

**PARENT-DAUGHTER COMMUNICATION  
AND SEXUAL ABSTINENCE INTENTION AMONG  
THAI FEMALE ADOLESCENTS GRADES 7-9 STUDENTS**

**JANYA CHAREONSUK**

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*Janya Chareonsuk*

.....  
Mrs. Janya Chareonsuk,  
Candidate

*Ruti Ph*

.....  
Prof. Rutja Phuphaibul,  
D.N.S.  
Major advisor

*Nittaya Sinsuksai*

.....  
Asst. Prof. Nittaya Sinsuksai,  
Ph.D.  
Co-advisor

*Chukiat Viwatwongkasem*

.....  
Assoc. Prof. Chukiat Viwatwongkasem,  
Ph.D.  
Co-advisor

*Antonia Villarruel*

.....  
Prof. Antonia Villarruel,  
Ph.D.  
Co-advisor

*B. Mahai*

.....  
Prof. Banchong Mahaisavariya,  
M. D., Dip. Thai Board of Orthopedics  
Dean  
Faculty of Graduate Studies  
Mahidol University

*Ruti Ph*

.....  
Prof. Rutja Phuphaibul,  
D.N.S.  
Program Director  
Doctor of Philosophy Program in Nursing  
Faculty of Medicine, Ramathibodi Hospital  
Mahidol University

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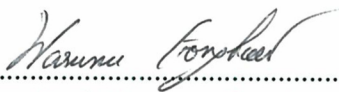
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December 20, 2012



Mrs. Janya Chareonsuk,  
Candidate



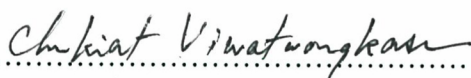
Asst. Prof. Wantana Maneesriwongkul,  
D.N.Sc  
Chair



Assoc. Prof. Warunee Fongkaew, Ph.D.  
Member



Prof. Rutja Phuphaibul, D.N.S.  
Member



Assoc. Prof. Chukiat Viwatwongkasem,  
Ph.D.  
Member



Asst. Prof. Nittaya Sinsuksai, Ph.D.  
Member



Prof. Antonia Villarruel, Ph.D.  
Member



Prof. Winit Phuapradit, M.D.  
Dean  
Faculty of Medicine, Ramathibodi Hospital  
Mahidol University



Prof. Banchong Mahaisavariya,  
M. D., Dip. Thai Board of Orthopedics  
Dean  
Faculty of Graduate Studies,  
Mahidol University



Assoc. Prof. Fongcum Tilokskulchai, Ph.D.  
Dean  
Faculty of Nursing,  
Mahidol University

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Janya Chareonsuk

PARENT-DAUGHTER COMMUNICATION AND SEXUAL ABSTINENCE INTENTION  
AMONG THAI FEMALE ADOLESCENTS GRADES 7-9 STUDENTS

JANYA CHAREONSUK 5137717 NRNS/D

Ph.D. (NURSING)

THESIS ADVISORY COMMITTEE: RUTJA PHUPHAIBUL, D.N.S.,  
NITTAYA SINSUKSAI, Ph.D., CHUKIAT VIWATWONGKASEM, Ph.D.,  
ANTONIA VILLARRUEL, Ph.D.

ABSTRACT

The purpose of this cross sectional descriptive study was to determine the factors predicting sexual abstinence intention during the school years among young Thai female adolescents aged between 12-16 years and studying in grades 7-9. The variables included parent-daughter sexual abstinence communication, behavioral beliefs, normative beliefs, control beliefs toward sexual abstinence, and sexual abstinence intention during the school years. The model was based on the parent-based expansion of theory of planned behavior. Stratified random sampling was used to take 528 participants from three Education Commission Service Areas in Bangkok Metropolitan Area. The respondents completed a set of self-report questionnaires, including questionnaires on demographic data, parent-daughter sexual abstinence communication, and sexual abstinence measurements. After excluding the uncompleted questionnaires and the participants who had had sexual experience, the total number of participant were 470 cases. The SPSS and LISREL 8.53 programs were used to analyze the descriptive data and together with Path analysis.

The results demonstrated that the final model fit with the empirical data ( $\chi^2 = 0.24$ ,  $df = 1$ ,  $\chi^2/df = 0.24$ ,  $p$ -value = 0.621, RMSEA =0.000, GFI=1.00, AGFI=0.99), and explained 33% of the variance in sexual abstinence intention. The results indicated parent-daughter sexual abstinence communications to have a significantly positive indirect effect on sexual abstinence intention during the school years via behavioral beliefs, normative beliefs, and control beliefs ( $\beta = 0.20$ ,  $p < .001$ ). Behavioral beliefs, normative beliefs, and control beliefs toward sexual abstinence have a significantly positive direct effect on sexual abstinence intention during the school years ( $\beta = 0.25$ ,  $p < .001$ ,  $\beta = 0.27$ ,  $p < .001$ , and  $\beta = 0.41$ ,  $p < .001$ , respectively).

The findings suggest that parent-based expansion of TPB explicitly includes parent-daughter sexual abstinence communication influences and indicates a conceptual framework for designing the family-based intervention program to promote sexual abstinence behavior during the school years. In addition, the results also found perceived power and control beliefs to have the highest effect on intention. As a result, intervention programs concerning this variable are appropriate to promote sexual abstinence during the school years among young Thai female adolescents.

KEY WORDS: FEMALE ADOLESCENTS / SEXUAL ABSTINENCE /  
PARENT-DAUGHTER COMMUNICATION

165 pages

การสื่อสารระหว่างผู้ปกครองกับบุตรสาวและความตั้งใจละเว้นเพศสัมพันธ์ในวัยรุ่นหญิงไทยที่เป็นนักเรียนชั้นมัธยมศึกษาปีที่ 1-3

PARENT-DAUGHTER COMMUNICATION AND SEXUAL ABSTINENCE INTENTION AMONG THAI FEMALE ADOLESCENTS GRADES 7-9 STUDENTS

จรรยา เจริญสุข 5137717 NRNS/D

ปร.ด. (การพยาบาล)

คณะกรรมการที่ปรึกษาวิทยานิพนธ์: รุจา ภูไพบูลย์, D.N.S., นิตยา สีนสุกใส, Ph.D., ชูเกียรติ วิวัฒนวงศ์เกษม, Ph.D., Antonia Villarruel, Ph.D.

#### บทคัดย่อ

การศึกษานี้มีวัตถุประสงค์เพื่อศึกษาความสัมพันธ์เชิงสาเหตุระหว่างการสื่อสารของผู้ปกครองกับบุตรสาว ความเชื่อเรื่องการละเว้นเพศสัมพันธ์ ความเชื่อต่อบรรทัดฐานทางสังคมและความเชื่อเรื่องความสามารถในการควบคุมพฤติกรรมการละเว้นเพศสัมพันธ์ ต่อความตั้งใจละเว้นเพศสัมพันธ์ในวัยรุ่นหญิงไทยที่มีอายุระหว่าง 12-16 ปีและกำลังศึกษาอยู่ในชั้นมัธยมศึกษาปีที่ 1-3 ในเขตกรุงเทพมหานคร โดยใช้การขยายทฤษฎีการวางแผนพฤติกรรมซึ่งเพิ่มตัวแปรการสื่อสารระหว่างพ่อแม่/ผู้ปกครองกับบุตรสาวเป็นกรอบแนวคิดในการศึกษา เก็บรวบรวมข้อมูลโดยใช้วิธีการสุ่มตามลำดับชั้น ได้กลุ่มตัวอย่างจำนวน 523 คน กลุ่มตัวอย่างตอบแบบประเมินตนเอง จำนวน 3 ชุด ได้แก่ แบบบันทึกข้อมูลส่วนบุคคล แบบสอบถามการสื่อสารระหว่างผู้ปกครองกับบุตรสาวเรื่องการละเว้นเพศสัมพันธ์ และแบบสอบถามการละเว้นเพศสัมพันธ์ในวัยรุ่น หลังจากคัดเลือกแบบสอบถามที่ตอบคำถามไม่ครบถ้วนและตัดกลุ่มตัวอย่างที่เคยมีเพศสัมพันธ์ในวัยรุ่นนอก พบว่ามีจำนวนแบบสอบถามที่สมบูรณ์ทั้งสิ้น 470 ราย การวิเคราะห์ข้อมูลใช้สถิติขั้นพื้นฐานและการวิเคราะห์อิทธิพล

ผลการศึกษาพบว่าแบบจำลองสุดท้ายที่ปรับมีความสอดคล้องกับข้อมูลเชิงประจักษ์ ( $X^2 = 0.24$ ,  $df = 1$ ,  $X^2/df = 0.24$ ,  $p\text{-value} = 0.621$ ,  $RMSEA = 0.000$ ,  $GFI = 1.00$ ,  $AGFI = 0.99$ ) โดยสามารถทำนายความผันแปรของความตั้งใจในการละเว้นเพศสัมพันธ์ในวัยรุ่นได้ร้อยละ 33 ความเชื่อเรื่องความสามารถในการควบคุมพฤติกรรม ทำนายความตั้งใจในการละเว้นเพศสัมพันธ์ได้มากที่สุด ทั้งนี้พบว่าการสื่อสารระหว่างผู้ปกครองกับบุตรสาวมีอิทธิพลโดยอ้อมทางบวกต่อความตั้งใจละเว้นเพศสัมพันธ์ผ่านความเชื่อต่อการละเว้นเพศสัมพันธ์ ความเชื่อต่อบรรทัดฐานทางสังคมและความเชื่อเรื่องความสามารถในการควบคุมพฤติกรรม ( $\beta = 0.20$ ,  $p < .001$ ) และตัวแปรส่งผ่านทั้งสามนี้มีอิทธิพลโดยตรงทางบวกต่อความตั้งใจในการละเว้นเพศสัมพันธ์ในวัยรุ่นหญิงไทยตอนต้นและตอนกลาง ( $\beta = 0.25$ ,  $p < .001$ ,  $\beta = 0.27$ ,  $p < .001$ , และ  $\beta = 0.41$ ,  $p < .001$ , ตามลำดับ)

ผลการศึกษาครั้งนี้บ่งชี้ว่ารูปแบบความสัมพันธ์เชิงสาเหตุที่ศึกษาสามารถอธิบายความตั้งใจละเว้นเพศสัมพันธ์ในวัยรุ่นหญิงไทยได้ ซึ่งความรู้นี้จะนำไปสู่การพัฒนาโปรแกรมการส่งเสริมสุขภาพเพื่อละเว้นเพศสัมพันธ์ในวัยรุ่น โดยใช้ครอบครัวเป็นฐานได้อย่างมีประสิทธิภาพและเหมาะสมกับบริบทของสังคมไทย นอกจากนี้ยังพบว่าความเชื่อเกี่ยวกับการควบคุมตนเองมีอิทธิพลต่อความตั้งใจละเว้นเพศสัมพันธ์ในวัยรุ่นมากที่สุด ดังนั้น โปรแกรมการส่งเสริมพฤติกรรมดังกล่าวควรเน้นให้วัยรุ่นหญิงเกิดความมั่นใจและเชื่อว่าตนเองสามารถควบคุมตนเองให้ละเว้นการมีเพศสัมพันธ์ในวัยรุ่นได้

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## **CHAPTER I**

### **INTRODUCTION**

#### **Background and Significance of the Study**

At present, early initiation of sexual intercourse among early and middle Thai female adolescents is a major reproductive health concern because the numbers of female adolescents practicing sexual abstinence are declining. During the past three years, the trend of early sexual activity has rapidly increased among female adolescents at an average age of 13.8-16.8 years for students in Grades 8 and 11 as well as vocational students in their second year in Bangkok (Srivanichakorn, Thepthien, Tasee, & Wongsawass, 2010). From 1996 to 2009, the median age for first intercourse shifted from 18-19 to 15-16 years of age (Bureau of Reproductive Health, Ministry of Public Health, 2011). In addition, Srivanichakorn et al. found the lowest age for first intercourse was very low at 10 years of age. In fact, young adolescents, especially females, are not encouraged to engage in sexual intercourse because their reproductive and sex organs are still developing. An increased risk in negative health outcomes, such as sexually transmitted diseases (STDs) and Human Immunodeficiency Virus (HIV) infection stems largely from initiating sexual intercourse at earlier ages and engaging in unprotected sexual intercourse with multiple partners (Hutchinson, Sosa, & Thompson, 2001). Significantly, these sexual risk behaviors have also been identified as the most important cause of teenage pregnancies and abortions, as well as other negative social and psychological outcomes.

The earlier age at which females engage in sexual intercourse usually marks the beginning of a longer risk period for negative health consequences than men and adult women. Recent findings reveal that the incidence rate of pregnancy among adolescents aged 15-19 years have continuously increased from 2007 to 2010 (54.6, 55.5, 56.1 and 56.2 per 1,000, respectively) (Bureau of Reproductive Health, Ministry of Public Health, 2010). Similarly, Thai Health Promotion Foundation has reported that females under 19 years of age have the highest pregnancy rate

(<http://en.thaihealth.or.th>). Correspondingly, the trend of mothers giving birth at 10-19 years has been continuously increasing from 2007 to 2011 (15.1, 15.5, 16.0, 16.2 and 16.5%, respectively) (Bureau of Reproductive Health, Ministry of Public Health, 2011). Comparing the trend of mothers giving birth at these aged to other Asian countries, Thailand was the second rank (<http://foweb.unfpa.org>).

In addition, physical immaturity raises the correlation between young adolescents and pregnancy/childbearing health risks over the risks incurred by adult women. The unpleasant health outcomes include high risk pregnancies and maternal mortality. Pregnancy-induced hypertension, anemia, cephalopelvic disproportion and poor weight gain are the common health problems encountered in teenage mothers (The National Campaign to Prevent Teen Pregnancy, 1999). The maternal mortality rate among young adolescent mothers is higher than that of mothers aged 20-30 years. This risk increased as maternal age decreases, with adolescents less than 16 years facing 4 times the risk of maternal death as women aged over 20 years (World Health Organization, 2008). Moreover, teenage pregnancy is also related to negative educational and economic consequences because the opportunities to complete school also decrease when a baby is born. In addition, the chance of being expelled from school and becoming a single parent is high. Consequence, the future prospects of teenage mothers are limited and socioeconomic advancement in later life is also considerably reduced (The Population Council, 1999). Furthermore, health risks not only occur with teenage mothers, but also with their babies. More recently from 2008 to 2011, the percentages of low birth weights newborn of teenage mothers have been found to increase among mothers aged under 15 years (17.2, 19.2, 18.4 and 18.8%, respectively) and 15-19 years (12.4, 13.0, 13.1 and 12.7%, respectively) (Bureau of Reproductive Health, Ministry of Public Health, 2011).

Another potential consequence of unplanned pregnancy among adolescents is criminal abortion. Each year, approximately 100,000 illegal abortions are performed, thereby increasing the risk for infections, hemorrhage or uterine perforation because essential medical facilities are not always available. Significantly, most illegal abortions are performed by harmful and inexpert persons causing high morbidity. This finding is supported by the number of women who have become infertile following an induced abortion (Taneepanichskul, 2007).

Early and middle female adolescents who have engaged in early sexual intercourse together with a continuing pattern of unprotected sex and multiple sexual partners are more frequently faced with STD pathogens than adult women because the biologic cervical immaturity and the immune-protective factors of the cervical mucus do not fully develop. The high incidence rates of STDs in adolescents have resulted in an increased incidence of pelvic inflammatory disease (PID), infertility, ectopic pregnancy, and cervical cancer ( Institute of Medicine, 1997). The incidence rates of STDs among adolescents aged 15-24 years continually escalated from 2007 to 2011 (50.1, 59.5, 76.5, 78.9, and 89.5 per 100,000, respectively) (Bureau of Epidemiology, Ministry of Public Health, 2011). Regarding the situation of AIDS in Thailand, the statistics show that approximately one-third of AIDS patients (33.5%) were adolescents and young adults. The major route of the transmission is sexual intercourse (Epidemiological Information Section, Bureau of Epidemiology, 2007).

Therefore, delaying the initiation of intercourse in female adolescents is a significant preventive measure apart from supporting sexual abstinence. Furthermore, supporting this behavior in young female adolescents is essential because those who engage in intercourse before 16 years of age rarely use contraceptives. They often become teenage parents and contract more STDs than older adolescents (O'Donnell, O'Donnell, & Stueve, 2001). Through the practice of sexual abstinence, adolescents can reduce the number of lifetime partners while further limiting exposure to behaviors putting them at risk for pregnancy and STDs (Rasberry, 2006). In addition, social health potential is also actualized in sexually abstinent girls when they can maximize individual courses in life, including participation in higher education (Schvaneveldt, Miller, Berry, & Lee, 2001) and more paid employment than sexually active girls. Moreover, sexual abstinence is important in the encouragement of success in education and careers (Supametaporn, 2006).

Although there are a number of strategies for preventing the negative health outcomes of the early initiation of sexual intercourse, Thai culture continues to support sexual abstinence as the best technique for fighting such problems especially for female. According to Thai tradition, girls are expected to be docile, submissive, modest and disinterested in sex until marriage (Vuttanont, Greenhalgh, Griffin, & Boynton, 2006). Early engagement in sexual intercourse is considered unacceptable,

particularly for young female. In addition, remaining sexually abstinent is related to the cultural image of the Thai “good” girl. Sexually abstinent girls and their families are more respectable in Thai society than sexually experienced girls (Supametaporn, 2006). This cultural environment supports girls who practice sexual abstinence in everyday life to develop positive psychological and intellectual well-being while actualizing health potential, such as a sense of maturity and the ability to identify and avoid potentially harmful situations.

In addition, if sexual abstinence is successfully achieved, it must be carried out before the beginning of sexual activity (Aarons et al., 2000). Moreover, early and middle adolescents may require information and make decisions to create alternatives for avoiding unintended pregnancy and STDs or combating the negative outcomes of unsafe sex because trends for sexual initiation occur at this stage. Consequently, early and middle female adolescence aged between 12-16 years require active prevention of adolescent sexual risk-taking behavior.

Although there have been programs to promote sexual abstinence, such as abstinence-based sex education, many researchers in the US assert that the data does not support the effectiveness of such programs (Buhi, 2006). Several scholars have also suggested that abstinent youth have been overlooked by investigators who require basic knowledge, such as the meaning of sexual abstinence and factors related to sexual abstinence, before constructing the programs (Norris, Clark, & Magnus, 2003; Rasberry, 2006).

Most studies in Thailand have focused on factors and situations affecting other sexual risk behaviors, such as safe sex behavior or condom use, in middle or late adolescents (Amnuayporn, 2005; Khumsaen, 2008 ; Khumsaen & Gary, 2009; Rasamimari, Dancy, Talashek, & Park, 2007; Thato, Hanna, & Rodcumdee, 2005; Wayuhuerd, Phancharoenworakul, Avant, Sinsuksai, & Vorapongsathorn, 2010). Only four studies have been conducted on sexual abstinence in female adolescents. One of the studies was based on a qualitative study design addressing the sexual abstinent process among Thai women aged 18-23 years old (Supametaporn, 2006). The findings demonstrated the social process which young Thai women are use to remaining sexually abstinent, namely, learning proper sexual etiquette, planning a life-long sexual path and establishing personal sexual etiquette. Another study guided by

Pender's Health Promotion model (Panurat, 2009) examined the factors associated with sexual abstinence among Thai female adolescents in high school. The results revealed perceived sexual abstinence self-efficacy and peer influence to be significantly positive predictors of sexual abstinence whereas parental influence was a significantly negative predictor of sexual abstinence among Thai female adolescents in high school. While another focused on the factors influencing sexual abstinence behavior among secondary school students in Samutprakan province (Bencharat, 2010). The findings demonstrated that the factors predicting sexual abstinence were perceived peer norms, experience with sex education, sex and age. The last study explored the factors influencing sexual abstinence behavior among late adolescent females in the Bangkok Metropolitan area (Danaidussadeekul, 2004). The results showed the increasing numbers of close friends who had had sexual experiences to be related to sexual abstinence behaviors among late adolescent females. These previous findings are insufficient for forecasting and determining the risk and protective factors related to sexual abstinence behavior among early and middle female adolescents.

Another main point involves the limited theory-driven studies related to sexual abstinence among early and middle Thai female adolescents. To date, only one study has been based on theories of effective behavior modification and that was the study based on Pender's Health Promotion Model (Panurat, 2009). Over the past decade, existing studies about sexual risk reduction behaviors have been exploratory, but not theory-based (Allen et al., 2003; Augsornrat, 2005; Khongraksa, 2005; Thanyaphon, 2005; Tanintayangkul, 2009). In the United States, success in behavioral modifications reflects the theory-based interventions dealing with multiple determinants of sexual risk behavior. Adolescents have been provided evidence of the effectiveness of reducing sexual risk behaviors (Jemmott, Jemmott, Braverman & Fong, 2005). As a consequence, sex education programs focusing on sexual abstinence in Thai context are necessary and theory-based development programs are also important.

The Theory of Planned Behavior (TPB) offers a high-quality construction to understand and predict social behaviors. It recommends that the key predictor of behavioral performance is a person's intention to perform a behavior and presents the intention to act as the proximal determinant of behavior. Attitude toward a behavior,

subjective norms and perceived behavioral control also influence intention. Behaviors are influenced directly by perceived behavioral control. In addition, the TPB recommends that individual intentions to engage in a certain behavior are strong when there are positive attitudes toward the behavior, consideration that important persons believe the behavior should be performed and personal belief in ability to perform the behavior (Ajzen, 1985).

