blunt H. Adolescent sexual abstinence: A test of an integrative theoretical framework. Health Educ Behav. 2011; 38(1): 63–79.
35 Childs G, Moneyham L, Felton G. Correlates of sexual abstinence and sexual activity of low-income African American adolescent females. J Assoc Nurse AIDS Care. 2008; 6: 432-42.
36. Mathews C, Aaro LE, Flisher AJ, Mukoma W, Wubs AG, Schaalma H. Predictors of early first sexual intercourse among adolescents in Cape Town, South Africa. Health Educ Res. 2009; 24(1): 1-10.

การสื่อสารระหว่างผู้ปกครองกับบุตรสาวและความตั้งใจละเว้นเพศสัมพันธ์ในวัยเรียนของวัยรุ่นหญิงไทย

จรรยา เจริญสุข, รุจา ภู่ไพบูลย์, นิตยา สินสุกใส, ชูเกียรติ วิวัฒน์วงศ์เกษม, Antonia M. Villarruel

บทคัดย่อ: การศึกษาครั้งนี้มีวัตถุประสงค์เพื่อพัฒนาและทดสอบความสัมพันธ์เชิงสาเหตุระหว่างตัวแปรการสื่อสารระหว่างพ่อแม่/ผู้ปกครองกับบุตรสาวเรื่องการละเว้นเพศสัมพันธ์ในวัยเรียน ความเชื่อเรื่องการละเว้นเพศสัมพันธ์ ความเชื่อต่อบรรทัดฐานทางสังคมและความเชื่อเรื่องความสามารถในการควบคุมพฤติกรรมการละเว้นเพศสัมพันธ์ ต่อความตั้งใจละเว้นเพศสัมพันธ์ในวัยเรียน กลุ่มตัวอย่างได้แก่วัยรุ่นหญิงไทยที่มีอายุระหว่าง 12-16 ปีและกำลังศึกษาอยู่ในชั้นมัธยมศึกษาปีที่ 1-3 ในเขตกรุงเทพมหานคร จำนวน 470 คน เก็บรวบรวมข้อมูลโดยใช้แบบสอบถามจำนวน 3 ชุด ได้แก่ แบบสอบถามข้อมูลส่วนบุคคล แบบสอบถามการสื่อสารระหว่างผู้ปกครองกับบุตรสาวเรื่องการละเว้นเพศสัมพันธ์ในวัยเรียน และ แบบสอบถามความตั้งใจในการละเว้นเพศสัมพันธ์ในวัยเรียน

ผลการศึกษาพบว่าโมเดลที่เสนอมีความสอดคล้องกับข้อมูลเชิงประจักษ์ โดยสามารถทำนายความผันแปรของความตั้งใจในการละเว้นเพศสัมพันธ์ในวัยเรียนได้ร้อยละ 33 ผลการศึกษาครั้งนี้บ่งชี้ว่าการสื่อสารของผู้ปกครองกับบุตรสาวเรื่องการละเว้นเพศสัมพันธ์ในวัยเรียน มีอิทธิพลทางอ้อมต่อความตั้งใจละเว้นเพศสัมพันธ์ในวัยเรียนของวัยรุ่นหญิงโดยส่งผ่านตัวแปรความเชื่อทั้ง 3 ด้าน ได้แก่ ความเชื่อเรื่องการละเว้นเพศสัมพันธ์ ความเชื่อต่อบรรทัดฐานทางสังคมและความเชื่อเรื่องความสามารถในการควบคุมพฤติกรรมการละเว้นเพศสัมพันธ์ ซึ่งผลการศึกษานี้พยาบาลและบุคคลอื่นสามารถนำไปใช้ทดสอบและวางแผนการพัฒนารูปแบบการส่งเสริมพฤติกรรมการละเว้นเพศสัมพันธ์ในวัยเรียนของวัยรุ่นหญิงไทย อย่างไรก็ตามควรมีการทำการทดสอบโมเดลซ้ำในกลุ่มประชากรอื่นและในที่ตั้งอื่นๆ ก่อนสรุปผลการนำไปใช้อ้างอิงถึงกลุ่มประชากรนั้น

Pacific Rim Int J Nurs Res 2013 ; 17(4) 329-341

คำสำคัญ: วัยรุ่นหญิง, ความตั้งใจ, การละเว้นเพศสัมพันธ์, การสื่อสารระหว่างผู้ปกครองกับบุตรสาว, ทฤษฎีการแสดงพฤติกรรมตามแผน

ติดต่อที่ *จรรยา เจริญสุข* RN, PhD. Candidate ผู้ช่วยศาสตราจารย์ ภาควิชาการพยาบาลสูติศาสตร์-นรีเวชวิทยา คณะพยาบาลศาสตร์ มหาวิทยาลัยมหิดล เลขที่ 2 ถนนพรานนก แขวงศิริราช เขตบางกอกน้อย กรุงเทพฯ 10700*

E-mail: *janya.che@mahidol.ac.th*

รุจา ภู่ไพบูลย์*, DNS Professor, โรงเรียนพยาบาลรามาธิบดี คณะแพทยศาสตร์ โรงพยาบาลรามาธิบดี มหาวิทยาลัยมหิดล 270 ถนนพระราม6 ราชเทวี กรุงเทพฯ 10400*

นิตยา สินสุกใส*, RN, PhD ผู้ช่วยศาสตราจารย์ ภาควิชาการพยาบาลสูติศาสตร์-นรีเวชวิทยา คณะพยาบาลศาสตร์ มหาวิทยาลัยมหิดล เลขที่ 2 ถนนพรานนก แขวงศิริราช เขตบางกอกน้อย กรุงเทพฯ 10700*

ชูเกียรติ วิวัฒน์วงศ์เกษม*, PhD รองศาสตราจารย์, คณะสาธารณสุขศาสตร์ มหาวิทยาลัยมหิดล 420/1 ถนนราชวิถี เขตราชเทวี กรุงเทพฯ 10400*

Antonia M. Villarruel*, RN, PhD, FAAN Professor, School of Nursing, Michigan University, 400 N. Ingalls, Suite 4320, Ann Arbor, MI 48109-5482*