Although the TPB has been used to predict AIDS-preventive behaviors, delayed sexual initiation and definitively guiding interventions to modify behavior in many studies (Jemmott, et al., 2005; Villarruel, Jemmott, Jemmott, & Ronis, 2004; Hutchinson, Jemmott, Jemmott, Braverman, & Fong, 2003; Cha, Kim, & Patrick, 2008; Childs, Moneyham, & Felton, 2008; Villarruel, Cherry, Cabriaes, Ronis, & Zhou, 2008; Wang, Simoni, Wu, & Banvard, 2008; Saunders, 2009; Alvarez, Villarruel, Zhou, & Gallegos, 2010), only three studies have applied this theory to Thai youth and HIV risks or preventive behaviors. One of the studies applied the TPB to a study of sexual behavior during the school years among early adolescents in Thailand (Fongkaew et. al, 2006). Another applied this theory to condom use behavior among adolescent vocational students in Bangkok (Wayuhuerd et al., 2010). The other applied it to sexual risk behaviors among adolescents in school (Srisuriyawet, 2006). Hence, the researcher found it necessary to use the TPB as the conceptual framework for this study.

As previously mentioned, the TPB is distinguished for its usefulness and predictive validity in understanding numerous health behaviors on the personal level. External factors related to the personal level, however, are not taken into account. The time to concentrate on risky sexual behavior in adolescents and the exclusion of parental influence is an important omission strictly limiting the usefulness of the TPB (Hutchinson & Wood, 2007). Moreover, empirical evidence suggests that parents, particularly mothers, have been illustrated as the most important factors in adolescents' lives and may influence the sexual behaviors of their adolescent daughters. Evidence has demonstrated that parents may put forth much more power on adolescent sexual behaviors (Hutchinson et. al., 2003). Similarly, parent-teen sexual communication (PTSC) has been indicated as the prominent factor influencing the risky sexual behavior of adolescents over other parenting processes, including parent-

child closeness, parent monitoring and role modeling (Di Clemente et al., 2001; Hutchinson, 2002; Hutchinson et al., 2003; Wu et al., 2003; Crosby, Di Clemente, Wingood, Lang, & Harrington, 2003; Lenciauskiene & Zaborskis, 2008). Moreover, PTSC is viewed extensively as the single-most essential influence on adolescent sexual risk behaviors (Blake, Simkin, Ledsky, Perkins, & Calabrese, 2001; Hutchinson, 2002, 2007; Hutchinson et al., 2003; Guzman et al., 2003; Aspy et al., 2007; Hutchinson & Montgomery, 2007).

In Thai society, parents are the principal learning resource for children and parents regularly anticipate brilliant futures for their children, which can be explained as achieving a secured and promising career path, attaining higher education and having an honorable marital life. Most parents take care and choose the best things for their children. They educate and supervise the imperatives of appropriate sexual behaviors for their children continually from childhood to adulthood. Parents do not want their children to have sexual intercourse during their school years. They desire their daughters to remain sexually abstinent until the appropriate time (Supametaporn, 2006). A current study by Fongkaew et al. (2012) showed that many parents to communicate their disapproval of sexual activity for their adolescents. They wanted their adolescents to refrain from engaging in sexual relations because they were still too young. They were also concerned about adolescents destroying their future due to potentially adverse outcomes. Additionally, Rhucharoenpornpanich et al. (2010) found both sons and daughters to report that their parents did not permit them to engage in sexual relations. The average score for parental disapproval of sex was rather high and the average score for parental communication about sex and prohibition of sex is higher among daughters than sons.

As previously mentioned, much evidence obviously supports the correlation of PTSC with less sexual risk-taking in adolescents. Nevertheless, little is known about how parent-daughter sexual abstinence communication (PDSAC) influences sexually abstinent intention among early and middle Thai female adolescents. To address these gaps, this study will examine how PDSAC affects the sexual abstinence intention among early and middle Thai female adolescents. To that end, it is necessary to understand the predictive factors of early and middle female adolescent sexual abstinence behavior

capable of leading to culturally specific theory-based interventions to promote sexual abstinence behaviors in Thai female adolescents.

## **Conceptual Framework**

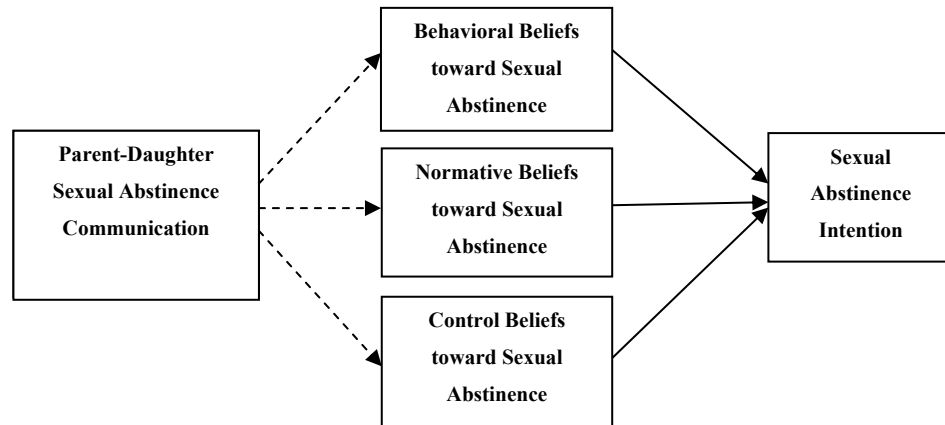
The conceptual framework underpinning this study is the TPB (Ajzen, 1985) and the extension of the TPB by adding a variable, PDSAC, based on Ajzen's guide for adding variables (Ajzen, 2005b). According to the theory, a personal's intention to perform a behavior is a key determinant of that behavior (Ajzen, 1985, 1991). The intention has three conceptually independent determinants, including attitude toward the behavior, subjective norm and perceived behavioral control. The degree to which a person has a favorable or unfavorable evaluation of a behavior is the person's attitude toward that behavior. A social factor referring to the perceived social pressure to perform or not perform a behavior is subjective norm. Lastly, the perception of simplicity or difficulty involved in performing a behavior, as well as anticipated hindrances and obstacles refers to perceived behavioral control (Ajzen, 1985, 1991; Ajzen & Madden, 1986).

The antecedents of the three abovementioned predictors of intention are corresponding beliefs reflecting the underlying cognitive structure guiding human actions (Ajzen, 1991), including 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. The beliefs about the normative anticipations of others and motivation to comply with these anticipations are normative beliefs. The beliefs regarding the existence of factors enabling or hindering the act of a behavior and the perceived power of these factors are control beliefs. In their respective aggregates, the model proposed the following: 1) a favorable or unfavorable attitude toward a behavior is fabricated by behavioral beliefs; 2) perceived social pressure or subjective norms are caused by normative beliefs and 3) perceived behavioral control is caused by control beliefs. A combination of attitude, subjective norm and perception of behavioral control develops behavioral intention (Ajzen 1991, 2002). Behavioral intentions are sequentially determined by attitudes toward the behavior, subjective

norms and perceived control. Behavioral intentions are also supposed to be the immediate antecedent of behavior.

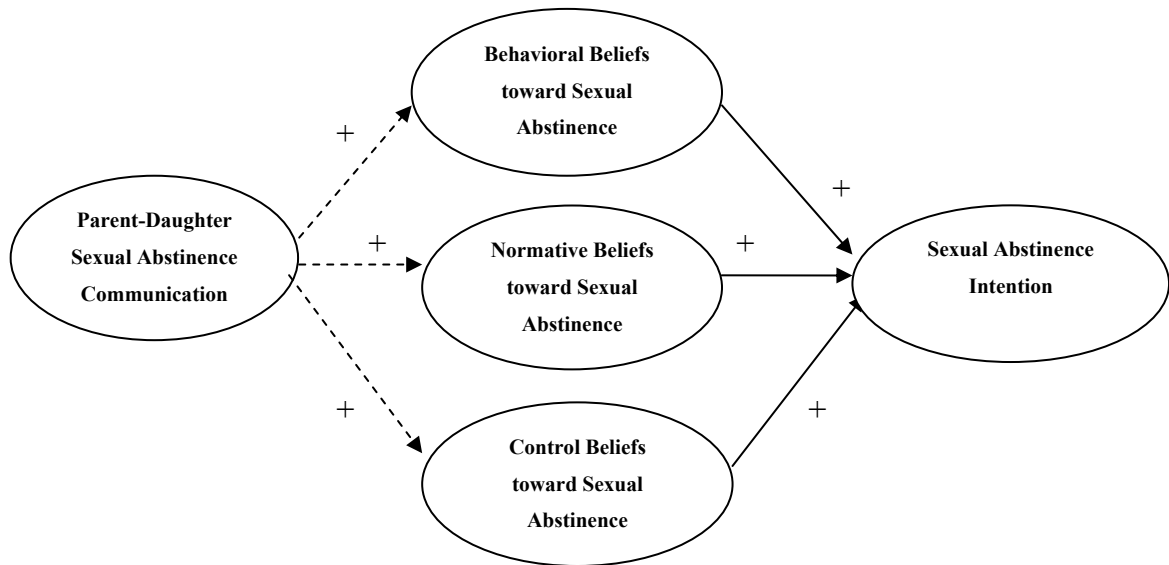
The TPB further suggests that attitude can be measured directly by a standard or global measure, or indirectly by a belief-based measure (Ajzen, 1991). A direct measure is the means of an evaluative semantic differential. An indirect measure is an expectancy-value model which recommends that the strong point of each prominent belief be combined in a multiplicative method, while the subjective evaluation of the belief's feature and the summation over the  $n$  salient beliefs are the resulting products. Ajzen described that directly proportional to this summative beliefs index is a person's attitude. A set of salient beliefs about the normative prescriptions of specific referents, weighted by the motivation to comply with each of those referents also influences the subjective norm. An indirect measure of the subjective norm was calculated by each normative belief multiplied by the corresponding motivation to comply and the summation of the products over the referents to yield a score corresponding with the degree of perceived normative force to perform a behavior. Lastly, the function of control beliefs is considered perceived behavioral control. The indirect measure gauges each control belief multiplied by the corresponding perceived powers and the summation over the  $n$  as resulting products of perceive behavioral control. The direct proportion of this summative beliefs index is a person's perceived behavioral control.

Parent–daughter sexual abstinence communication is an extension of the TPB in this study. In general, most children and young adolescents are influenced by parents as the important and principal persons taking part in sexual socialization. Sexual decision-making during adolescence, particularly HIV/AIDS risk-related behaviors, are possibly shaped by the information and messages communicated or not communicated between adolescents and parents (Di Iorio, Pluhar, & Belcher, 2003). The first sex educators of children are their parents. Adolescents' sexual attitudes and behaviors are also formed by information and socialization from their parents (Miller, Levin, & Whitaker, 1998). This study focuses on how PDSAC, behavioral beliefs, normative beliefs and control beliefs toward sexual abstinence can predict sexual abstinence intention among early and middle female adolescents. The conceptual framework of this study is shown in Figure 1.1.



**Figure 1.1:** Conceptual Framework of the Study Based on the Parent-Based Expansion of the TPB.

In order to examine the factors predicting sexual abstinence intention among early and middle Thai female adolescents, a hypothesized model is proposed in Figure 1.2. This proposed model is considered as a testing model of the TPB and parent-based extension of the TPB. It explains sexual abstinence intention among early and middle Thai female adolescents. The approval of the model testing will contribute to the understanding of early and middle Thai female adolescents' sexual abstinence behaviors; it will also strengthen the TPB in explaining the phenomena of Thai female early and middle adolescents' sexual abstinence behaviors. Finally, an intervention program can then be proposed to promote sexual abstinence among Thai female adolescents.



**Figure 1.2:** Hypothesized Model of Factors Predicting Sexual Abstinence Intention among Thai Female Adolescents, Bangkok, Thailand

### Research Questions

The research question in this study is, “What are the factors predicting sexual abstinence intention among early and middle Thai female adolescents?”

### Purpose of the Study

The purpose of this study is to determine the factors predicting sexual abstinence intention among early and middle Thai female adolescents.

### Research Hypotheses

This study has two hypotheses which are identified as follows:

1. Parent-daughter sexual abstinence communication will have a positive indirect effect on sexual abstinence intention among early and middle Thai female

adolescents via behavioral beliefs, normative beliefs, and control beliefs toward sexual abstinence.

2. Behavioral beliefs, normative beliefs, and control beliefs toward sexual abstinence will have a positive direct effect on sexual abstinence intention among early and middle Thai female adolescents.

### **Scope of the Study**

This study was conducted to investigate the predictive factors of the sexual abstinence intention among early and middle Thai female adolescents. In this study, behavioral beliefs, normative beliefs, control beliefs, and sexual abstinence intention from the main constructs of the TPB and Parent-Daughter Sexual Abstinence Communication, the parent-based expansion of the TPB, were examined. Data were collected from early and middle female adolescents in secondary school (Muttayom 1-3 or Grades 7 - 9) in Bangkok, Thailand.

### **Expected Outcomes and Benefits**

The findings were expected to provide understanding of the factors associated with sexual abstinence intention among early and middle Thai female adolescents. They were also expected to contribute to an understanding of the mechanisms related to sexual abstinence behavior for developing an effective intervention program to promote sexual abstinence in the Thai context.

### **Definition of Terms**

The conceptual definitions for the parent-based expansion of the TPB, PDSAC and four constructs employed from the TPB in this study are explained below.

### **Parent-Daughter Sexual Abstinence Communication (PDSAC)**

Parent-Daughter Sexual Abstinence Communication (PDSAC) is defined as the perception of adolescents toward the transmission process between parents and adolescent daughters with emphasis on the message related to the set of behaviors used to not engaging in sexual activity including “(a) thoughts; (b) actions; and (c) interaction (Norris et al., 2003, p.141). This process is both verbal and nonverbal through auditory and visual channels. It was measured by a parent-daughter sexual abstinence communication questionnaire developed by the researcher.

### **Behavioral Beliefs toward Sexual Abstinence**

Behavioral beliefs toward sexual abstinence are defined as the salient set of beliefs and the positive or negative evaluations of the outcomes of early and middle Thai female adolescents to refrain from engaging in sexual activity during the school years. Behavioral beliefs toward sexual abstinence are measured by the questionnaire on Sexual Abstinence Intention during the School Years which was modified from the questionnaire on Intention to Engage in Sexual Intercourse during the School Years (Fongkaew et al., 2006).

These were evaluated by the strong points of each prominent belief combined in a multiplicative method with the subjective evaluation of the belief feature and the summation over the  $n$  salient beliefs. Directly proportional to this summative beliefs index is a person's attitude (Ajzen, 1991).

### **Normative Beliefs toward Sexual Abstinence**

Normative beliefs toward sexual abstinence are defined as the beliefs about the normative anticipations of others and motivation to comply with these anticipations of early and middle Thai female adolescents with regard to refrain from engaging in sexual activity during the school years. Normative beliefs toward sexual abstinence are measured by the questionnaire on Sexual Abstinence Intention during the School Years which was modified from the questionnaire on Intention to Engage in Sexual Intercourse during the School Years (Fongkaew et al., 2006).

These were evaluated by each normative belief multiplied by the corresponding motivation to comply and the summation of the products over the

referents. Directly proportional to this summative beliefs index is a degree of perceived normative force to perform the behavior (Ajzen, 1991).

### **Control Beliefs toward Sexual Abstinence**

Control beliefs toward sexual abstinence are defined as the beliefs regarding the existence of factors potentially enabling or hindering the performance of a behavior and the perceived power of these factors on early and middle Thai female adolescents to refrain from engaging in sexual activity during the school years. Control beliefs toward sexual abstinence are measured by the questionnaire on Sexual Abstinence Intention during the School Years which was modified from the questionnaire on Intention to Engage in Sexual Intercourse during the School Years (Fongkaew et al., 2006).

These were evaluated by each control belief multiplied by the corresponding perceived powers and the summation over the  $n$  as the resulting products of perceived behavioral control. The direct proportion of this summative beliefs index is a person's perceived behavioral control (Ajzen, 1991).

### **Sexual Abstinence Intention during the School Years**

The sexual abstinence intention during the school years is defined as the early and middle Thai female adolescents' determination to refrain from engaging in sexual activity during the school years. Sexual abstinence intention is measured by the questionnaire on Sexual Abstinence Intention during the School Years developed by the researcher.

## **Summary**

This chapter provided the theoretical and empirical evidence to support the proposed study on sexual abstinence intention during the school years among early and middle Thai female adolescents. It has also provided an over viewed of the research, described the purpose, research question, and the hypotheses. A conceptual model relating study variables was introduced that describes the relationship between PDSAC, behavioral beliefs, normative beliefs, control beliefs, and sexual abstinence intention during the school years.

## **CHAPTER II**

### **LITERATURE REVIEW**

This chapter deliberated on the factors predicting sexual abstinence intention among female adolescents. The first section began with adolescent development and sexual behaviors. The second section related to sexual abstinence in Thai culture. The third section addressed parent-daughter sexual abstinence communication and the fourth section reviewed the influence of parent-daughter sexual communication on sexual abstinence intention. The above was followed by a review of three factors on sexual abstinence intention (behavioral beliefs, normative beliefs, and control beliefs). Despite the scarcity of literature about adolescents' sexual abstinence behaviors in Thailand, the main literature in western countries offered knowledge to make this scientific attempt. The literature review of sexual abstinence behaviors for Thai female adolescents have been integrated into each of these sections

#### **Adolescent Development and Sexual Behaviors**

The period of time between childhood and adulthood when puberty occurs is called adolescence. During this period, children experience multiple physical, social, psychological, and cognitive changes. These changes push adolescents toward physical maturity and adult lifestyles. The onset of adolescence is considered an essential developmental transition due to the confluence of changes across adolescence.

##### **Definition of Adolescence**

Adolescence is a period of significant physical growth and sexual maturation influenced by nutrition, genetics and growth hormones. Girls transition to adolescence two years earlier than boys and undergo changes in body size, shape and composition at approximately at 11 years of age (Rogol, Roemmich & Clark, 2002).

Emotional development is also important during this period. Impermanent chemical disproportions caused by the increase in a variety of hormones frequently occur. These can account for unstable emotions, such as irritability, anger and mood swings. Adolescent transition to adulthood marks the end of the adolescent period. The length of the adolescent period depends on how completely adulthood is defined in a particular culture. Therefore, the definition of adolescence is uncertain and varies across cultures as explained below.

Adolescence is defined as the period from 10 to 19 years of age from the perspectives of biological and psychological development as well as socioeconomic status (World Health Organization, 2002). Similarly, Hill (2008) defined adolescence as the period from 10 years to the early twenties and further divided adolescence into three phases. These are early, middle and late adolescence (10-13, 14-18, and 19-22 years old, respectively). Pilliteri (1999) asserted the ages between 13 and 18 to 20 years as adolescence. In addition, others have defined the ages from 12 to 19 years as adolescence (Master, Johnson, & Kolodny, 1995). Although the age characteristic offers a perspective on defining adolescence, the age characteristic varies among definitions. The age characteristic only offers a broad guideline as a dynamic and non-standard rule. Many researchers hold the same opinion that the starting period of adolescence is puberty and continue to look for the end point of adolescence (Petersen & Leffert, 1995). This definition could provide a clear definition of the adult role.

Puberty is now, however, a sign of adolescence, not adulthood, in westernizing countries (Petersen & Leffert, 1995). Although physical development, such as puberty, continues to be regarded as the hallmark of adolescence, researchers have started to consider other developmental domains related to adolescence: cognitive, moral and psychosocial development. Neither marriage nor first sexual behavior are no longer considered criteria marking the onset of adulthood (Pachauri & Santhya, 2002) because many persons in modern societies engage in premarital sexual behavior during adolescence. Furthermore, the extended duration of education influences the average age of first marriage, childbearing and adolescent sexual behavior (The Alan Guttmacher Institute, 2002). Therefore, there is a need to identify the criterion of the adult role in order to define adolescence.

This study defines adolescence as the period of time between 10-19 years of age. This period is divided into three groups: 1) early adolescence (10-13 years); 2) middle adolescence (14-16 years); and 3) late adolescence (aged 17-19 years) (World Health Organization, 2003). Physical and psychological developments are important changes during these periods. The changes include adolescent achievements of independence from parents, adopting peer codes and life styles, giving significance to physical image and acceptance of physical image with the establishment of sexual, ego, vocational and moral identities. The following section briefly clarifies the characteristics of adolescence.

### **Characteristics of Adolescence**

During adolescence, adolescents experience external (secondary sexual characteristics) and internal changes (cognitive and emotional changes) (Petersen & Leffert, 1995). In addition, social relationships also change in adolescence (Lerner, 2002; Maxwell, 2002) as adolescents meet different developmental tasks during the three phases of adolescence (early, middle, and late adolescence).

During the early stages of adolescence, adolescents experience pubertal development, set new definitions of self and discover sexual identity (Lerner, 2002). The main issue of middle adolescence is changing social relationships (Petersen & Leffert, 1995). During this second stage of adolescence, peer influence increases, the impact of parents weakens with regard to adolescent behavior (Barber & Erickson, 2001). This stage is the one most people regard as stereotypical adolescence. Late adolescence is a newer concept associated with the characteristics of modern society, such as extended education and delayed marriage. Petersen and Leffert stated that during this phase, adolescents experience adult roles. Additionally, Lerner affirmed that late adolescents develop formal operational thought processes defined as one of the characteristics of adults in modern society.

### **Developmental Stages of Adolescence**

Between early and middle adolescence, cognitive abilities begin transitioning from concrete to abstract thinking. This transition is not an immediate, but a gradual process. Therefore, adolescent transition from early to late adolescence is

marked by varying stages of cognitive development and different interpretations of situations and consequences (Hockenberry, 2003).

Early adolescence is characterized by concrete operational thinking. It is during this period that the understanding of immediate responses to behavior begins to develop. However, these adolescents do not yet have the ability to perceive the future implications or consequences of their actions (Hulton, 2001). Parents are the prominent forces in a child's life. For that reason, a strong influence on whether or not initiating early sexual activity in adolescents tends to be affected by the perception of parental attitudes regarding premarital sex (Maguen & Amistage, 2006). It is not until middle adolescence that abstract thinking begins to develop. During this period, adolescents begin to develop the necessary reasoning skills that allow them to begin linking actions and behaviors to future consequences (Hulton, 2001). These adolescents also begin to form peer groups, and the amount of time spent with peers versus parents/family increases. As a result, peers begin to exert more influence over decisions about sexual behavior than parents (Hampton, McWatters, Jeffery, & Smith, 2005). The development of physical maturation is completed in late adolescence. Many adolescents are able to understand abstract concepts, as well as the results and consequences of their actions and behaviors. Additionally, the ability to focus on others, giving and receiving intimacy and definitions of adult roles are increased. The greater autonomy from the family, as well as peer groups and sexuality, may become more associated with commitment and planning for the future in late adolescence (Haffner, 1995).

A major developmental task during adolescence is identity development. The need to be loved, independent and accepted is essential to the development of identity and self-esteem in adolescents. For adolescent girls, caring is highly valued and involvement in a relationship can enhance the desire to engage in sexual activity. It has also been suggested that many adolescent girls are not assertive in making decisions concerning the initiation of sexual activity or the use of contraception, particularly condoms. This lack of assertiveness may be associated with a fear of jeopardizing the relationship with their partner (Hacker, Amare, Strunk, & Horst, 2000). Consequently, a risk for negative outcomes of these behaviors, such as unintended pregnancy and contracting HIV/AIDS, may occur with female adolescents.

### **Sexual Development of Early and Middle Female Adolescence**

In girls, the rapid changes in structure and the function of many parts of the body are significant signs of early adolescence. This pre-puberty period combines the emergence of physical changes and warns of differentiated sexuality. The reproductive organs become functional and secondary sex characteristics increase in size. The beginning of menstrual periods is called “the menarche” and early ovulation occurs with the effect of the sexual hormone, estrogen (Pilliteri, 1999). The undifferentiated desirability for sexual objects turns into sexual stimulations or arousal of the senses owing to the starting of estrogen secretions.

Although close relationships with one peer of the same sex frequently occur among early adolescents, they also meet and join with members of the opposite sex. The feelings of affection for a person of the opposite sex who is fashionable or possesses qualities significant to the adolescent is a regular occurrence but long-term dedication and deep romantic affections do not commonly occur (Leifer, 2003). In addition, sexual experimentation frequently arises as a temporary enjoyment, as a meeting for inquisitiveness, or to enhance a sense of adoration and care. Sexual inquisitiveness is a regular occurrence. Closeness of individual companionships is also a requirement and sexual relationships may be established by looking for a member of the opposite sex to share confidences and feelings. Break-ups in such relations are frequently the cause of tremendous emotional pain. These physical changes, emotions of affection for the opposite sex and sexual inquisitiveness may cause young adolescents to engage in sexual activities.

These physical, mental, cognitive and sexual changes occur once middle adolescence has been achieved. During this period, physical maturity and complete puberty occurs in adolescent girls. Puberty is the physical development of the reproductive and sexual organs leading to changes in a wide range of physical features and enables the production of offspring (Hill, 2008). Girls usually have negative perceptions of increases in height and weight in their bodies. They often report a desire to be thinner than they are after the onset of weight gain resulting from puberty (Archibald, Graber, & Brooks-Gunn, 2003). During this period, unique characteristics and opinions are developed in female adolescents. Although peer rapport is essential, other interests, such as a clearer sense of identity, are important. Sexual identity is a

general understanding of all aspects of sexuality. Worthington, Savoy, Dillon, and Vernaglia, (2002) stated that sexual identity consists of two components. Individual sexual identity is the first component as the recognition and acceptance of sexual needs, preferences and tendencies. The second component is self-image, which is called social identity and involves a sense of belonging to a particular sexual identity group, as well as attitudes toward other sexual orientation groups. The pattern of sexual identity intensifies around the time of puberty as secondary sex characteristics begin to develop and individuals start to experience increased levels of sexual feelings and desires.

Middle adolescent girls must learn to recognize and understand sexual desires. They must also accustom themselves to experiencing sexual stimulation and the emotional reactions associated with sexual arousal. In addition, girls must come to understand the attention they receive from others due to increased sexual attractiveness and integrate this understanding into their self-image and value system. They must also explore and crystallize attitudes about sexual behavior and relationships (Hill, 2008). Finally, they must deal with the meaning of physical and emotional intimacy and the vulnerability involved in these types of interactions (Worthington et al., 2002).

### **Adolescent Sexual Risk Behaviors in Thailand**

Sexual risk behaviors among early and middle female adolescents, including early initiation of sexual intercourse, unsafe sex behavior and multiple sexual partners, are a serious reproductive health issue in Thailand. The evidence from 2008 to 2010 supports that the trends of sexually active girls have rapidly increased among female adolescents at a mean age 13.8-16.8 years and studying in Grades 8 and 11, as well as the second year of vocational students in Bangkok. There were 3.5, 5.9, and 8.9% among Grade 8 students, 6.7, 17.5, and 11.1% among Grade 11 students and 27.5, 25.8, and 38.8%, among second-year vocational students (Srivanichakorn et al., 2010). From 1996 to 2009, the median age for first intercourse shifted from 18-19 to 15-16 years of age (Bureau of Reproductive Health, Department of Health, 2011). In addition, Srivanichakorn et al. also reported that the lowest age for first intercourse has been found to be very low at 10 years of age. These findings indicate that female adolescents engage in sexual activities earlier than in the past.

The life-long period of sexual activity puts adolescents at risk for multiple sexual partners and unprotected sex. Furthermore, recent findings indicate the incidence rate of condom use during the last intercourse to have decreased (63.2, 53.6, and 50.5% respectively) among female adolescents who studied in Grade 8 during 2008-2010. Similarly, the consistency of condom use with boyfriends has also decreased among Grade 11 (33.0, 33.3, and 20.0% respectively) students and second-year vocational students (18.7, 12.7, and 14.6% respectively). The same is true for the percentages of multiple sexual partners, the finding indicates that the incidence also increasing among early and middle female adolescents who have more than one partner over one year (27.5, 29.5 and 30.5%, respectively) (Srivanichakorn et al., 2010).

The tendency of the abovementioned risky sexual behaviors have increased the opportunities of early and middle Thai female adolescents to increase the numbers of unwanted pregnancies, induced abortions and reproductive tract infections. Recent findings reveal the incidence rates of teenage pregnancy among adolescents aged 15-19 years have continuously increased from 2007 to 2010 (54.6, 55.5, 56.1 and 56.2 per 1,000, respectively) (Bureau of Reproductive Health, Department of Health, 2010). In addition, Thai Health Promotion Foundation reports that females under 19 years of age have the highest pregnancy rate (<http://en.thaihealth.or.th>). Moreover, the Bureau of Reproductive Health, Department of Health reported the incidence rates of teenage pregnancy have been found to be 2.0 and 46.8 per 1,000 female adolescents aged 10-14 and 15-17 years, respectively. Correspondingly, the trend of mothers giving birth at the age 10-19 years have been continuously increasing from 2007 to 2011 (15.1, 15.5, 16.0, 16.2 and 16.5 %, respectively) (Bureau of Reproductive Health, Department of Health, 2011).

Unplanned pregnancy among young people can lead to induced abortion. The numerous illegal abortions amounting to approximately 100,000 cases are performed each year (Taneepanichskul, 2007). Unfortunately, most illegal abortions are performed unsafely and by unskilled persons and this leads to high morbidity with increased risks for infections, hemorrhage or uterine perforation. Moreover, the incidence rates of STDs among adolescents aged 15-24 years continually escalated

from 2007 to 2011 (50.1, 59.5, 76.5, 78.9, and 89.5 per 100,000, respectively) (Bureau of Epidemiology, Department of Diseases Control, 2011).

For all of the above reasons, the evidence emphasizes that sexual risk behaviors among adolescents require urgent efforts to prevent its negative consequences, especially for early and middle adolescent females. Targeted prevention of these behaviors is very important for early ages rather than waiting until adolescents are sexually active. One significant technique for preventing these consequences is sexual abstinence because adolescents who engage in intercourse before the age of 16 years rarely use contraceptives, often become teenage parents and contract more STDs than older adolescents (O'Donnell et al., 2001). In addition, successful abstinence preservation is most likely to be successful with adolescents who are not sexually active. Therefore, the promotion of sexual abstinence interventions must take place before the initiation of sexual activity (Aten, Siegel, Enaharo, & Auinger, 2002).

In summary, early initiation of sexual intercourse together with a continuing pattern of unprotected sex and multiple sexual partners can lead to many serious health problems in modern Thai society and promises to become more serious in the future. Early and middle female adolescents are at greater risk for being confronted with negative health consequences than male adolescents and adult women. Therefore, early middle female adolescence is the time to actively prevent adolescent sexual risk-taking behaviors, predominantly in female adolescents' aged between 12-16 years because sexual initiation tends to occur at this stage.

Although there are several strategies for preventing sexual risk-taking behavior in young female adolescents, sexual abstinence is one sexual health promotion that plays a chief role as the safest sexual practice. Abstinence is the first strategy promoted by Healthy People 2010 (WHO, 2000) and enables youth to avoid behaviors potentially leading to health and social issues. Most people acknowledge that "sexual abstinence" is the only way 100% certainty in preventing the negative consequences of sexual activity during adolescence such as unintended pregnancy, induced abortions, contact of STDs, HIV/AIDS and psychological maladjustment (Guindon, 2002), as well as the negative outcomes of adolescent parenthood, including low educational attainment, low income, poorer psychological function and greater welfare use (Khumsaen, 2008). Moreover, sexual abstinence is essential in the encouragement of successful educations and careers (Supametaporn, 2006).

## **Sexual Abstinence in Thai Culture**

For Thai women, sexuality is socially constrained within the marital relationship. Virginity at marriage is still valued to a large extent in traditional Thai society. Hence, remaining sexually abstinent during adolescence is common and socially expected. This behavior plays a critical role as a strategy for promoting sexual health in female adolescents. However, several scholars have also suggested a requirement for basic knowledge, such as the meaning of sexual abstinence, before constructing sexual abstinence programs.

### **Definition of Sexual Abstinence**

Abstinence is used in various contexts and definitions in different disciplines. According to the American Heritage Dictionary of the English Language, Fourth Edition, abstinence is defined as “the act or practice of refraining from indulging an appetite or desire, especially for alcoholic drinking or sexual intercourse” (<http://dictionary.reference.com/browse/abstinence>). Norris et al. (2003) defined sexual abstinence as “a specific set of behaviors used to actively avoid sexual intercourse by persons who are not married but are interested in a romantic relationship with a partner” (p. 142). In addition, Goodson, Suther, Pruitt, and Wilson (2003) explored the definition of abstinence among directors of abstinence-only-until-marriage education programs, instructors on the program staff and youths, finding all groups to define sexual abstinence as “not engaging in sexual activity, sexual/vaginal intercourse; oral sex, anal sex or pre-coital behavior comprising petting, kissing and touching, behavior potentially leading to sexual intercourse; behaviors with the purpose of sexual arousal and non-sexual behaviors” (p. 94). Interestingly, Bersamin, Fisher, Walker, Hill, and Grube (2007) studied adolescent conceptualizations and definitions of virginity and abstinence terms. The findings indicated lost virginity to be mainly associated with vaginal and anal intercourse. Even as greater numbers of adolescents also attribute failed abstinence to lower genital touching and oral sex behaviors, important variability appears in how abstinent behavior is defined.

According to Byers, Henderson, and Hobson (2009) who examined the definitions of abstinence and engaging in sex among 298 heterosexual students who studied in a Canadian university, 17 sexual behaviors were offered to indicate which

behaviors were related to the terms. The results demonstrated the meaning of both terms to not involve genital stimulation. On the other hand, the definition of engaging in sex takes into account bi-directional sexual stimulation (penile–vaginal intercourse or penile–anal intercourse) but sexual abstinence does not take these behaviors into account. The terms of whether or not behaviors involving unidirectional genital stimulation (oral sex, genital fondling) either represented abstinence or engaging in sex, or neither abstinence nor having sex. However, students selected these activities as more abstinent than engaging in sex. Saunderson (2009) defined abstinence as “not engaging in vaginal or anal intercourse or oral sex” (p. 11).

In Thailand, Supametakorn (2006) explored the process of maintaining sexual abstinence in Thai female college students aged between 18-23 years. The researcher defined sexual abstinence as “refraining from sexual intercourse”, which is an essential attribution that closely resembles the concept of “Rug Nuan Sa Nguan Tou” in traditional Thai society. The term “Rug Nuan Sa Nguan Tou” refers to female strategies employed to prevent improper sexual relationships with men” (p. 26). Danaidussadeekul (2004) examined the factors related to sexual abstinence among late adolescent females in the Bangkok Metropolitan area, defining sexual abstinence as “not engaging in sexual intercourse with a male” (p. 5). In addition, Panurat (2009) examined the predictive factors of sexual abstinence among Thai female middle adolescents and defined sexual abstinence as “an act of Thai female middle adolescents in omitting vaginal, oral and anal sexual intercourse with males during the school years” (p. 11) which is quite different from Suthinphrak (2010) who defined sexual abstinence as “the act of secondary school students who refrain from penile-vaginal sexual intercourse with men before marriage” (p. 7).

Although the term “sexual abstinence” has had slightly different definitions from various literatures, most studies define the term sexual abstinence as refraining from heterosexual vaginal intercourse and other forms of genital contact, such as oral or anal intercourse, included in the definition of sexual activity. Many evidences have proposed the differences in the definitions of sexual abstinence among adolescents to be determined by age, gender, ethnicity, religion, sexual conservativeness and sexual experience (Bersamin et al., 2007). In Thailand, all of the studies about sexual abstinence have demonstrated similar definition of sexual

abstinence as “not engaged in sexual intercourse” (Danaidussadeekul, 2004; Supametaporn, 2006; Panurat, 2009; Suthinphuak, 2010). Therefore, this research studying early to middle adolescent Thai female students defines sexual abstinence “as not engaging in sexual activities, sexual/vaginal intercourse; oral sex, anal sex, pre-coital behavior (petting, kissing and touching), behavior potentially leading to sexual intercourse; behaviors with the purpose of sexual arousal and non-sexual behaviors” (Goodson et al., 2003, p. 94) and the specific set of activities used to practice sexual abstinence, including the following: “(a) thoughts, such as the negative consequences of early sexual intercourse; (b) actions, such as avoiding certain situations; and (c) interactions, such as saying, “No,” (Norris et al., 2003, p.141). These three components were also the basic concept used to develop the parent-daughter sexual abstinence communication during the school years among early and middle female adolescents in this study.

### **Advantages of Sexual Abstinence**

Owing to the requisite of knowledge and judgment to create informed options to deal with the negative consequences of unprotected sexual intercourse, such as pregnancy and STDs, the abstinence approach has been demand among adolescents, particularly for young adolescents (Jemmott, Jemmott, & Fong, 1998). Such programs provide a seemingly logical recommendation for youth to reduce health risks. Through the practice of sexual abstinence, adolescents can decrease the amount of lifetime partners and non-monogamous partners, as well as limit exposure to behaviors putting them at risk for the negative consequence of risky sexual behaviors (Rasberry, 2006).

In Thai culture, remaining sexually abstinent is related to the cultural image of the “good” Thai girl. The sexually abstinent girls and their families are more respectable in society than the sexually experienced ones (Supametaporn, 2006). This cultural environment supports girls who practice sexual abstinence in their everyday lives to develop positive psychological and intellectual well-being and to actualize health potentials, such as a sense of maturity and the ability to identify and avoid situations potentially ending in trouble as found in previous literature. In addition, social health potential is also actualized in sexually abstinent girls when they can maximize individual courses in life that include taking part in higher education and

more paid employment than the sexually active girls (Schvaneveldt et al., 2001). Moreover, Supametaporn stated that sexual abstinence is important in the encouragement of educational and career-oriented success. Conversely, the negative outcomes of adolescent parenthood include low educational attainment, low income, poorer psychological function and greater welfare use (Khumsaen, 2008). Therefore, Supametaporn concluded that “sexual abstinence plays a critical role as both a health preventive and health promotion behavior able to enhance female adolescent health” (p. 29).

### **Parent-Daughter Sexual Abstinence Communication (PDSAC)**

The process of socialization is established in families as the first part of society. The significant roles of adolescents’ sexual socialization by the family have been addressed by several researches (Dittus, Miller, Kotchick, & Forehand, 2004). Among these, parents are the foremost principal representatives in this process (Hutchinson & Wood, 2007). The major sexual educators for children are their parents and parents have been shown to be among the most prominent factors in adolescents’ lives.

#### **Significance of Parent-Daughter Sexual Abstinence Communication**

Parent-Daughter Sexual Abstinence Communication (PDSAC) is one of the issues which are derived from the parent-teen sexual risk communication (PTSRC) concept. The PTSRC includes eight issues related to birth control, STDs, HIV/AIDS, condoms, how to prevent HIV/AIDS, abstinence or postponement of sexual behaviors, peer pressure to have sex and how to handle sexual pressure (Hutchinson, 2007) but the PDSAC focus only on abstinence or postponement of sexual behaviors. Hutchinson added STI and HIV prevention in the concept of parent-teen sexual communication (PTSC) which only includes six topics including menstruation, dating, sexual morality, conception, intercourse and contraception. Most evidence supports that PTSC may influence adolescents’ sexual values and perceptions of sexual norms, thereby leading to the development of sexual values more closely resembling the values of parents and may also serve as a buffer against peer

pressure on sexual activity (Whitaker & Miller, 2000; Schouten, Putte, Pasmans, & Meeuwesen, 2007).

Previous studies have indicated that the adverse effects of peer pressure on adolescent sexual behaviors are decreased by PTSC. The number of sexual partners, the engagement in sexual intercourse and the liberal sexual values regarding adolescents and sexuality among adolescents who discuss sexuality with their parents might be lower than those who discuss sexuality with their friends (Di Iorio et al., 1999). In addition, PTSC is also viewed broadly as the single-most significant influence on adolescents' sexual and sexual risk behaviors (Blake et al., 2001; Hutchinson, 2002; Guzman et al., 2003; Hutchinson et al., 2003; Aspy et al., 2007; Hutchinson, 2007; Hutchinson & Montgomery, 2007), such as delaying the onset of initiating sexual behavior, decreased unsafe sex, lower numbers of sexual partners and increased probability of using contraception.

Additionally, Hutchinson and Montgomery (2007) found adolescents' sexual risk-related attitudes, beliefs and intentions to also be associated with greater amounts of PTSRC. The more conservative attitudes toward adolescent sexual behavior in general, the more conservative attitudes toward personally engaging in sexual intercourse during the next three months and the lower the perceived difficulty in discussing sexual issues with partners concerning PTSRC with mothers. Furthermore, numerous studies have stressed the significance of parent–daughter sexuality communication as a preventive factor related to many reproductive health consequences, including unintended pregnancy and HIV/STD infections (Jaccard, Dittus, & Gordon, 1996; Dittus & Jaccard, 2000). Babalola, Tabashe, & Vondrasek (2005) also found primary sexual abstinence to be positively associated with parent-child communication about sexual abstinence.

In conclusion, PTSC is an essential protective factor in reducing adolescents' sexual risk problems as an important factor in maintaining abstinence, delaying adolescent sexual behavior, increasing the probability of contraceptive use and influencing adolescents' sexual conservative attitudes, while reducing peer influences on sexuality. Next, the researcher would like to examine the PDSAC influence on sexual abstinence intention among early and middle Thai female adolescents.

### **Meaning of Parent-Daughter Sexual Abstinence Communication**

Communication is the means to achieving personal and family goals. Positive communication can be a functional device in helping a family stay together while assisting families in becoming skilled at supporting or slightly hurting one another. Communication has numerous definitions. For example, Wikipedia, the free encyclopedia describes the meaning of communication as follows:

Communication is the activity of conveying information and is derived from the Latin word 'communis', which means 'to share'. Communication requires a sender, a message and an intended recipient, although the receiver need not be present or aware of the sender's intent to communicate at the time of communication; thus, communication can occur across vast distances in time and space. Communication requires that the communicating parties share an area of communicative commonality. The communication process is complete once the receiver has understood the sender's message. Feedback is critical to effective communication between parties (<http://en.wikipedia.org/wiki/Communication>).

Another study addressed a procedure by which a source send outs a message to a receiver through definite channels as the communication (Trenholm & Jensen, 2000). Furthermore, the process of exchanging information, feelings, desires, needs, values, customs and opinions, i.e. each individual is seen as both speaker and listener, as concurrently communicating and receiving messages defined as communication (Hoffer, 1996). In this idea, communication is an ever-changing procedure and a continuing action. All of the components of communication are in a constantly dynamic situation. In other words, when the people, environment, time or place of a communication changes, communication processes also change. Nothing in communication ever remains static.

In this study, the meaning of parent-daughter sexual abstinence communication is the transmission process between parents and adolescent daughters with focus on the set of activities including the following: (a) thoughts, such as the negative consequences of early sexual intercourse; (b) actions, such as avoiding risk situations; and (c) interactions, such as saying, "No," (Norris et al., 2003, p.141) to "not engaging in sexual activity; sexual/vaginal intercourse; oral sex; anal sex; pre-coital behavior (petting, kissing and touching); behavior potentially leading to

sexual intercourse; behaviors with the purpose of sexual arousal and non-sexual behaviors” (Goodson et al., 2003, p.94). These processes were verbally and nonverbally, through auditory and visual channels.

### **Parent-Daughter Sexuality Communication in Thai Culture**

Although the topic of adolescent sexuality remains sensitive and the social norms and attitudes remain conservative in Thai society, trends for risky sexual behaviors among adolescents have been increasing (Tangmunkongvorakul & Bhuttarowas, 2005). Nearly all Thai people imagine the word “sex” as “making love”, which makes it difficult for parent-adolescent sexual communication to take place (Ekacha, 2002). In fact, there are various dimensions of sexuality and sexual activities are only one of these.

The sense of “sex” being familiar with Thai people makes them feel ashamed and embarrassed to discuss sexuality with the belief that communication about sexuality with adolescents also triggers adolescents to engage in sex (Nualnak, 2003). This finding was congruent with Ditcharoen (2005) who examined parent-teen communication and the sexual risk behaviors of female adolescents. Father-teen and mother-teen sexual risk communication was revealed to be at a low level. Similarly, Sangburan (2008) examined parenting styles and sexual communication between mothers and early adolescent daughters on sexual behavior among early female adolescents in Bangkok Metropolis. The findings showed communication between mothers and daughters regarding reproduction, infertility, inter-gender relationships, proper practices of sexual behavior and the emotional effects of sexuality to be at a low level.

Because engaging in premarital sexual intercourse is considered culturally wrong, even kissing, hugging or holding hands remain unacceptable behaviors (Gray & Punpuing, 1999). Thai parents rigorously support their daughters in virginity and strictly oppose premarital sex. Thai girls are required to be docile, submissive, modest and disinterested in sex until marriage (Vuttanont et al., 2006). Thai girls 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 remain

limited about sexuality. Women learn that sex is terrible, unclean, disgraceful and requiring of secrecy as well as prohibition and abstinence of thoughts about sex until they are older and ready to get married (Fongkaew, 1997). Girls who know much about sexuality, such as how to use contraception, are scrutinized as “bad” girls. They might be censured as having had sexual experiences. Conversely, it is acceptable for boys to experience and have the freedom of premarital sexual experiences. These imitate an obvious double standard that criticizes female premarital sex while paying no attention to male sexual promiscuity. Young men who are virgins are ridiculed by their peers. Gender differences are present as imbalanced power between men and women at the level of interpersonal relationships (Gray & Punpuing, 1999).

Additionally, Rhucharoenpornpanich et al. (2010) investigated parenting practices and reported sexual and delinquent behaviors among Thai adolescents with particular emphasis on the differences between sons and daughters. In comparison to males, female adolescents reported higher levels of parent communication about sex and parental disapproval of sex. Parents were also found to communicate with their teens about sex sometimes but not very often. The above findings are likely to be related to Thai culture and values where parents are not usually to openly discuss sex with their teenagers. Similarly, Sridawruang, Pfeil, and Crozier (2010) explored the attitudes of Thai adolescents and parents concerning the barriers preventing parents from providing sex education for their adolescent children. The results indicated that most Thai parents have not taught their children about sex education issues.

As illustrated above, parents are restrained by the values toward sexuality of Thai traditional culture to educate their children about sexuality, principally daughters. Gender-related double standards have a significant influence on the sexual and reproductive health and lives of young females. The abovementioned situation leads to restrictions in correct sexual knowledge, inadequate decision-making in sexual partnerships and inhibited practical contact to contraceptive counseling services. Thus, female adolescents are at risk for the negative consequences of sexual behaviors, such as unintentional pregnancies and HIV infections.

## **Content Related to Parent-Daughter Sexual Communication in Thai**

### **Families**

A number of studies have been related to parent-daughter sexual communication in Thai families. For example, the study of Laosuwan and Nanthamongkolchai (2002) about the sexual socialization of Thai families during the adolescent period (13-18 years) found that virginity and gentlemanly manners (86.8%), HIV protection (40.1%) and contraceptive use (24.0%) were issues main caregivers discussed with their children, talking about preserving virginity and gentlemanly manners toward their daughters more frequently than their sons and discussing HIV prevention with their sons more than their daughters. Safe sex behaviors and contraceptive use were not discussed between mothers and children aged 13-16 years because mothers believed that their children remained ignorant of these issues and did not engage in sexual behaviors. They also believed risk-taking behavior to not appear among their children and assumed their children had already learned about sexuality in school. Their daughters might become embarrassed and be triggered to have sexual experiences if they talked about safer sex.

Fongkaew et al. (2012) explored the perceptions of parents and adolescents toward sexual risk-taking behaviors among 30 parents and 30 adolescents aged 13-14 years in Bangkok. The results indicated parental disapproval of sexual behavior for their adolescents. Parents always communicated with their adolescents about remaining abstinent because the adolescents were too young. Parents were concerned about adolescents harming their future due to potentially adverse outcomes, such as unwanted pregnancies and HIV infections, stressing to their daughters the significance of preserving virginity and supervising their daughters to keep them away from adolescent boys who might cause their daughter to make mistakes. Furthermore, adolescents perceived their parents as having primary influence on their sexual behavior. Parents were likely to forbid adolescents from engaging in sexual behaviors, especially females. Parents provided examples of adverse outcomes to reinforce this abstinence message, such as having sex causes pregnancy, potential expulsion from school and boyfriends who might not take responsibility for unwanted children, potential infections with STDs.

In addition, the examination of the sexual issues parents taught teenage sons and daughters by Boonperm (2001) reported nearly half of the parents participating in the study to have never discussed sexuality with their children. Among those who had discussed sexuality, both fathers and mothers usually talked with their daughters about proper apparel suitable for age, sex, timing and place; abstinence, adverse consequences of early engagement in sexual intercourse, physiological changes and relationships with the opposite sex as well as STD and AIDS prevention.

A qualitative study by Charoenthaweesub (2002) on the investigation of communication approaches to sex education in families with adolescents aged between 13-21 years revealed mixed answers. Some of the participants reported the significance of sex education, while others stated that sex education is quite significant and still others claimed sex education to be insignificant. In addition, the researcher indicated that several topics concerning sexuality were discussed by parents but none were discussed in detail.

Siriarunrat (2009) explored the experiences about sexuality communication between parents and adolescent daughters aged 12-13 years studying in Grade 7. The findings indicated communication about sexuality among parents and adolescent daughters were rare, especially on topics associated with safe sex, such as prevention of unintended pregnancy and prevention of STD and HIV infections, as well as issues associated with sexual desire, such as sexual drive management and sexual drive controlling. Most of the parents (90.0%) discussed general, everyday or nearly ordinary topics with their daughters, such as education issues, relationships with friends, responsibilities for household work, money spending and socialization. In the same way, daughters gave similar reported as their parents. The general issues were frequently talked with their parents. Both responded congruently about generally proper dress, maintaining opposite sex relationships as friendships only and avoiding any risky sexual situations.

In summary, Thai traditional culture places great value in maintaining female virginity until marriage. Parents pay more attention to abstinence concepts or postponing engagement in sex. Parents usually talk to their daughters about the strategies for avoiding sexual intercourse or maintaining virginity (Ruk-Nuan-Sa-Nguan-Tua) until marriage. However, the incidence of sexual risk behaviors among

unmarried adolescents has been increasing in Thai society. Female adolescents are at risk for unintended pregnancy and HIV infection. As a result, the researcher would like to examine the influences of parent-daughter sexual abstinence communication on the sexual abstinence intention among early and middle Thai female adolescents. Toward that end, an understanding of the predictive factors of early and middle female adolescents' sexual abstinence potentially leading to theory-based interventions is essential in order to promote sexual abstinence behaviors that are culturally specific with Thai female adolescents.

### **Parent-Daughter Sexual Abstinence Communication Measurements**

Although it has been summarized that PTSC might have a positive effect on the contraceptives use of adolescents from the late 1970s to the 1980s, the restrictions about non-representative samples and incoherent methodologies have frequently depended upon global, weak or unproven measurements (Fox, & Inazu, 1980). Although the STD, HIV and pregnancy prevention issues were added to adolescent sexual risk behaviors in the 1990s, the PTSC measurements do not specifically address these issues.

Next, the Parent Child Sexual Communication (PCSC) measurements were reviewed by Fisher (1993) in a study indicating that the incoherent and differing effects of PCSC depend upon the inconsistent concept of the measurements. The single-item global measures using yes/no answers are frequently applied. For example, the measure of PCSC by Fox and Inazu (1980) included six issues related to menstruation, dating, sexual morality, conception, intercourse and contraception. The topics parents had discussed ranged from 0 to 6 points. The results showed that parental discussion was rated lower than expected while further failing to mention STD/HIV prevention. Another study by Newcomer and Udry (1984) also used a short yes/no format with three-items asking only adolescents about communication with their parents. Total scores ranged from 0 to 3 (yes=1 and no=0) and this measurement had various inadequacies such as too general, not specific to STD/HIV or prevention strategies. Additionally, the dichotomous scale is an important conceptual and methodological weakness.

In 1994, the original PTSRC Scale was developed as a part of a dissertation by Hutchinson. The familial and dyad influences of sexual risk-taking behaviors among late adolescents and young adults were examined by four items related to the information that parents share with adolescents including (a) human sexuality; (b) AIDS and other STDs; (c) ways to protect themselves from getting STDs or AIDS and (d) contraception”. The item (a) was a global item and individual scores ranged from 1 to 5 (1= none, 5 = extensive), while the total scores ranged from 3 to 15 and higher scores demonstrated a greater amount of PTSRC (Hutchinson, 1994). Later on, Hutchinson developed PTSRC-II by separating scales between mothers and fathers. This measurement was derived from the contribution of older adolescents, families, professionals and HIV prevention specialists’. A total of 12 items were taken in a comprehensive PTSC scale (PTSC-II) and 8 items were created as sexual risk communication to become the PTSRC-III scale (Hutchinson, 2007).

Due to the lack of parent-daughter sexual communication scales in Thailand, the researcher developed this instrument by conducting the focus group discussion in early and middle female adolescents studying in secondary school focused on parent-daughter sexual abstinence communication issues. Based on the findings of the focus group discussions and the literature review guided by sexual abstinence concepts from other countries, the Parent-Daughter Sexual Abstinence Communication Scale (PDSAC) was developed. In this study, the researcher followed the sexual abstinence concept of Goodson et al. (2003) which defined sexual abstinence as “not engaging in sexual activities; sexual/vaginal intercourse; oral sex; anal sex; pre-coital behavior (petting; kissing and touching); behavior potentially leading to sexual intercourse; behaviors with the purpose of sexual arousal and non-sexual behaviors” (p.94) and Norris et al. (2003) who indicated that a specific set of activities used in practicing sexual abstinence including the following: “(a) thoughts; (b) actions; and (c) interactions (p.141). Thoughts refer to the perception of adolescents’ daughters toward the transmission process between parents and daughters with emphasis on the negative consequences of early initiation of sexual intercourse during the school years. Actions refer to the perception of adolescents’ daughters toward the transmission process between parents and daughters with focusing on proper performance such as dressing modestly, avoiding certain places or risk

situations. Interactions refer to the perception of adolescent daughters toward the parent-to-child transmission process with stress on the performing a manner of Thai good girls with the opposite sex. These processes were both verbal and nonverbal through auditory and visual channels.

### **Factors Influencing Sexual Abstinence Intention Guided by the Parent-Based Expansion of the TPB; PDSAC**

In this study, the researcher focused on the variables corresponding with the parent-based expansion of the TPB; PDSAC and the four constructs of the TPB; behavioral beliefs, normative beliefs, control beliefs, and sexual abstinence intention and empirical evidence on the phenomena and the literature review.

#### **Parent-Daughter Sexual Abstinence Communication**

Current studies concentrate on the degree to which parents could influence their adolescent daughters' sexual behaviors. Parents have been shown to put forth much greater power on adolescent sexual behaviors than in the past (Hutchinson et al., 2003) as follows:

Di Iorio, Kelly, and Hockenberry-Eaton (1999) examined the content, characteristics and comfort level of discussions about sexuality anticipated between African-American mothers and adolescents aged 13-15 years. The results demonstrated that adolescents who discussed more issues with their mothers were more likely to not engage in sexual intercourse and to uphold conservative values. In contrast, adolescents who discussed more issues with their peers were more likely to report engagement in intercourse and more "liberal" sexual values.

Whitaker and Miller (2000) explored parent-adolescent communication about sex. The results indicated that sexual behavior was associated with communication about sex and perceived peer norms about sex. Condom use behavior was associated with communication about condoms and perceived peer norms about condoms. For sex and condom use, the peer norm-behavior relationship was moderated by parental communication. Peer norms were more strongly correlated with the behavior of adolescents who had not discussed sex or condoms with their parents.

Communication was also associated with teens naming a parent as their best source of information about sex.

Jaccard and colleagues (1996) examined the effects of maternal disapproval of premarital sex, maternal discussions of contraceptive use and the quality of the parent-child relationship on adolescent sexual behavior. The findings showed abstinence from sexual intercourse, less-frequent sexual activity and more consistent use of birth control among sexually active adolescents to be significantly related to adolescent perceptions of maternal disapproval of premarital sex and satisfaction with the mother-child relationship. Increased likelihood for sexually active adolescents was found to be associated with discussions about contraceptive use. Although discussions about birth control were not significantly correlated with consistent contraceptive use for female teenagers, such discussions were correlated with increased contraceptive use for male adolescents.

Di Iorio, McCarty, Denzmore, and Landis (2007) examined discussions about sex moderating the relationship between adolescents' sex-based discussions with their friends and adolescents' involvement in sexual behaviors between African-American mothers' and adolescents. The results demonstrated significant predictors of sexual behaviors among adolescent girls to include age, discussions with friends and interactions between mother and peer sex-based discussions. The findings suggested the relationship between peer discussions about sex and a girl's involvement in sexual behaviors were moderated by the degree of discussion with their mothers.

Hutchinson and colleagues (2003) examined the relationship between mother-daughter communication about sex and the number of male sexual partners, the number of incidents of sexual intercourse and the number of incidents of unsafe sex behavior among inner-city adolescent females. The findings showed mother-daughter sexual risk communication to have mediated the frequency of unsafe sex behavior at the 3-month follow-up. The unsafe sex behavior at the 3-month follow-up was also significantly associated with attitudes toward condoms and self-efficacy in condom use. Some of the potential mediators, including self-efficacy in condom use, and hypothesized directions, such as higher levels of self-efficacy in condom use, were found to be associated with higher levels of mother-daughter sexual risk communication.

Hutchinson and Montgomery (2007) found adolescent' sexual risk-related attitudes, beliefs and intentions were related to greater amounts of PTSRC. Additionally, more conservative attitudes toward adolescent sexual behavior in general, more conservative attitudes toward individually engaging in sexual intercourse during the next three months, and less perceived difficulty in discussing sexual issues with partners associated with PTSRC with mothers. These associations were significant for both male and female students.

In addition, Aspy et al., (2007) examined the role of parental communication and instruction concerning sexual behavior. The samples comprised 1,083 youths aged 13–17 years in a community-based setting. The results indicated that adolescents whose parents had taught them to say no, had set clear rules, discussed right and wrong and promoted delaying sexual activity, rarely initiated sexual intercourse. Sexually active adolescents who were taught at home about delaying sexual activity and promoting birth control frequently use contraceptive devices. Being taught at home about contraceptive use, and being taught at home about how to say no with adult role models who support abstinence has been found to be associated with having only one sexual partner. If parents reported discussion with adolescents about contraceptive use and sexually transmitted disease (STD) prevention, adolescents were likely to practice birth control. Moreover, a small amount of self-reported rates of STDs has been found to be associated with a high degree of PDSC.

However, Cha, Doswell, Kim, Charron-Prochownik, and Patrick (2007) found higher self-efficacy in sexual abstinence ( $\beta = 0.16, p < 0.05$ ) and perceived disapproval of premarital sex from the reference group for male students ( $\beta = 0.19, p < 0.05$ ) to be significantly predicted by good quality of parent-adolescent communication. Among female adolescents, abstinence self-efficacy or subjective norms of premarital sex have not been found to be significantly predicted by parent-adolescent communication.

According to the parent-based expansion of the TPB by Hutchinson & Wood (2007), parenting processes were posited to act as proximal external influences of adolescents' behavioral beliefs, normative beliefs, and/or control beliefs toward engaging in sexual risks or safer sex behaviors. Hutchison and Wood also suggested

the importance of verifying whether or not control beliefs mediate parent-teen sexual communication and identifying whether or not behavioral and normative beliefs mediate the effects of PTSC on other sexual behaviors, including sexual initiation and numbers of sexual partners. As a result, the researcher would like to examine how parent-daughter sexual abstinence communication can strengthen the behavioral change model, the TPB, in this study.

### **Behavioral Beliefs toward Sexual Abstinence**

Behavioral beliefs are the antecedents of attitude in the TPB. Concern with the potential outcomes of behavior and the evaluations of these outcomes produces either favorable or unfavorable attitudes toward behaviors. Strong beliefs that positively valued outcomes will be caused by performing a behavior leads to a positive attitude toward the behavior. On the other hand, strong beliefs that negatively valued outcomes will be caused by performing a behavior leads to a negative attitude toward the behavior. Therefore, a person is likely to perform a certain behavior when he or she evaluates the behavior positively (Ajzen & Fishbein, 1980).

The behavioral beliefs on early engagement in sexual intercourse are concerned with avoiding unintended pregnancy, STD/HIV infections and contracting AIDS, all of which are the advantages of sexual abstinence (Jemmott et al., 1998). Bazargan and West (2006) also found that perceived pregnancy repercussions were found to be positively associated with sexual abstinence among Hispanic and African American high school students in Los Angeles, California. Students who perceive the outcomes of pregnancy as obstacles to an affluent life such as going to college, frequently proposed an intention to continue sexually inactive. Additionally, Villarruel et al. (2004) reported behavioral beliefs related to engaging in sexual intercourse will interfere with education or educational aims, finding among Spanish-dominant Latino youths who believed they or their parents would feel proud if they did not engage in sex likely to report not having had sexual intercourse in the 3 months preceding the study. Similarly, Lammers, Ireland, Resnick, and Blum (2000) reported that Latino adolescents who believed their parents had high expectations for them and a belief in the significance of a good education were found to be positively related with abstinence or delays in sexual intercourse.

The function of “attitude”, a major predictor explaining the intention for sexual behavior in the TRA and the TPB, has been affirmed in many studies (Carvajal et al., 1999; Albarracín, Johnson, Fishbein, & Muellerleile, 2001; Villarruel et al., 2004; Cha, 2005; Cha et al., 2007; Wang et al., 2008; Wayuhued et al., 2010; Childs et al., 2008) as follows:

Carvajal and colleagues (1999) conducted a longitudinal study to examine the predictors in delayed onset of first sexual intercourse. In the beginning of the study, the participants comprised 910 students in Grade 9 who were sexually inactive (mean age=14.8). Approximately 73% of the participants were Latinos and African Americans. The findings suggested that students who had more positive attitudes toward sexual abstinence and whose parents had graduated from college rarely engaged in intercourse during the follow-up period (up to approximately 2 years). In this study, attitude was found to be the most influential predictor in delaying sexual debut among the three components of the TPB (attitude, perceived behavioral control and subjective norms).

Cha and colleagues (2007) examined the effectiveness of the TPB in explaining the intention to engage in premarital sex of Korean college students' aged 18 to 25 years. In all, 298 students participated in final data analysis. In this study, premarital attitude (males:  $\beta = 0.45$ ,  $p < 0.01$ , females:  $\beta = 0.52$ ,  $p < 0.01$ ) was found to be the strongest predictor of intention to engage in premarital sex in both genders; participants with conservative attitudes about premarital sex had a lower intention to engage in premarital sex.

Villarruel and colleagues (2004) examined theoretical predictors from the TPB, including attitude, subjective norms, behavioral beliefs, normative beliefs and control beliefs toward sexual intercourse and condom use. The samples comprised 141 Spanish-dominant Latino adolescents aged 12 to 18 years (77 girls and 64 boys). The findings showed intention to engage in sexual intercourse to be positively associated with attitudes toward sexual intercourse ( $r = .70$ ;  $p < .001$ ). Similarly, attitudes ( $r = .43$ ;  $p < .001$ ) and intentions ( $r = .41$ ;  $p < .001$ ) were found to be associated positively with whether or not adolescents reported having sexual intercourse during the 3 months preceding the study. Adolescents who reported intentions to engage in sexual intercourse in the months following the study (odds ratio [OR], 2.105; 95% confidence

interval [CI], 1.104-4.010), and those who had positive attitudes toward sexual intercourse (OR, 2.334; 95% CI, 1.146- 4.752) were more likely to have had sexual intercourse during the 3 months preceding the study. The behavioral beliefs respondents would feel proud if they did not have sex ( $r = .41$ ;  $p < .001$ ) and felt their parents would be proud of them if they did not have sex ( $r = -.30$ ;  $p < .001$ ), which was associated with intentions to not engage in sexual intercourse.

Wang and colleagues (2008) examined the relationship between attitudes and risky sexual behaviors among 159 females aged 14 – 20 from three high schools in West Virginia. The results indicated that participants who favored premarital sex were more likely to engage in risky sexual behaviors. The only factor with an independent impact on risky sexual behaviors was attitude toward premarital sex (odds = 0.56; CI = 0.34 – 0.93;  $p = .02$ ).

In summary, although some studies were not conducted with an adequate sample size of Thai female adolescents, attitude has consistently predicted sexual behaviors in previous literature examining adolescent sexual behaviors. Therefore, behavioral beliefs toward sexual abstinence are expected to explain the significant variances of sexual abstinence intention in Thai female adolescents. As a result, behavioral beliefs toward sexual abstinence will be included as a predictor and presumed to affect sexual abstinence intention in early and middle female adolescents in this study.

### **Normative Beliefs toward Sexual Abstinence**

The beliefs that significant others agree or disagree with a person's performance of a behavior and the motivation to concur with those referents are normative beliefs. Normative beliefs are the antecedents of subjective norms in the TPB. (Ajzen & Fishbein, 1980). According to Villarruel et al. (2004) 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 and colleagues (2007) found a correlation between greater perceived disapproval of premarital sexual behavior from peers and a higher intention for sexual abstinence. Both male and female adolescents with lower

intention to engage in premarital sex (males:  $\beta = 0.39$ ,  $p < 0.01$ , females:  $\beta = 0.42$ ,  $p < 0.01$ ) perceived disapproval of reference groups to engage in premarital sex.

Diverse types of subjective norms significantly predict intention for sexual behavior. However, the significance can differ with cultural diversity. In Thai culture, there is an agreement that the most important person influencing decisions about sexual debut depends upon the stage of adolescence. Parental norms are more important in early adolescence, but this influence declines with age; then peer norms become more important in later stages. Thus, there is a need to examine what exact type of subjective norms affects early and middle Thai female adolescents' sexual abstinence intention in this study.

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 (Carvajal et al., 1999; Loewenson, Ireland, & Resnick, 2004; Santelli, Hirsch, Radosh, Simkin, & Middlestadt, 2004; Villarruel et al., 2004; Cha, 2005; Silver & Bauman, 2006; Srisuriyawet, 2006; Cha et al., 2007; Bazargan & West, 2006) as follows:

### **Peer (Friend) Norms**

Santelli and colleagues (2004) explored the psychosocial predictors for the initiation of sexual intercourse among 3,163 middle-school, inner-city youth. The final psychosocial model identified "sex norms" as specifically personal and perceived peer norms about sexual abstinence as the single best predictor of the initiation of sexual intercourse ( $p \leq .001$ ). Adolescents who were less likely to initiate sexual intercourse had higher scores on the sex norms scale than those who scored lower with the odds of initiating sexual intercourse changed by .75 for every one standard deviation in changing scores. In addition, Cha and colleagues (2007) found a higher perceived disapproval of premarital sexual behavior from the referent group (peer) norms to be correlated with higher intention for sexual abstinence among more female ( $r = 0.63$ ) than male students ( $r = .46$ ) (for gender difference  $Z = -1.99$ ,  $p < 0.05$ ). Peer norm was the most influential norm in making the decision to engage in premarital sex for both genders. Similarly, Carvajal and colleagues (1999) conducted a longitudinal study on predicting delay in initiating sexual intercourse among 910 students. This

study found peer norms delaying sexual behavior to have a stronger protective effect in the youngest and oldest groups than in the 15 year-old group.

Furthermore, Silver and Bauman (2006) compared the knowledge, attitudes and demographic characteristics of 630 sexually experienced and 422 inexperienced inner-city adolescents aged 14–17 years, finding most inexperienced adolescents to intend to remain virgins for the 6 months following the study. Most of their peer groups also perceived intention to maintain virginity and were more positive and confident about remaining abstinent. Similarly, Bazargan and West (2006) examined the correlates of the intention to remain sexually inactive among 502 Hispanic and African American high school students in Los Angeles, California. This study documented that students with a higher level of perceived peer pressure were less likely to claim intention to remain sexually inactive. The above findings are similar to the findings of Loewenson and colleagues (2004) who evaluated reasons for remaining sexual abstinent among virgins (primary abstainers) and sexually experienced youth (secondary abstainers). The results indicated that more girls and primary abstainers generally selected statements reflecting normative beliefs on youth or friends not having intercourse than boys or secondary abstainers

Moreover, Srisuriyawet (2006) conducted a survey using self-administered questionnaires on sexual risk behavior with 596 female adolescents and 573 male adolescents aged 15-22 years old who were studying in public upper secondary schools, public vocational colleges and a public university in a province of eastern Thailand, finding the most influential factors on having sexual experience among male and female adolescents to be having sexually experienced friends (OR =11.73; 95% CI 6.17-22.29, OR = 27.56; 95 % CI 10.21-74.44, respectively).

### **Parental Norms**

Parental norms toward sexual behavior have been discussed as an influential predictor of adolescent sexual behavioral. Several studies have shown the beliefs related to the sexual risks, attitudes and behaviors of adolescents to be influenced by parents (Jaccard et al., 1996; Jaccard & Dittus, 2000; Whitaker & Miller, 2000; Villarruel et al., 2004; Cha, et al., 2007) as follows:

Cha and colleagues (2007) found female students' intention for sexual abstinence to be affected by parental disapproval more than in male students, finding significantly perceived higher conservative subjective norms of premarital sex from mothers and fathers. Similarly, Jaccard and colleagues (1996) examined adolescents' sexual activity and the consistency of contraceptive use. The participants' comprised 751 African-American adolescents. The results indicated participants' perceptions of maternal disapproval of premarital sex and satisfaction with the mother-child relationship to be significantly related to abstinence from adolescent sexual activity and less-frequent sexual intercourse, as well as more consistent use of contraceptives among sexually active adolescents. Adolescents who reported a low level of satisfaction with mother-child relationships were more than twice as likely to engage in sexual intercourse as those highly satisfied with the mother-child relationship.

### **Partner Norms**

Villarruel and colleagues (2004) found intentions to have sexual intercourse to be predicted by normative beliefs (perceived partner approval of sexual intercourse;  $\beta = 0.47$ ;  $t [129] = 6.558$ ;  $p < .001$ ). The participants who were more likely to report having engaged in sexual intercourse perceived that their partners would approve of sexual intercourse.

Although normative beliefs toward sexual behaviors have consistently predicted the sexual behaviors of adolescents in previous literature (Bazargan & West, 2006; Carvajal et al., 1999a; Cha et al., 2007; Jaccard & Dittus, 2000; Jaccard et al., 1996; Loewenson et al., 2004; Santelli et al., 2004; Silver & Bauman, 2006; Srisuriyawet, 2006; Villarruel et al., 2004), previous studies were not conducted with adequate sample sizes of Thai female adolescents. Therefore, normative beliefs toward sexual abstinence are expected to explain the significant variance of sexual abstinence intention among Thai female adolescents. As a result, normative beliefs toward sexual abstinence are included as predictors and presumed to affect sexual abstinence intention among early and middle female adolescents in this study.

### **Control Beliefs toward Sexual Abstinence**

Control beliefs are the beliefs regarding the existence of factors potentially enabling or hindering the performance of a behavior and the perceived power of a specific control factor in facilitating or impeding behavior performance (Ajzen, 2002). Past experiences, availability of required resources/opportunities and anticipated barriers to performing the behavior influence these beliefs. Control beliefs are antecedent to perceived behavioral control (Ajzen, 1989). Perceived behavioral control reflects the perception that an individual possesses adequate resources and skills to perform the behavior with the confidence to do so adequately (Ajzen, 1985, 1991). This concept is closely related to self-efficacy which is an essential construct of social cognitive theory (Bandura, 1982). Since perceived behavioral control and self-efficacy beliefs share the same construct (Ajzen, 2002), researchers often interchangeably measure perceived behavior control with a self-efficacy scale in the empirical studies guided by the TPB.

A number of studies have examined sexual abstinence self-efficacy, which is influential in decision-making concerned with engaging in sexual behavior in adolescents (Norris et al., 2003; Caron, Godin, Otis, & Lambert, 2004; Santelli et al., 2004; Srisuriyawet, 2006; Powwattana & Ramasoota, 2008; Mathews et al., 2009; Buhi, Goodson, Neilands, & Blunt, 2011; Bazargan & West, 2006) as follows:

Bazargan and West (2006) examined the intention to remain sexually inactive among 502 Hispanic and African-American high school students in Los Angeles, California. This study documented that participants who were less likely to claim having remained sexually inactive had a lower level of behavioral and refusal skills for avoiding sexual activity. Additionally, Buhi and colleagues (2011) tested an integrative theoretical framework in explaining adolescents' sexual abstinence and intentions to remain abstinent, refining the framework to reflect which elements contribute more powerfully to the explanation of abstinence and intentions. Participants were in Grades 7 and 8 ( $n = 451$  and  $447$ , respectively). The study revealed that self-efficacy to remain sexually abstinent, the indirect effect through intention, was significant at .05 ( $B = 0.10$ ; 95% CI = 0.02, 0.22;  $\beta = 0.09$ ). The indirect effect through intention and abstinence at T1 was also significant at .05 ( $B = 0.13$ ; 95% CI = 0.07, 0.22;  $\beta = 0.11$ ). In the final Wave 2 Model, self-efficacy was the

largest predictor of intention ( $B = 0.48$ ; 95% CI = 0.33, 0.62;  $\beta = 0.40$ ). According to the final model, the percentages of variance described for T1 and T2 abstinence were 43.1% and 47.1%, respectively. The largest percentage of variance described was for beliefs (89.4%), followed by intention (75.6%), norms (66.9%), self-efficacy (59.8%), and self-standards (25.3%).

Furthermore, Caron and colleagues (2004) examined the effectiveness of AIDS/STD peer education programs using Ajzen's Theory by looking at an intervention group and a control group. After nine months, the final sample comprised 698 (initial participants = 945) junior school students and 306 (initial participants = 477) high school students. The students were asked to what grade they could easily postpone sexual intercourse and use a condom. In this study, a positive change in perceived behavior control of condom use explained that the senior students used condoms more consistently after the intervention program.

In addition, Mathews and colleagues (2009) investigated the predictors of young adolescents' transition to first intercourse. The results indicated transition to first sexual intercourse to be significantly associated with intention to engage in sexual intercourse with poor self-efficacy to negotiate delayed sex and intimate partner violence. The model predicted 35% of the variance in intentions and 16% of the variance in transition. Moreover, Santelli and colleagues (2004) explored potential psychosocial predictors for initiation of sexual intercourse among middle-school, inner-city youth. This study found self-efficacy to indicate mixed effect in the seventh grade, but increasing risk in the eighth grade.

Powwattana and Ramasoota (2008) tested the differences among the predictors between sexually active and non-active female adolescents' in congested communities in Bangkok Metropolis. The participants comprised 581 Thai female adolescents (262 sexually non-active and 319 sexually active) and found the sexually active group to have lower perceived sexual self-efficacy in terms of ability to say "No" compared with the sexually non-active subjects ( $p < .01$ ). In addition, the mean score for perceived ability to take precautions among the sexually active group had higher scores than the sexually non-active group, even though the overall mean scores for perceived sexual self-efficacy remained low. Similarly, Srisuriyawet (2006) studied the psychosocial and gender-based determinants for sexual risk behaviors

among adolescents in a school in a province of eastern Thailand. This study found low refusal self-efficacy to be directly influenced by sexual experience among females (OR=5.88; 95% CI 2.54-13.62), but not among males.

However, other studies have reported abstinence self-efficacy to not predict the intention to engage in sexual behavior among other populations. For example, Cha and colleagues (2007) studied the efficacy of the TPB in explaining intention to engage in premarital sex in Korean college students. The findings indicated abstinence self-efficacy to be positively associated with the intention for premarital sexual behavior in male students ( $r = .40, p < 0.01$ ), but was not associated with the intention for premarital sex in female students ( $r = .16, p = \text{NS}$ ) (for gender difference  $Z = 2.22, p < 0.05$ ). For both genders, a higher intention for sexual abstinence was found to be positively related to celibate status (males [ $n = 165$ ],  $r = - 0.31, p < 0.001$ ; females [ $n = 133$ ],  $r = - 0.40, p < 0.001$ ) with no gender difference ( $Z = - 0.87, p = \text{NS}$ ). In a similar study, Childs and colleagues (2008) examined antecedent (knowledge of HIV and spirituality) and psychosocial (attitude toward abstinence, attitude toward condom use, sexual self-efficacy and perceived parental attitudes toward premarital sex) factors as correlates and predictors of both sexual abstinence and sexual activity among 94 African-American adolescent females from low-income housing communities. This study found no significant relationships between engaging in sexual activity and sexual self-efficacy ( $r = -.17, p = .09$ ).

As mentioned above, control beliefs toward sexual behaviors did not consistently predict sexual behaviors in previous literature. Hence, control beliefs should be included in an adequate sample size of adolescent Thai females. Therefore, control beliefs toward sexual abstinence are also expected to explain the significant variances of sexual abstinence intention and will be included as predictors in this study.

In summary, previous findings have revealed three major components of the TPB, including behavioral beliefs, normative beliefs, and control beliefs and the parent-based expansion of the TPB influencing the initiation of sexual intercourse in female adolescents. However, no factors were found to influence sexual abstinence behavior in early and middle Thai female adolescents. To this point, the issue of whether or not these variables can predict sexual abstinence intention among early and middle Thai female adolescents should be examined in this study.

## **Summary**

This chapter reviewed the importance of a theory-driven study in explaining sexual behavior and the relationships among the variables focusing on TPB components and the parent-based expansion of the TPB, parent- daughter sexual abstinence communication. The review of the literature and previous studies, however, supports the need for theory-based interventions designed to reduce the negative outcomes associated with risky sexual behavior in female adolescents. One theoretical framework, the TPB, yields strong evidence to assist the researcher in identifying potential determinants of sexual behavior and also provides a basis for the development of strategies to help adolescents practicing sexual abstinence or delaying the initiation of sexual behavior in Westernized cultures. Moreover, according to the review, the researcher has found that parents, particularly mothers, are the most important factors in adolescents' lives. Moreover, mothers may influence the sexual behaviors of their adolescent girls. The evidence also supports the PTSCs' association with less adolescent sexual risk-taking, but the little is known about the nature of the influence sexual abstinence behavior. Hence, the PDSAC was added to the TPB model to prove its ability to predict sexual abstinence intention among early and middle Thai female adolescents.

## **CHAPTER III**

### **METHODOLOGY**

The objective of this study was to determine the factors predicting sexual abstinence intention among early and middle adolescent Thai females studying in secondary schools in Bangkok. The research design, population and sample, instruments, protection of human subjects, data collection and data analysis are described in this chapter.

#### **Research Design**

A descriptive correlation, cross-sectional study design was employed to describe sexual abstinence intention among early and middle adolescent Thai females using constructs from the parent-based expansion of the Theory of Planned Behavior (TPB).

#### **Population and Sample**

##### **Population**

Early and middle adolescent Thai females aged between 12-16 years studying in Muttayom1-3 or Grades 7-9 of secondary schools in the Bangkok Metropolitan region under the Office of the Basic Education Commission, Ministry of Education, comprised the target population for this study.

##### **Sampling and Setting**

##### **Inclusion Criteria**

1. Living with mother and/or father (mother or father may be a biological parent, step-parent or guardian), or other significant person, such as a relative.
2. Willingness to participate in the study and provide written informed consent.

### Exclusion criteria

1. The participants had sexual experience.

### Sample Size

The sample size was determined by statistical power analysis to ensure sufficient numbers. Previous studies provided the effect sizes. According to Cohen (1988), the sample size was calculated with the following formula:

$$N = \frac{\lambda (1 - R^2_{Y-B}) + U + 1}{R^2_{Y-B}}$$

Where N = the total number of the sample size

$\lambda$  = non-centrality parameter

R = effect size of the independent variables on the dependent variable

The value of  $\lambda$  was taken from the  $\lambda$  table. The criteria were as follows:

1. Significant criteria,  $\alpha$ , was set at .05.
2. The number of independent variables,  $u$ , comprised 4 independent variables.
3. The degree of freedom of the denominator of the F ratio,  $v$ . According to Cohen, a trial value of  $\lambda$  for  $v=120$  yields an N of sufficient accuracy. Therefore, a trial value of  $v=120$  was used in this study.
4. Desired Power - A maximum of 10% of Type II errors was accepted in this study. Thus, power = .90 were used to determine the sample size. The value of  $\lambda$  from the  $\lambda$  table where  $\alpha = .05$ ,  $u = 4$ ,  $v = 120$  and power = .90 is 16.0 (Cohen, 1988 p. 452).

Although several previous studies have used the Theory of Planned Behavior as the framework for reporting the effects of intention regarding premarital sexual behavior, the effects of sexual abstinence behavior among early and middle adolescents has hardly ever been examined in Thailand. Consequently, the researcher set the effect size at a low level ( $R^2 = .10$ ) to obtain the most accurate sample size (Cohen, 1988).

To determine the total number of the sample size (N), the non-centrality parameter ( $\lambda$ ) and effect size values were entered into the following equation.

$$N = 16.0 (1 - .10) + 4 + 1 / .10$$

$$N = 163.4$$

Based on these criteria, at least 164 subjects were required for the study. Ten percent additional subjects were added in order to compensate for incomplete data. Consequently, a minimum of 180 participants was optimal for participation in this study.

Alternatively, the ratio of estimated parameters per number of subjects generally was used to calculate the sample size of the Structural Equation Modeling (SEM) (Hair, Black, Babin, Anderson, & Tatham, 2010). Hair et al. recommended that sample size requirements be 5-20 respondents per parameter. In order to prevent the problems of multivariate normality, a minimum sample size requirement for the SEM of 150 was also recommended with seven or fewer constructs, modest communalities (0.5) and no under-identified constructs. Additionally, Tabachnick and Fidell (2007) further suggested 10 respondents per estimated parameter for determining adequate sample size. Moreover, Kerlinger and Pedhazur (1973) also suggested 30 participants per parameter to determine the sample size for the SEM. From the hypothesized model (see Figure 2.2), there were 11 estimated parameters. If the estimated parameters were equal to 11, the sample size would be equal to 55 or 330 subjects. The study of intention to engage in premarital sex found the response rate to be quite low at approximately 60% (Cha et al., 2007). Therefore, this study will include an additional 132 subjects to account for refusal to participate and incomplete data. Thus, the total numbers of participants suggested for this study should be at least 77 or 462 participants.

However, Kiline (1998) suggested that a sample size of less than 100 could be considered “small” for descriptive purposes in path analysis; a sample size between 100 and 200 subjects could be considered a “medium” sample size which was better than minimum, but not an absolute solution because issues such as model complexity must also be considered. Generally speaking, a larger sample size would be required for the SEM (Hair et al., 2010). In this study, the ratio of the number of model parameters to the number of subjects was 1:30 and the estimated sample size was 462 participants. Additionally, the percentage of young female sexually active students was 8.9 % (Srivaniachakorn et al., 2010). Subsequently, the researcher will

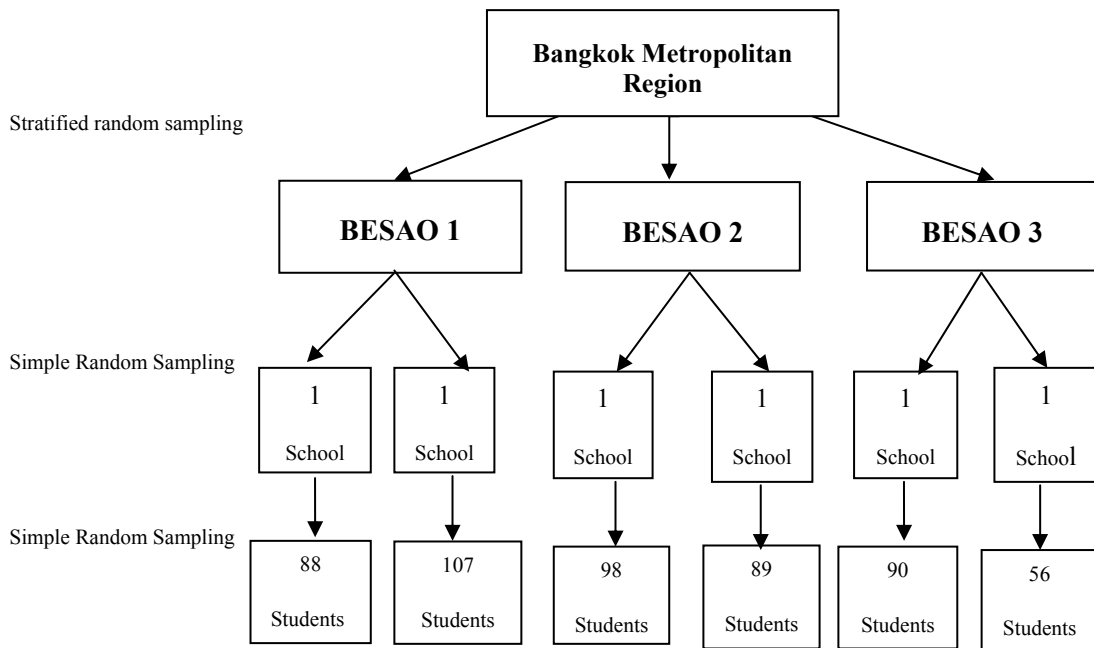
add 10 % to account for the chance of other sexually active girls. Therefore, the total number of participants should comprise 495 cases. However, once data were collected, some school teachers asked the researcher to collect the data from the entire students who were sampled. Then the total number for the sample size grew larger than estimated to 528 participants.

### **Sampling Method**

To recruit the participants for this study, the researcher used the Multi-Stage Random Sampling technique according to the following procedures.

1. There are three Education Commission Service Areas in the Bangkok Metropolitan region (Bangkok Educational Service Area Offices 1-3). Accordingly, the participants were selected from these three area offices. The names of two schools in each Educational Service Area Office were random sampling from each Educational Service Area Office. A total of six schools were chosen.

2. For each targeted school, the samples were recruited to participate in this study by the random sampling in guidance hours. Approximately, 30 female students from each grade (Grades 7-9) to participate in this study. The total number of participants was 528. However, after excluded the incomplete questionnaires and the participants who had sexual experience, the total number of participants were 470 cases.



**Figure 3.1** Stratified Multi-Stage Random Sampling Procedures

**Setting**

This study was conducted in Bangkok, Thailand. The participants were recruited from students studying in Grades 7, 8, and 9 of secondary schools under the Office of the Basic Education Commission, Ministry of Education.

**Research Instrumentation**

**Instrument Development**

This study employed three instruments to obtain data on the study variables including the Demographic Data Questionnaire, the Parent-Daughter Sexual Abstinence Communication Questionnaire and the Sexual Abstinence Intention during the School Years Questionnaire which was modified from the Sexual Intercourse Intention during the School Years Questionnaire (Fongkaew et al., 2006). Based on the four major constructs of the TPB (behavioral beliefs, normative beliefs, control beliefs, and intention) and the parent-based expansion of TPB, a modified version of the Sexual Abstinence Intention during the School Years Questionnaire and the

Parent-Daughter Sexual Abstinence Communication Questionnaire were used to predict sexual abstinence intention among early and middle adolescent females. All of the instruments were self-report questionnaires which reported as follows:

### **1) Demographic Data Questionnaire**

The researcher developed the Demographic Data Questionnaire to request information about each participant's age, grade, grade point average (GPA), religion, parental educational attainment, parental marital status, living arrangements, family income and sexual experience (Appendix F).

### **2) Parent-Daughter Sexual Abstinence Communication Questionnaire**

The Parent-Daughter Sexual Abstinence Communication Questionnaire was not developed in Thailand, so the researcher developed the instrument based on the findings of the focus group discussions and the literature review. The subjects recruited from one high school in vicinity area of Bangkok. Among these, seven participants lived with their mothers and fathers, another lived with only her father, and the other lived with her mother and relative. Additionally, five of participants live in nuclear family and the others were live in extended families. The careers of their parents were merchants, labors, and technician. The grade point average was at moderate to high level (ranging from 2.97 to 3.78). Most of them have had no sexual experience and never had boyfriends at the time of the interview. The discussions were conducted within 45 minutes.

The participants in focus group included 9 female adolescents studying in secondary school at Grades 7-9 (Matthayom1-3) ages between 12-16 years. All of the adolescents participating in the research were Buddhists. Seven lived with their parents, while one lived with her father only and the last lived with her mother and another relative. Five of the participants' parents were merchant, labors and technicians, and the participants' Grade Point Averages ranged from 2.97 to 3.78. Most of the participants had never had sexual experience and/or boyfriends at the time of the study.

The results from the focus group interview revealed topics discussion related to parent-daughter sexual abstinence communication. It included strategies to

practice sexual abstinence during the school years including; a) thoughts, such as thought about the negative consequences of early sexual intercourse; b) actions, such as avoiding risk situation; c) interactions, such as saying “No”, refusal skills to engage in sexual activities. The findings showed that nearly all students perceive that their parents previously discussed sexual abstinence during the school years. Their parents had told them to refrain from sexual intercourse by performing the behavior of “good” Thai girls such as modest dress (no miniskirts or overly short shorts), finishing school before having a boyfriend and letting parents know if they had a boyfriend. In addition, they perceived that their parent usually talked to them about strategies for avoiding risky situations potentially leading to sexual intercourse, such as avoiding going out with boyfriends in private places, not allowing a boy to hold their hand and abstaining from alcohol consumption. Furthermore, their parents regularly explained the negative consequences of engaging in sexual intercourse during the school years such as unwanted pregnancy, AIDS infection and dismal futures. Interestingly, nearly all of the participants reported that their parent had not taught them about refusal skills and had not restored confidence with them about refraining from sexual intercourse during the school years.

The results of the content analysis of the elicitation interviews were used to construct a set of questionnaires comprising three components containing 25 items (Appendix F) with the following three domains:

a) Thoughts consisted of ten items measuring the perception of adolescents’ daughters toward the transmission process between parents and daughters with emphasis on the negative consequences of early initiation of sexual intercourse during the school years. This process was both verbal and nonverbal through auditory and visual channels. The ten items are Questions 1 to 10.

b) Actions comprised eight items measuring the perception of adolescents’ daughters toward the parent-to-child transmission process with emphasis on the messages related to proper performance such as dressing modestly, avoiding certain places or risk situations. This process was both verbal and nonverbal through auditory and visual channels. The eight items are Questions 11 to 17.

c) Interaction consisted of eight items measuring the perception of adolescent daughters toward the parent-to-child transmission process with emphasis

on the messages related to performing a manner of Thai good girls with the opposite sex. This process was both verbal and nonverbal through auditory and visual channels. The eight items are Questions 18 to 25.

The abovementioned behaviors were measured by using 5-point Likert-type scales with scores ranging from 1 = “Never” to 5 = “Very Often”. Higher scores indicated higher levels of parent-daughter sexual abstinence communication in the family.

After developing the Parent-Daughter Sexual Abstinence Communication Questionnaire, the researcher checked the psychometrics test for both validity and reliability. The content validity index (CVI) was calculated after the instrument was reviewed by 5 experts (Appendix E) then tested for reliability; and internal consistency (Cronbach’s alpha) was calculated after submitting the questionnaire to trial implementation with 30 female adolescents. Some items were partly revised and deleted according to the comments of the experts. The mean CVI equaled .95 and the Cronbach’s alpha coefficient was .94 for the aggregate items. When each component was considered individually, the Cronbach’s alpha coefficients equaled .93, .86, and .82 for thoughts, actions and interactions, respectively.

### **3) Sexual Abstinence Intention during the School Years Questionnaire**

Two steps were involved in modifying the Intention to Have Sexual Intercourse during the School Years Scale developed by Fongkaew et al. (2006). The elicitation study and pilot testing for sexual abstinence intention during the school years of early and middle Thai female adolescents were described as follows:

#### **Step I: Elicitation Study**

According to the TPB, the questionnaires for each construct should be developed from a pilot study to identify accessible behavioral, normative, and control beliefs (Ajzen, 2002). In this study, the researcher conducted the focus group discussion with 9 female students to identify accessible behavioral, normative, and control beliefs toward sexual abstinence during the school years. All 9 participants were the same participants who participated in parent-daughter sexual abstinence

communication focus group discussion. The discussions were conducted within 45 minutes.

As a group, the students were asked to consider the advantages and disadvantages of sexual abstinence during the school years, people with potential influence on sexual abstinence behavior, the students' agreement to comply with those people, perception of the ease or difficulty of engaging in sexual abstinence behavior, and the perception of the specific control factors either facilitating or impeding personal power to influence the likelihood of engaging in sexual abstinence behavior. The abovementioned represents behavioral, normative, and control beliefs toward sexual abstinence behavior during the school years of female adolescents. Tape-recordings were used during the discussion. The content-analysis technique was employed to analyze the data. The elements extracted from the analysis were utilized to modify the Intention to Have Sexual Intercourse during the School Years Scale.

The Sexual Abstinence Intention during the School Years Questionnaire consisted of the following four major constructs:

### **1. Behavioral Beliefs toward Sexual Abstinence during the School Years Scale**

The Behavioral Beliefs toward Sexual Abstinence during the School Years Scale was assessed in terms of the following two subscales:

#### **a) Behavioral Beliefs toward Sexual Abstinence**

Behavioral beliefs toward sexual abstinence comprised the beliefs of early and middle adolescent Thai females toward a positive or negative outcome yielded by refraining from sexual intercourse during the school years. These were measured by using 5-point Likert-type scales with scores ranging from 1= "Strongly Disagree" to 5= "Strongly Agree". Higher scores indicate higher positive behavioral beliefs toward sexual abstinence.

#### **b) Outcome Evaluations toward Sexual Abstinence**

Outcome evaluations toward sexual abstinence were the evaluation of early and middle adolescent Thai females toward the consequences of refraining from sexual intercourse during the school years. These were measured by using 5-point Likert-type scales with scores ranging from 1= "Extremely Unimportant" to 5=

“Extremely Important” where higher scores indicated more positive outcome evaluation regarding the consequences of sexual abstinence behavior.

The abovementioned was evaluated by the strong points of each prominent belief combined in a multiplicative method with the subjective evaluation of the “belief” feature and the summation over the  $n$  salient beliefs. Directly proportional to this summative beliefs index is a person’s attitude. The responses from the negative items in both parts of the scale were re-coded before calculating the total scores. There were 33 items in each subscale. The possible range of the behavioral beliefs toward sexual abstinence scale ranged from 33-825. A high score indicated higher positive behavioral beliefs toward sexual abstinence behavior during the school years.

## **2. Normative Beliefs toward Sexual Abstinence during the School Years Scale**

The Normative Beliefs toward Sexual Abstinence during the School Years Scale were assessed in terms of the following two subscales:

### **a) Normative Beliefs toward Sexual Abstinence**

Normative beliefs toward sexual abstinence were the significant referents concerned and approval or disapproval of early and middle adolescent Thai females in refraining from sexual intercourse during the school years. These were measured by using 5-point Likert-type scales with scores ranging from 1= “Definitely Do Not Do” to 5= “Definitely Do” where higher scores reflected greater influence by individuals who were important to the participants.

### **b) Motivation to Comply with Sexual Abstinence**

Motivation to comply with sexual abstinence was the early and middle adolescent Thai females’ motivation to comply with the referents’ desire for the adolescent to refrain from sexual intercourse during the school years. These were measured by using 5-point Likert-type scales with scores ranging from 1= “Very Little” to 5= “Very Much” where higher scores reflected greater influence by individuals who are important to the early and middle adolescent Thai females.

The abovementioned were evaluated by each normative belief multiplied by the corresponding motivation to comply and the summary of the products over the referents. Directly proportional to this summative beliefs index is a degree of

perceived normative force to perform the behavior. Each subscale contained 12 items. The possible range of the normative beliefs toward the sexual abstinence scale ranged from 12–300 where higher scores represented greater influence of others on sexual abstinence behavior during the school years.

### **3. Control Beliefs toward Sexual Abstinence during the School Years Scale**

The questionnaire on Control Beliefs toward Sexual Abstinence during the School Years was assessed in terms of the following two subscales:

a) Control Beliefs toward Sexual Abstinence

Control beliefs toward sexual abstinence were the early and middle Thai female adolescents' perception of the ease or difficulty of refraining from sexual intercourse during the school years which were measured by using 5-point Likert-type scales with scores ranging from 1= "Very Difficult" to 5= "Very Easy", where higher scores reflected greater control beliefs.

b) Perceived Powers toward Sexual Abstinence

Perceived powers toward sexual abstinence were the early and middle adolescent Thai females' perceptions of personal power to influence the likelihood of refraining from sexual intercourse during the school years which were measured by using 5-point Likert-type scales with scores ranging from 1= "Very Unlikely" to 5= "Very Likely", where higher scores reflected greater perceived powers of refraining from sexual intercourse during the school years.

The abovementioned were evaluated by each control belief multiplied by the corresponding perceived power and the summation over the  $n$  resulting in products of perceived behavioral control. The direct proportion of this summative beliefs index is a person's perceived behavioral control. Responses from the negative items in both parts of the scale were re-coded before calculating the total scores for perceived behavioral control toward sexual abstinence behavior. Each subscale contained 17 items. The possible range of control beliefs toward the sexual abstinence scale ranged from 17–425 where higher scores represented greater perceived ease in performing sexual abstinence behavior during the school years.

#### **4. Sexual Abstinence Intention during the School Years Scale**

The Sexual Abstinence Intention during the School Years scale developed by the researcher to assess in terms of early and middle female adolescents' determination to actively avoid sexual intercourse on all occasions during the school years. This aspect was measured by 4 responses on 5-point Likert-type scales with scores ranging from 1= "Absolutely Not" to 5= "Absolutely Yes". The total score ranged from 4–20 where higher scores reflected greater intention to practice sexual abstinence during the school years.

#### **Step II: Pilot Testing**

Pilot testing was conducted based on the elicitation results. The questionnaire were constructed and piloted with 30 early and middle female students' age 13-14 years studying in Grades 7-9. The participants were measure the salient behavioral beliefs, normative beliefs and control beliefs of the population studied. All of the modified items of the instrument were simply written to tap into various aspects of each salient belief.

After modifying the Sexual Abstinence Intention during the School Years Questionnaire, the researcher ensured the psychometrics test for both validity and reliability. The content validity index (CVI) values for each instrument were calculated after the instruments had been reviewed by 5 experts comprising one researcher and educator in health and behavioral science, one nursing educator and researcher expert in reproductive and sexual health among adolescents, two nursing educators in TPB and one faculty member in adolescent-psychiatric nursing. All of the experts were asked to rate the relevance of each item to the specific conceptual definition. The scale ranged from 0 to 1 with the responses of "Disagree" or "Agree". Some items were partly revised and deleted in line with the comments of the experts. The proportion of items rated by experts as "Agree" divided by the number of five experts was calculated for Content Validity Index (CVI).

Furthermore, clarification of the instructions and wording of items were tested by ten female students studying Grades 7-9 in a secondary school. The starting and finishing times when the students completed the questionnaires were recorded. These students discussed the difficulty of responding to all items and some items were

revised again as all students stated perceived them as difficult. Finally, the internal consistency (Cronbach's alpha) was calculated after submitting the questionnaire to trial implementation with 30 female adolescents. Pilot testing was then conducted to ensure that the constructs of the TPB were comprehensively identified and measured. The results were demonstrated as follows:

#### **Behavioral Beliefs toward Sexual Abstinence during the School Years Scale**

The content validity index of the Behavioral Beliefs toward Sexual Abstinence Scale for both the valued beliefs parts and the evaluation parts were 0.98. The reliability of both the valued beliefs section and the evaluation section were .84.

#### **Normative Beliefs toward Sexual Abstinence during the School Years Scale**

The content validity index of the Normative Beliefs toward Sexual Abstinence Scale was 0.95. The results from the pilot testing showed this measure was easy to understand for students studying in Grades 7-9. The reliability in the pilot test of the normative beliefs section was .89 and the motivation to comply section was .94.

#### **Control Beliefs toward Sexual Abstinence during the School Years Scale**

The content validity index of the Control Beliefs toward Sexual Abstinence Scale was 0.92. The reliability in the pilot test of the control beliefs section was .81 and the perceived powers section was .74.

#### **Sexual Abstinence Intention during the School Years Scale**

The content validity index of Sexual Abstinence Intention during the School Years Scale was 0.90. The reliability for the pilot test was .75.

**Table 3.1 Research Instrument Reliabilities**

Scale	Number of items	Cronbach's Alpha Coefficient
Parent-Daughter Sexual Abstinence Communication	25	.94
- Thought	10	.93
- Action	7	.86
- Interaction	8	.82
Behavioral Beliefs	33	.84
Outcome Evaluations	33	.84
Normative Beliefs	12	.89
Motivation to Comply	12	.94
Control Beliefs	17	.81
Perceived Power	17	.74
Sexual Abstinence Intention	4	.75

Table 3.1 showed the reliability estimates' of the parent-based expansion of the TPB, Parent-Daughter Sexual Abstinence Communication, and the Theory of Planned Behavior constructs. In this study, the researcher analyzed the data to estimate the internal consistency and reliability using Cronbach's alpha coefficients. The analysis revealed that Cronbach's alpha coefficients ranged from .74 to .94.

### **Protection of Human Subjects**

Permission to conduct this research was obtained from the Institutional Review Board for the Protection of Human Subjects, Faculty of Medicine, Ramathibodi Hospital, Mahidol University. After approval had been granted, letters of introduction from the Faculty of Graduate Studies, Mahidol University were sent out to the director of each selected school to obtain authorization and cooperation by the researcher. Before collecting the data, the researcher gave each potential participant an information sheet explaining the following: the research objectives, participation details and assurance of no risks associated with participation. The participants were assured of the maintenance of anonymity and confidentiality. They were able to withdraw from the study at any point with no repercussions and did not affect academic achievements. The confidentiality of the respondents' responses was assured

by the use of coded numbers on the questionnaires and the participants submitted the completed questionnaires by themselves in a closed box.

Due to the extremely sensitive nature of sexual topics in Thai culture and because young female adolescents are also a vulnerable group, the protection of human subjects was a critical issue in this study. Although the participants' ages were under 18 years, the researcher decided to waive the documentation consent form of the adolescents' parents in order to protect their confidentiality.

### **Data Collection**

Data were collected from June to July of 2012. Prior to provide students with the consent forms to sign, the researcher introduced herself and also provided information about the study to all selected students. Consent forms containing the objective of the study and human rights of the participants in the study (Appendix D) were distributed to the students. After the participants signed the consent form, the researcher administered the research instruments to the students in their classrooms at a time scheduled by the respective school administrators and classroom teachers. The recruits were seated far apart to ensure individual privacy. The researcher reviewed the directions for completing the research instruments with the students and remained available in the classrooms at all times to further explain the research instruments and answer the questions. The Parent- Daughter Sexual Abstinence Questionnaire was the first session of the instruments, followed by the Sexual Abstinence Intention during the School Years Questionnaire. The Demographic Data Questionnaire was the last session. The participants took approximately 40-45 minutes to complete all of the measurements. After completing the data, the participants submitted the completed questionnaires by themselves in a closed box provided by the researcher to reassure the subjects about confidentiality. In keeping with Thai tradition and respect, all students involved in the data collection process received small gifts as a show of appreciation for their time.

## Data Analysis

The sample was described by descriptive statistics (mean, standard deviation, percentage and frequency distribution). The relationships among the study variables were determined by Pearson's Product Moment correlation. The 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 TPB model and the parent-based expansion of the TPB to predict sexual abstinence intention in adolescent females. In the proposed study, the procedures for data analysis were presented as follows:

1. Data was checked for missing information and as a means of ensuring accuracy by using descriptive statistics (frequency with exploration of the characteristics of the variables). The researcher rechecked any errors in the input with the raw data and corrected data entry errors.

2. The Software Product for Service Solution (SPSS), version 18.0 (Predictive Analytic Software, PASW), Mahidol University license, was used to describe the characteristics of the sample, including frequency, percentage, mean, range and standard deviation. Furthermore, distribution properties (skewness and kurtosis) were used to examine the demographic and chosen variables.

3. According to SEM analysis, it is not premises to have missing data in each item of all variables. Hair, Anderson, Tatham, and Black (2006) suggested that the complete case approach (listwise deletion), the all-variables approach (pairwise deletion), and the model-based imputation approach could solve this problem based on SEM. Therefore model-based imputation approach by using the estimation of the values of the sample means of each variable if there were no missing data was used in this study. It means that using analytical stage: substituted with means score to fill the data that were missing was the method used to manage the missing data problems of variables in the structure model.

4. Assumptions of Path Analysis were tested because Path Analysis consists of a series of regression equations and assumptions related to multiple regression, including the assumptions of normal distribution, homoscedasticity, linearity of all relationships and multicollinearity, which were tested with the SPSS

program, version 18.0, and then the LISREL version 8.53 was used to answer the research question and tested for research hypotheses.

5. The hypothesized model was tested through the goodness of fit test statistics. If the model did not fit the data, the model was modified based on modification indices suggestions and the theoretically-based principles to improve the overall fit of the model fit.

## **Summary**

A cross-sectional study design was used to examine the factors predicting sexual abstinence intention among adolescent Thai females. Stratified multiple-stage random sampling was used to obtain the participants studying in secondary schools in Bangkok, Thailand. The participants completed questionnaires about the demographic data, Parent-Daughter Sexual Abstinence Communication Questionnaire and the Sexual Abstinence Intention during the School Years Questionnaire. The demographic data and all of the variables were analyzed by descriptive statistics and the reliability of measurements was analyzed by inferential statistics using the SPSS 18.0 (PASW). Lastly, the research questions were answered by analyzing path analysis with the LISREL program (Version 8.53).

## CHAPTER IV

### RESULTS

This chapter reports the aggregate findings of the statistical analysis for the study. It is divided into two parts. The first part illustrates the descriptive statistics of the participants, including the demographic characteristics of the participants and the descriptive statistics of the study variables and assumption testing. The second part reports the factors predicting sexual abstinence intention during the school years among early and middle Thai female adolescents. The research findings for this study are presented as follows:

#### **Descriptive Statistics of the Participants**

The total number of the participants recruited for this study was 528. However, after 15 incomplete questionnaires and 48 participants who had had previous sexual experience were excluded. Hence, the total number of participants equaled 470 cases.

#### **Demographic Characteristics of the Participants**

The participants were 470 female students studying in grade 7-9. The age ranged from 12 to 16 years old. Among these, 223 (46.8%) participants were early adolescents and 247 (53.2%) participants were middle adolescents. The average age was 13.44 ( $SD = .93$ ) and most of the participants (42.1 %) were 14 years old. The majority of participants comprised of students in Grade 9 (38.1%). The grade point average (GPA) ranged from 1.25 to 4.00 and the average GPA was 3.4 ( $SD = .48$ ). Most of them were Buddhists (95.3%). Approximately 54.9 % of participants reported that they received expenses from their fathers and monthly incomes were more than 1,500 bahts (54.7%). Nearly two-thirds (64.3%) of the participants had sufficient funds and was able to save money. In terms of family characteristics, 69.1% of the

participants stayed with their parents and had two siblings (40.6%). Most parents (65.7%) lived together and had attained elementary educations (27.4% of the fathers and 33.4% of the mothers). In addition, 46.8% of the fathers and 38.3% of the mothers were laborers.

A small percentage of the participants (8.4%,  $n = 43$ ) reported that they had had sexual intercourse during the school years (see Table 4.2). Among these, 19 participants (44.17%) had had their first sexual experience at 14 years of age and extreme cases found the lowest age at first sexual experience to be 8 years of age. The reason for having sexual intercourse was love (25.56%) and the partners at first sexual experience were their boyfriends 88.35% ( $n = 38$ ). Around, 30.23% of the participants had never used condoms during sex and approximately the same percent reported consistent condom use. Approximately, 39.53% of the participants reported only one sexual partner but 27.90 % of the participants claimed having had more than two sexual partners (see Table 4.3). In an extreme case, one participant reported having had 22 sexual partners.

**Table 4.1 Demographic Characteristics of the Participants (n= 470)**

Demographic Characteristics	n	%
<b>Age</b>		
12	91	19.4
13	132	28.1
14	198	42.1
15	47	10.0
16	2	0.4
<b>Educational Attainment</b>		
Grade 7	150	31.9
Grade 8	141	30.0
Grade 9	179	38.1
<b>GPA</b>		
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
<b>Religion</b>		
Buddhist	448	95.3
Christian	7	1.5
Muslim	14	3.0
Other	1	0.2

**Table 4.1 Demographic Characteristics of the Participants (n= 470) (cont.)**

Demographic Characteristics	n	%
<b>Income (Baht per month)</b>		
Below 1,000	85	18.1
1,001-1,500	121	25.7
More than 1,500	257	54.7
Missing	7	1.5
<b>Sufficient Income</b>		
Sufficient with savings	302	64.3
Sufficient	58	12.3
Insufficient	107	21.3
Missing	3	0.6
<b>Supporter (answer more than one)</b>		
Father	258	54.9
Mother	155	33.0
Relative	24	5.1
Other	21	4.4
More than one source	12	2.5
<b>Number of Siblings</b>		
0	29	6.2
1	111	23.6
2	191	40.6
More than 2	96	21.6
Missing	43	9.1
<b>Living Situation</b>		
Father and Mother	325	69.1
Father or Mother	81	17.2
Relative	54	11.5
Others	8	1.7
Missing	2	0.4
<b>Parents' Marital Status</b>		
Living Together	309	65.7
Father/Mother Deceased	29	6.2
Divorced/ Separated	129	27.35
Other	3	0.60
<b>Father's Career</b>		
Unemployed	11	2.3
Farmer	9	1.9
Labor	220	46.8
Government employee	45	9.6
State enterprises	31	6.6
Business	111	23.6
Other	35	7.4
Missing	8	1.7
<b>Mother's Career</b>		
Unemployed	82	17.4
Farmer	8	1.7
Labor	180	38.3
Government employee	31	6.6
State enterprises	22	4.7
Business	143	26.2
Other	23	4.9
Missing	1	0.2

**Table 4.1 Demographic Characteristics of the Participants (n= 470) (cont.)**

Demographic Characteristics	n	%
<b>Father's Educational Attainment</b>		
No Formal Education	6	1.3
Elementary	129	27.4
Secondary School	77	16.4
High School	67	14.3
Vocational Certificate	43	9.1
Diploma	48	10.2
Bachelor Degree or Higher	82	17.5
Missing	18	3.8
<b>Mothers Educational Attainment</b>		
No Formal Education	5	1.1
Elementary	157	33.4
Secondary School	73	15.5
High School	62	13.2
Vocational Certificate	41	8.7
Diploma	42	8.9
Bachelor Degree or Higher	78	16.7
Missing	12	2.6

**Table 4.2 Participants' Sexual Experience (n= 513)**

Sexual Experience	n	%
<b>Sexual Experience</b>		
No sexual experience	470	91.60
Has had sexual experience	43	8.40

**Table 4.3 Demographic Characteristics of the Participants' Sexual Experience (n= 43)**

Demographic Characteristics	n	%
<b>Age at First Sex</b>		
≤12 years	7	16.28
13 years	7	16.28
14 years	19	44.17
15 years	2	4.65
Missing	8	18.60
<b>Reasons for First Sexual Experience (more than one possible)</b>		
Want to try	4	9.3
Love	11	25.56
Force	4	9.3
Drinking Alcohol	1	2.32
Stay Alone Together	5	11.65
More than Two Reasons	21	40.75

**Table 4.3 Demographic Characteristics of the Participants' Sexual Experience (n= 43) (cont.)**

<b>Demographic Characteristics</b>	<b>n</b>	<b>%</b>
<b>Sexual Partner</b>		
Boyfriend	38	88.35
Friend	2	4.65
Acquaintance	1	2.32
Other	2	4.65
<b>Condom Use</b>		
Never	13	30.23
Sometimes	7	16.26
Often	8	18.60
Every time	13	30.26
Missing	2	4.65
<b>Number of Partners</b>		
1	17	39.53
2	6	13.95
More than 2	12	27.90
Missing	8	18.60

### **Descriptive Statistics of the Study Variables**

The following was a description of the major variables; sexual abstinence intention during the school years, parent-daughter sexual abstinence communication, behavioral beliefs, normative beliefs, and control beliefs toward sexual abstinence. The descriptive statistics for all variables are shown in Tables 4.4.

#### **Sexual Abstinence Intention during the School Years**

Sexual abstinence intention during the school years, which was a dependent variable in this study, was measured by 4 items with scores ranging from 1-5 points. The possible total scores ranged from 4 to 20 with an actual mean score of 15.94 ( $SD = 3.36$ ), (see Table 4.4). When considered in terms of individual items, the participants rated the item of "I intend to practice sexual abstinence until I am 20 years old." with the highest score (Mean= 4.29,  $SD= 0.97$ ).

#### **Parent-Daughter Sexual Abstinence Communication**

Parent-daughter sexual abstinence communication, which was the independent variable in this study, was measured by 25 items with scores for individual items ranging from 1-5 points. The total of possible scores ranged from 25

to 125 points with a mean score of 86.91 ( $SD = 20.18$ ). The three subscales of parent-daughter sexual abstinence communication included thoughts, actions and interactions. The total scores for each subscale ranged from 10 - 50, 7- 35 and 8 - 40 respectively, with mean scores of 31.57, 26.75 and 28.59 for each subscale, respectively (see Table 4.4). When considered in terms of individual items, the item, "I have seen my parents have sex." had the lowest scores. As a result of the negative item, the score was reversed before calculating the points. Consequently, the mean score was changed to the highest (Mean= 4.84,  $SD= 0.06$ ). The item, "My parents told me getting pregnant during the school years would ruin our family reputation," had the lowest scores (Means= 2.81,  $SD= 1.32$ ).

### **Behavioral Beliefs toward Sexual Abstinence**

Behavioral beliefs toward sexual abstinence during the school years were measured by 33 items of behavioral beliefs multiplied by 33 items of outcome evaluations. The total of possible scores for each individual item ranged from 1-25 points while the total of possible scores ranged from 33 to 825. The mean of the total scores was 594.82 ( $SD = 115.15$ ) with a possible range of 240 to 825. When each subscale was considered individually, the individual item scores ranged from 1-5 points. The total scores for behavioral beliefs ranged from 33 to 165. The actual mean for the total score was 140.73 ( $SD = 15.89$ ) within a range of 74 to 165. The outcome evaluations ranged from 33 to 165. The actual mean of the total score was 136.24 ( $SD = 15.33$ ) within a range of 89 to 165 (see Table 4.4). When considered in terms of individual items, the item, "Being sexually abstinent during the school years prevents unintended pregnancy," had the highest scores (Mean= 21.88,  $SD= 5.97$ ) and the item, "Having sexual abstinence during the school years receives praise from parents," had the lowest scores (Means= 12.55,  $SD = 7.89$ ).

### **Normative Beliefs toward Sexual Abstinence**

Normative beliefs toward sexual abstinence during the school years were measured by 12 items of normative beliefs multiplied by 12 items of motivation to comply with the scores ranging from 1-25 points. The total of possible scores ranged from 12 to 300 with a mean of 257.11 ( $SD = 55.99$ ), within an actual ranged from 18

to 300. When considered in terms of individual subscales, the scores for each individual item ranged from 1-5 points. The total of the possible scores for the normative beliefs ranged from 12 to 60. The mean for the total score was 55.95 ( $SD = 7.47$ ) within a range of 15 to 60. The total of possible scores for motivation to comply ranged from 12 to 60 with a total score mean of 54.40 ( $SD = 7.70$ ) within an actual range of 12 to 60 (see Table 4.4). When considered in terms of individual items, the results showed the score to be highest on maternal influence in relation to sexual abstinence intention during the school years (Mean= 22.41,  $SD= 5.00$ ). The item of boyfriend influence had the lowest scores (Means= 19.12,  $SD= 6.45$ ).

### **Control Beliefs toward Sexual Abstinence**

Control beliefs toward sexual abstinence during the school years were measured with 17 items of control belief multiplied by 17 items of perceived powers. The scores for each individual item ranged from 1-25 points, while the total of possible scores ranged from 17 to 425. The total score mean was 293.87 ( $SD = 60.96$ ) within an actual range of 87 to 425. When considered in terms of each individual variable, the scores for each individual item ranged from 1-5 points. The total possible scores for control beliefs ranged from 17 to 85. The total score mean was 72.01 ( $SD = 9.70$ ) within an actual range of 23 to 85. The total scores for perceived powers ranged from 17 to 85 with a total score mean of 68.60 ( $SD = 9.02$ ) within an actual range of 43 to 85 (see Table 4.4). When considered in terms of individual items, the item, "Although I drink alcohol, I adhere to practice sexual abstinence during the school years" and "Although I have sexual drive, I adhere to sexual abstinence during the school years," had the lowest mean score with 9.36, ( $SD= 5.82$ ) and 11.24 ( $SD= 7.01$ ) respectively. The item, "Thinking of family makes me practice sexual abstinence during the school years," had the highest score (Mean= 22.64,  $SD= 4.59$ ).

**Table 4.4 Descriptive Statistics of the Study Variables (n=470)**

<b>Variables</b>	<b>Possible Range</b>	<b>Actual Range</b>	<b>Mean</b>	<b>Med</b>	<b>SD</b>	<b>Sk.</b>	<b>Ku.</b>
<b>Sexual Abstinence Intention</b>							
Total	4-20	4-20	15.94	17.00	3.36	-0.99	0.78
<b>Parent-Daughter Sexual Abstinence Communication</b>							
Thoughts	10-50	10-50	31.58	32	9.66	-0.09	-0.85
Actions	7-35	11-35	26.75	28	6.04	-0.64	-0.44
Interactions	8-40	6-40	28.59	30	7.28	-0.68	-0.12
Total	25-125	29-125	86.91	88.50	20.18	-0.42	-0.34
<b>Behavioral Belief toward Sexual Abstinence</b>							
Behavioral Beliefs	33-165	74-165	140.73	143	15.89	-1.07	-1.82
Outcome Evaluation	33-165	89-165	136.24	136	15.33	-0.34	-0.26
Behavioral Beliefs Multiplied by Outcome Evaluation	33-825	240-825	594.82	598	115.15	-0.48	.06
<b>Normative Beliefs toward Sexual Abstinence</b>							
Normative Beliefs	12-60	15-60	55.95	59	7.47	-3.07	10.83
Motivation to Comply	12-60	12-60	54.40	58	7.70	-2.14	6.37
Normative Beliefs Multiplied by Motivation to Comply	12-300	18-300	257.11	280	55.99	-1.75	2.89
<b>Control Beliefs toward Sexual Abstinence</b>							
Control Beliefs	17-85	23-85	72.01	76	9.70	-1.31	2.35
Perceived Powers	17-85	43-85	68.60	69	9.02	-0.35	-0.51
Control Beliefs Multiplied by Perceived Powers.	17-425	87-425	293.87	300.50	60.96	-0.53	0.03

## Factors Predicting Sexual Abstinence Intention

### Establishing the Psychometric Properties by LISREL

According to the TPB, the major variables in this theory (attitude, subjective norms, and perceived behavioral control) could be measured directly and indirectly (Ajzen, 1985, 1991). In this study, the indirect measure was used to measure the constructs of the TPB. The parent-daughter sexual abstinence communication, the extension of the TPB, was a direct measure. These variables were identified as either exogenous, which were independents with no prior causal variable, and endogenous, which were mediating variables and pure dependent variables. These variables set up the structural equation model for the path analysis which was used to answer the questions regarding the relationships between a set of independent variables and a dependent variable as a causal modeling technique. The details of the endogenous variables and exogenous variable are as follows:

<b>Exogenous Construct</b>	<b>Endogenous Constructs</b>
Parent-Daughter Sexual Abstinence Communication	Behavioral Beliefs toward Sexual Abstinence
	Normative beliefs toward Sexual Abstinence
	Control beliefs toward Sexual Abstinence
	Sexual Abstinence Intention

In this study, the model consisted of five key variables with sets of independent variables and dependent variables, including parent-daughter sexual abstinence communication, behavioral beliefs, normative beliefs, and control beliefs to be selected factors affecting sexual abstinence intention. The exogenous variable was parent-daughter sexual abstinence communication. The endogenous variables were behavioral beliefs, normative beliefs, control beliefs and sexual abstinence intention during the school years. In the causal model, the dependent variable was the sexual abstinence intention during the school years and behavioral beliefs, normative beliefs, and control beliefs toward sexual abstinence as mediating factors.

### **Preliminary Analysis: Testing Assumptions**

To ensure the data were not violating the assumption, including normality, linearity, homoscedasticity and multicollinearity before the multivariate analysis for the structural equation model (SEM) was performed. The details of the data are illustrated as follows:

#### **Normality**

One of the necessary assumptions of the multivariate analysis testing is the normality of the independent and dependent variables. The univariate normality of the variables (skewness, kurtosis and zero-scores) was used. The value of skewness and kurtosis were zero as well as the values of skewness and kurtosis which were divided by standard error (the Z- score) within a range of  $\pm 1.96$  at a significance level of .05 or  $\pm 2.58$  at a significance level of .01 (Hair et. al, 2010) when the distribution obtained was normal. As shown in Table 4.7, most of the variables demonstrated logical normality because the values of skewness and kurtosis were close to zero, except for the subjective norm and sexual abstinence intention during the school years.

Overall, non-normal distribution should be transformed in order to attain normality. Although normality can have serious effects on a small sample size less than 50 cases, a large sample size comprising more than 200 cases minimizes the impacts well (Hair et al., 2010). According to Hair et al., the rule of thumb regarding the transformation data may change the interpretation of the variables. The use of variables with untransformed data should be performed with profiling or interpreting results (p. 97). In this study, the sample size was 470 cases. Consequently, the original data was used without transformation.

**Table 4.5 Univariate Normality of the Study Variables (n= 470)**

Variables	Skewness (SE=0.113)	Kurtosis (SE=0.225)	Z-score	
			Skewness	Kurtosis
pc	-0.42	-0.32	-3.81	-1.45
bboe	-0.49	-0.05	-4.45	0.22
nbmc	-1.77	2.99	16.09	13.59
cbpp	-0.55	0.06	-5.00	0.27
Intention	-1.02	0.88	-9.27	4.00

bboe = Behavioral Beliefs Multiplied by Outcome Evaluation  
 nbmc = Normative Beliefs Multiplied by Motivation to Comply  
 cbpp = Control Beliefs Multiplied by Perceived Powers

**Linearity**

Linearity is referred to as the straight line relationship between two variables representing the degree to which the change of the dependent variable is associated with the independent variables (Tabachnich & Fidell, 2007; Hair et al, 2010). The scatter plots of the independent variables with the dependent variable were examined to assess linearity in this study. The results indicated no evidence of non-linearity of the variables. In addition, the correlation matrix of the study variables revealed all predictors to be significantly correlated with the sexual abstinence intention during the school years (see Table 4.11). These results indicated no severe violations of the linearity assumption.

**Homoscedasticity**

Homoscedasticity of variance is an assumption exhibiting equal levels of variance across the range of all data values. The residuals from regression analysis were plotted for the predicted values and against the dependent variables for testing this assumption, (Hair et al., 1998). The results showed a straight line from the lower left corner to the upper right corner, thereby indicating that the model fit the data in this study.

**Multicollinearity**

Multicollinearity occurs when there is a high relationship among the variables, which can affect the interpretation of the study findings because the procedures reduced any single independent variable’s predictive power by the extent of association with the other independent variables (Hair et al., 2006). Hair et al. also explained that a high degree of correlations among variables can be tested by the following three indicators: 1) correlation coefficients between independent variables exceeding 0.85; 2) tolerance values less than 0.19 and variance inflation factor (VIF) more than 5.3 and 3) all condition indices were above the threshold value of 30. Furthermore, the identifying variables with variance proportion were above or equal to .90 where two or more coefficients indicated evidence of multicollinearity.

**Table 4.6 Testing for Multicollinearity of the Study Variables (n= 470)**

Variables					Tolerance	VIF	
1.Parent-Daughter Sexual Abstinence Communication (pc)					0.933	1.072	
2.Behavioral Beliefs Multiplied by Outcome Evaluation (bboe)					0.595	1.681	
3.Normative Belief Multiplied by Motivation to Comply (nbmc)					0.646	1.549	
4.Control Beliefs Multiplied by Perceived Powers (cbpp)					0.621	1.611	
Model Dimension	Eigen Value	Condition Index	Constant	Variance Proportions			
				pc	bboe	nbmc	cbpp
1	4.900	1.000	0.00	.00	.00	.00	.00
2	0.046	10.368	0.00	.71	.02	.11	.05
3	0.021	15.343	0.01	.04	.03	.80	.44
4	0.018	16.414	0.76	.24	.03	.05	.32
5	0.016	17.608	0.22	.01	.92	.04	.19

The results from the regression analysis indicated that 1) the bivariate correlations ranged between 0.24 and 0.56, no correlation was greater than .85 (see Table 4.11); 2) the tolerance values ranged between 0.59 and 0.93, all values more than 0.19 and variance inflation factors (VIF) ranged between 1.07 and 1.68 with none exceeding 5.3 (see Table 4.10): and 3) the condition indices were above the threshold value of 30, and all variance proportions were less than .90 (see Table 4.10). Therefore, the assumption of no multicollinearity problem was accepted.

**Table 4.7 Correlation Matrix of the Study Variables (n= 470)**

Variable	pc	bboe	nbmc	cbpp	Intention
1. pc	1.00				
2. bboe	.244**	1.00			
3. nbmc	.126**	.534**	1.00		
4. cbpp	.209**	.556**	.515**	1.00	
5. Intention	.208**	.279**	.290**	.428**	1.00

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\*\*P< .01

In summary, the testing of the data in this study, including the normality, linearity, and multicollinearity demonstrated no violation of the criteria for path analysis.

#### **Preliminary Analysis: Regression Analysis**

Path analysis was used to answer the research question regarding the direct and indirect effects between the set of dependent and independent variables. Conducting the path analysis involved preparation and the consideration of analysis limitations (Munro, 2010). For the preparation step, multiple regression was carried out by exploring the factors influencing sexual abstinence intention. The results showed that four predictors significantly accounted for 20.30 percent of the variability in sexual abstinence intention ( $R^2 = .203$ ,  $F = 29.70$ ,  $p = .000$ ). The strongest predictor was control beliefs, thereby indicating significant positive effects ( $\beta = 0.356$ ) on sexual abstinence intention. The other significant predictor was parent-daughter sexual communication ( $\beta = 0.119$ ). Nevertheless, the other two predictors had no significant effects on sexual abstinence intention as demonstrated in Table 4.8.

**Table 4.8 Regression Analysis of the Study Variables (n= 470)**

Independent Variables	b	SE	$\beta$	t-value	P
Constant	7.068	.925	-	7.644	.000
pc	.020	.007	.119	2.767	.006
bboe	.000	.002	.008	.145	.885
nbmc	.005	.003	.084	1.622	.106
cbpp	.019	.003	.356	6.776	.000
R	.457				
R <sup>2</sup>	.203				
Adjust R <sup>2</sup>	.197				
F	29.701				
df	4				
p	0.000				

### **Establishing the Psychosomatics Properties**

The psychosomatics properties for all of the instruments used in this study were content validity and reliability by using Cronbach's alpha coefficient. The content validity index (CVI) was calculated after the instruments were reviewed by five experts. The results of the content validity of all instruments using the mean CVI ranged from .90 to .98. The Cronbach's alpha coefficients of all measurements were tested in a pilot study of 30 participants and 470 total participants as reported in Table 4.9.

**Table 4.9 Summarized Research Instrument Reliabilities**

Scale	Number of Items	Cronbach's Alpha	
		30 cases	470 cases
-Parent-Daughter Sexual Abstinence Communication	25	0.94	0.94
-Thoughts	10	0.93	0.91
- Actions	8	0.86	0.83
- Interactions	7	0.82	0.81
-Behavioral Beliefs	33	0.84	0.89
-Outcome Evaluations	33	0.84	0.87
-Normative Beliefs	12	0.89	0.96
-Motivation to Comply	12	0.94	0.95
-Control Beliefs	17	0.81	0.89
-Perceived Power	17	0.74	0.80
-Sexual Abstinence Intention	4	0.75	0.70

## Principal Analysis

### Structural Model Testing

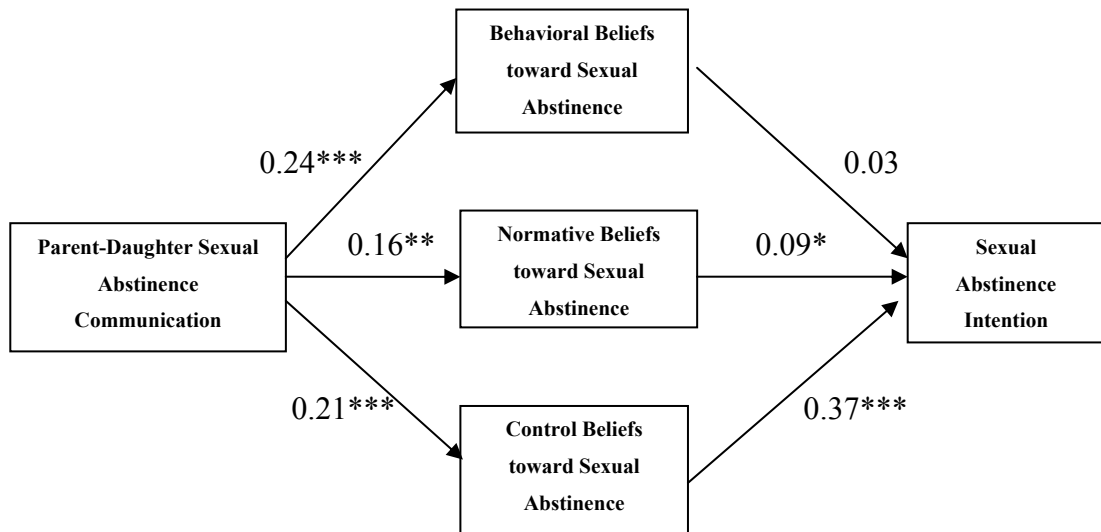
Path analysis was implemented through the LISREL 8.53 program to identify the casual relationships among the study variables and to explain the casual effects, including testing of the hypothesized model of sexual abstinence intention. According to Hair, et al. (2010) and others, the overall model fit indices are composed of 1) the likelihood ratio chi-square ( $X^2$ ); 2) the relative norm chi-square( $X^2/df$ ); 3) the goodness of fit index (GFI); 4) adjusted goodness of fit index (AGFI); 5) and the root mean square error approximation (RMSEA). The overall model fit when the test specified: 1) non significant chi-square; 2) the relative norm chi-square( $X^2/df$ ) less than 2; 3) GFI and AGFI value greater than 0.9; 4) RMSEA value less than 0.05.

The hypothesized model consisted of five variables including parent-daughter sexual abstinence communication; behavioral beliefs, normative beliefs, control beliefs and sexual abstinence intention during the school years were tested.

### **Hypothesized Model**

The hypothesized model in this study consisted of one exogenous variable: parent-daughter sexual abstinence communication and four endogenous variables: behavioral beliefs, normative beliefs, control beliefs, and sexual abstinence intention during the school years. The researcher also fixed the matrix specification followed by the default of the program. The maximum likelihood (ML) method of parameter estimation was employed. The results demonstrated that most paths in the hypothesized model were significant with the proposed direction, except the direct effect of behavioral beliefs on sexual abstinence intention during the school years as shown in Figure 1.

Additionally, the results indicate that the model did not fit the data ( $\chi^2=381.15$ ,  $df = 4$ ,  $\chi^2/df = 95.28$ ,  $p\text{-value} = 0.000$ ,  $RMSEA = 0.449$ ,  $GFI = 0.755$ ,  $AGFI = 0.080$ ). The smallest and largest standardized residuals ranged from 0.000 to 0.510. These results determined that the Fit Index Statistics of the hypothesized model were not within an acceptable range. Thus, the hypothesized model was modified using the modification indices of the program and theoretical support.



\*p< .05; \*\*p< .01; \*\*\* p< .001

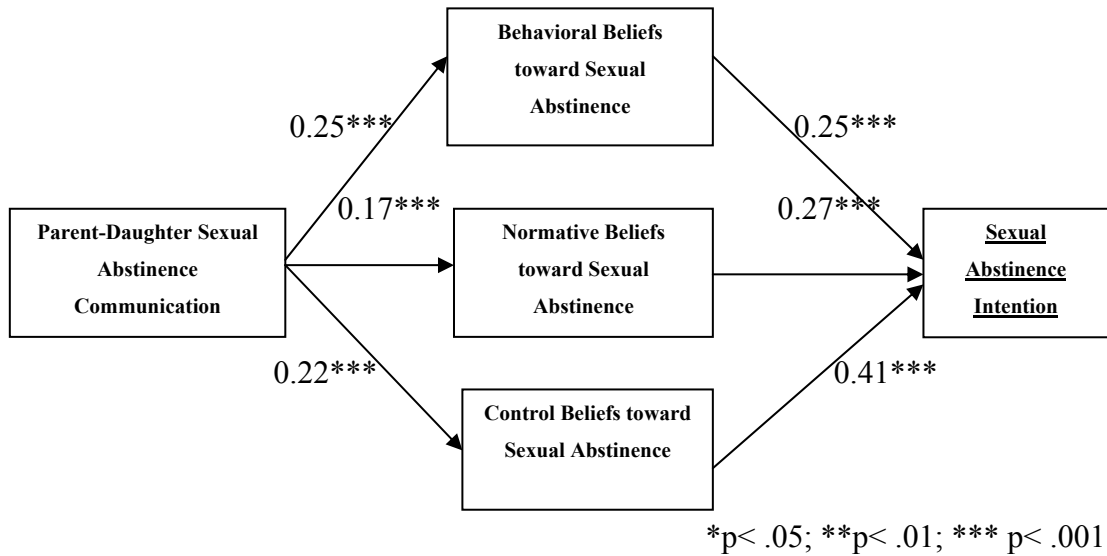
Chi- square ( $X^2$ ) = 381.15, df = 4, p-value = 0.000, RMSEA =0.449

**Figure 4.1:** A hypothesized Model of Sexual Abstinence Intention during the School Years (n= 470)

**Modification Model**

The hypothesized model did not fit the empirical data. Therefore, the model was modified guided by the modification indices of the LISREL program. The output showed the largest modification index to be associated with whether or not the error should be correlated or allowed to be free in the Theta-epsilon matrix which represented the expected drop in the chi-square value. After these modifications, the model fit well with the 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). The smallest and largest standardized residuals ranged from -0.493 to 0.493. Moreover, comparing with the hypothesized model, the modified model had more statistically significant paths and causal relationships than those in the first model. Nearly all paths from the casual variables to the outcome variable were statistically significant paths and had causal variables among those variables. The modified model accounted for 33% ( $R^2 = 0.33$ ) of the explained variance in sexual abstinence intention during the school years among early and middle Thai female adolescents. Thus, the last model was accepted (see Figure 2). The comparison of goodness of fit indices between the hypothesized model and the modified model was demonstrated in Table 4.10 and the Comparison of path

coefficient, standard errors, t-values of parameter estimates and the total effect between the hypothesized model and the modified model are also shown in Table 4.11 and Table 4.12.



Chi- square ( $X^2$ ) = 0.24, df = 1, p-value = 0.621, RMSEA = 0.000,  $R^2$  = 0.33

**Figure 4.2:** A Modified Model of Sexual Abstinence Intention during the School Years (n=470)

**Table 14.10 Comparison of Goodness of Fit Indices between the Hypothesized Model and the Modified Model**

Structural Model	$X^2$	df	$X^2/df$	p-value	GFI	AGFI	RMSEA	Largest Standardized Residual
Hypothesized Model	381.15	4	95.28	0.000	0.755	0.080	0.449	14.250
Modified Model	0.24	1	0.24	0.621	1.00	0.99	0.000	0.493

**Table 4.11 Comparison of Path Coefficient, Standard Errors, T-values of Parameter Estimates and the Total Effect between the Hypothesized Model and the Modified Model**

Path Diagram	Hypothesized Model			Modified Model		
	Path Coefficients	SE	t-values	Path Coefficients	SE	t-values
<b>BETA</b>						
bboe-Intention	0.03	0.042	0.62		0.042	6.05
nbmc- Intention	0.09*	0.042	2.08	.25***	0.041	6.52
cbpp- Intention	0.37***	0.042	8.91	0.27***	0.039	10.44
<b>GAMMAR</b>				0.41***		
pc-bboe	0.24***	0.045	5.34		0.042	5.88
pc-nmbc	0.16**	0.046	3.50	0.25***	0.044	3.82
pc-cbpp	0.21***	0.045	4.64	0.17**	0.044	4.90
				0.22***		

Note:  $t > |1.96|$ ,  $*p < .05$ ;  $t > |2.58|$ ,  $**p < .01$ ;  $t > |4.00|$ ,  $***p < .001$

**Table 14.12 Comparison of Predictive Factor Effects between the Hypothesized Model and the Modified Model**

Variables Causal Variables	Affected	Hypothesized Model			Modified Model		
		DE	IE	TE	DE	IE	TE
bboe → Intention		0.03	-	0.03	0.25***	-	0.25***
nbmc → Intention		0.09*	-	0.09*	0.27***	-	0.27***
cbpp → Intention		0.37***	-	0.37***	0.41***	-	0.41***
pc → bboe		0.24***	-	0.24***	0.25***	-	0.25***
pc → nmbc		0.16**	-	0.26*	0.17**	-	0.17**
pc → cbpp		0.21***	-	0.21*	0.22***	-	0.22***
pc → Intention		-	0.10*	0.10*	-	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

### **Hypothesis Testing Results**

**Hypothesis I:** Parent-daughter sexual abstinence communication has a positive indirect effect on sexual abstinence intention during the school years among early and middle Thai female adolescents via behavioral beliefs, normative beliefs, and control beliefs toward sexual abstinence.

Based on the modified model of sexual abstinence intention during the school years, the results indicated that parent-daughter sexual abstinence communication has a significant positive indirect effect ( $\beta = 0.20$ ,  $p < .001$ ) on sexual abstinence intention during the school years via behavioral beliefs, normative beliefs and control beliefs ( $\beta = .25$ ,  $\beta = .17$ , and  $\beta = .22$ ,  $p < .001$ , respectively). This finding supported behavioral beliefs, normative beliefs and control beliefs as the mediating factor of parent-daughter sexual abstinence communications on sexual abstinence intention during the school years among early and middle Thai female adolescents in this study.

As a result, hypothesis one was supported on the causal relationship as proposed in the parent-based expansion of the TPB model.

**Hypothesis II:** Behavioral beliefs, normative beliefs, and control beliefs toward sexual abstinence had a positive direct effect on sexual abstinence intention during the school years among early and middle Thai female adolescents.

The parameter estimates in Table 14.11 and Figure 2 demonstrated that behavioral beliefs, normative beliefs, and control beliefs toward sexual abstinence have significant positive direct effects on sexual abstinence intention during the school years ( $\beta = 0.25$ ,  $p < .001$ ,  $\beta = 0.27$ ,  $p < .001$ , and  $\beta = 0.41$ ,  $p < .001$ , respectively).

Subsequently, hypothesis two was supported by the causal relationship as proposed in the parent-based expansion of the TPB model.

### **Summary**

This chapter demonstrated the demographic characteristics of early and middle Thai female adolescents. Based on the parent-based expansion of the theory of planned behavior (TPB) model, the descriptive statistics of the study variables were

proposed. The statistics program, SPSS 18, was employed to analyze the preliminary findings. The LISREL 8.53 was employed to examine the hypothesized and modified models. The modified model of sexual abstinence intention during the school years was a good fit to the empirical data. The results of the study supported that parent-daughter sexual abstinence communication had an indirect positive effect on sexual abstinence intention during the school years via behavior beliefs, normative beliefs, and control beliefs toward sexual abstinence. In addition, it also supported the theory of planned behavior regarding the direct effect of the three major components on sexual abstinence intention during the school years of early and middle Thai female adolescents.

## **CHAPTER V**

### **DISCUSSION**

This chapter provides a discussion of the research findings. First, the demographic characteristics of the participants and the study variables are described. Second, the overall model of sexual abstinence intention during the school years among early and middle Thai female adolescents is addressed by using the constructs from the parent-based expansion of the TPB including parent-daughter sexual abstinence communication, behavioral beliefs, normative beliefs, control beliefs, and sexual abstinence intention during the school years are discussed. This section also discusses the hypotheses testing. Finally, the last section discusses the strengths and limitations of the study.

#### **Characteristics of the Participants and the Study Variables**

##### **Demographic Characteristics of the Participants**

The results revealed almost of the participants to be female adolescents studying in Grades 7-9 (M.1-3) in Bangkok. The participants' ages were between 12 to 16 years old with an average age of 13.44 years. Among these, 223 (46.8%) participants were early adolescents and 247 (53.2%) participants were middle adolescents. Of all the participants, 91.6% reported they never had sexual experiences. Approximately 8.4 % (n = 43) declared they had had sexual experience. Furthermore, the majority of these participants (44.2%) reported the average age at first experiencing sexual intercourse to be 13.3 years. This finding is congruent with the behavioral surveillance survey of five target groups in Bangkok (2010) conducted by the ASEAN Institute for Health Development, Mahidol University and showing that 8.9% of female students in Grade 8 had had sexual experience with an average age for the first sexual intercourse of 13.1 years old (Srivaniachakorn et al., 2010). It also supports that the median age for first intercourse altered from age 17-18 (Nicholas &

Kittisuksathit, 1996) to 13-15 years. Additionally, 25.6% of the participants who had sexual experienced reported the reason for having first sexual intercourse to be love and 88.4% of the partners at first sexual intercourse to be boyfriends. Approximately 65.0 % of the participants reported inconsistent condom use during sex. This finding is congruent with Suthinphuak (2010) who found nearly all of the students (88.2%) who were studying in Grades 8 and 11 of secondary school in Samutprakan province had had first sexual intercourse experiences with boyfriends or girlfriends and did not use condoms. Moreover, approximately 39.5% of the participants in this study reported that they had had only one sexual partner, but 27.9 % of them had had more than two sexual partners. In terms of family characteristics, 69.1% of the participants lived with their parents and had 2 siblings (40.6%). Most parents (65.7%) were married and lived together and had attained elementary educations (27.4 % of the fathers and 33.4 % of the mothers).

### **Characteristics of the Study Variables**

The major variables in this study were sexual abstinence intention during the school years, parent-daughter sexual abstinence communication, behavioral beliefs, normative beliefs, and control beliefs toward sexual abstinence. The descriptive statistics for all variables were presented in Table 4.4. Next, the discussions of the characteristics of these variables are described as follows:

#### **Sexual Abstinence Intention during the School Years**

Sexual abstinence intention during the school years, which was a dependent and endogenous variable in this study, was measured by 4 items with scores ranging from 1-5 points. The total scores ranged from 4 to 20. The mean of total scores was 15.94 (SD = 3.36), with a range from 4-20. When considered in terms of individual items, the participants rated the item, "I intend to practice sexual abstinence until I am 20 years old," had the highest score (Mean= 4.29, *SD*= 0.97). The results showed that female adolescents had higher mean scores for sexual abstinence intention during the school years than males. In the study of Fongkaew et al. (2012), which was the qualitative study on the topic, "Do Thai parents really know about the sexual risk taking of their children?" with 30 parents and 30 adolescents aged 13-14 years in

Bangkok, the adolescents reported they were expected to have sexual relations only after graduation or marriage. Supametaporn (2006) found similar results, i.e. young women set goals for life security and stability by committing to their studies, take serious consideration before entering romantic relationships and live up to parental expectations. These young Thai women intent to abstain from premarital sex or reported that they would wait until some certain goals in their lives had been achieved.

### **Parent-Daughter Sexual Abstinence Communication**

Parent-daughter sexual abstinence communication was the independent and exogenous variable. It was added to the parent-based expansion of the TPB in this study. This variable was measured by 25 items. The results showed the total mean scores for parent-daughter sexual abstinence communication was quite high (Mean = 87.16, *SD* = 20.09) with scores ranging from 29 to 125. When the three subscales, i.e. thoughts, actions and interactions were considered, the mean scores of each subscale were more than a half (Mean= 31.57, 26.75, and, 28.59, respectively) with the scores ranging from 10-50, 11-35, and 6-40, respectively. The findings indicated the perception of female adolescents toward the transmission process between daughters and parents with emphasis on the statements related to the set of behaviors used to practice sexual abstinence during the school years which frequently occurred both verbally and nonverbally.

These findings were congruent with Laosuwan and Nanthamongkolchai (2002), who studied the sexual socialization of Thai families during the adolescent period (13-18 years), reporting the topic primary caregivers discussed with their children to be maintaining virginity (Ruk-Nuan-Sa-Nguan-Tua) and behaving like gentlemen (86.8%). When considered by gender, parents were found to discuss maintaining virginity and gentlemen's manners with their daughters (94.2%) more than their sons (77.9 %). Additionally, the findings concurred with Siriarunrat (2009) who studied communication about sexuality between parents and their adolescent daughters. The results indicated "parents and daughters responded congruently about frequently discussing proper dress (93.8% in the parents' group, and 81.3% in the daughters' group), limiting the opposite sex relationship to friendship only (93.8%,

and 75.0%, respectively), and avoiding any risky sexual situations (78.1% of both groups)” (p. 104).

The findings were also similar to Boonperm (2001) who studied the sexual topics parents used to teach their teenage sons and daughters. The findings indicated nearly half of the parents participating in the study to have never discussed sexuality with their children. At the same, both fathers and mothers usually discussed proper apparel suitable for age, sex, timing and place with their daughters in addition to abstinence, adverse outcomes of early sexual intercourse, physiological changes, and relationships with the opposite sex and STDs and AIDS prevention. Recently, Butcharoen, Pichayapinyo, and Pawwattana (2012) studied the factors related to sexual risk behaviors using the PRECEDE-PROCEED Model. The participants comprised 150 Thai secondary school students in Lopburi province and the findings indicated the most frequent topic on sexual communication between parents and adolescents to be proper apparel suitable for age, sex, time and place. The topic related to sexual drive management was the least frequently encountered.

The reason might be due to the fact that the topic of adolescent sexuality remains sensitive, while social norms and attitudes about sex remain conservative in Thai society. Thai people feel ashamed and embarrassed to discuss this topic and think communication about sexuality with adolescents might stimulate them to have sex. The above findings are supported by the findings of Rhuchareonpornpanich et al. (2010) who studied parenting and adolescent problem behaviors among adolescents aged 13-14 in Bangkok, finding parents and adolescents to have communication about sex to a low degree, offering the reasons that parents might feel talking about sex could pave the way for initiating adolescent interest in sex, or that their adolescents were too young to discuss sex. In addition, Sridawruang et al. (2010) explored the attitudes of Thai adolescents and parents concerning the barriers preventing parents from providing sex education to their adolescent children. Five themes emerged, i.e. most Thai parents have not taught their children about sex education issues due to the restrictions imposed by traditional Thai culture; perception that sex education is not a parental duty; parental limitations; the generation gap; and the feeling that sexual issues are best not discussed.

In Thai society, parents are the primary learning resource for children and parents regularly anticipate brilliant futures for their children, which can be explained as achieving a secured and promising career path, attaining higher education and having an honorable marital life. Most parents take care and choose the best things for their children. They educate and supervise the imperatives of appropriate sexual behaviors for their children continually from childhood to adulthood. Parents do not want their children to have sexual intercourse during their school years. They want their daughters to remain sexually abstinent until the appropriate time (Supametaporn, 2006). This finding was also supported by Wayuhverd (2009), who found “fathers and mothers (74.7% and 73.8%) to strongly disagree with adolescents’ premarital sexual behavior and more strongly disagree with sexual behavior by female adolescents than by males. This idea indicates that Thai parents have greater influence in preventing girls from premature engagement in sexual activity” (p. 112).

Behavioral beliefs toward sexual abstinence during the school years are an endogenous variable in this study that was measured by 33 items of behavioral beliefs multiplied by 33 items of outcome evaluations. The results showed the total mean scores of the behavioral beliefs toward sexual abstinence was quite high level. The total mean score was 598.48 ( $SD=114.03$ ) with scores ranging from 240 to 825. Considering the behavioral beliefs measure, the results demonstrated female adolescents to rate preventing unintended pregnancy the highest (Mean = 21.88,  $SD = 5.14$ ), and building a bright future were also important (Mean = 21.73,  $SD = 5.10$ ). The findings indicated female adolescents in this study to have more positive attitudes toward sexual abstinence during the school years based on preventing unintended pregnancy and practicing sexual abstinence during the school years to support a bright future. 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 because pregnancy during the school years brings many troubles in the future.

This finding supported that the behavioral beliefs about early initiation of sexual intercourse are concerned with avoiding pregnancy and other negative consequences. These are the benefits of sexual abstinence (Jemott et al., 1998). This finding concurred with several previous studies. For example, the above finding concurs with Bazargan and West (2006) who found Hispanic and African American high school students in Los Angeles, California, to perceive pregnancy repercussions which were found to be positively associated with sexual abstinence. Furthermore, another behavioral belief related to sexual behavior is that engaging in intercourse will interfere with education or educational aims (Villarruel et al., 2004; Supametaporn, 2006). Bazargan and West also found adolescents who perceive the outcomes of pregnancy as an obstacle to a prosperous life to be more likely to report an intention to remain sexually inactive. Similarly, Latino adolescents who believed their parents had high expectations for them and a belief in the significance of a good education were found to be positively related to refraining from sex or delaying sexual intercourse (Lammers et al., 2000).

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 expected. Therefore, Thai parents rigorously support their daughters in virginity and strictly oppose premarital sex (Supametaporn, 2006). Although the issue of adolescent sexuality remains sensitive and the social norms and attitudes remain conservative in Thai society, Thai parents always convey a strong message to their daughters related to sexual abstinence during the school years. The above findings are supported by the findings of the qualitative study of Fongkaew et al. (2012). The following findings were also revealed:

Many parents convey a strong message about their disapproval of sexual activity for their teenagers. They wanted their teens to be abstinent because they were still too young. They were also concerned about teens destroying their future due to potentially adverse consequences, such as unwanted pregnancies or HIV infection. They emphasized to their daughters the importance of keeping their virginity and advised them to avoid adolescent boys who might “cause them to make mistakes”.

Additionally, parents are the major influential forces in the lives of early adolescents. Therefore, perceived parental attitude about premarital sex tends to have a stronger influence on adolescent behavioral beliefs toward sexual abstinence during the school years. The above findings also support that parent-daughter sexual abstinence communications influence the behavioral beliefs toward sexual abstinence during the school years of their female adolescents in this study.

### **Normative Beliefs toward Sexual Abstinence during the School Years**

Normative beliefs toward sexual abstinence during the school years were an endogenous variable in this study. They were measured by 12 items of normative beliefs multiplied by 12 items of motivation to comply with sexual abstinence during the school years. Regarding this study, the total mean scores of the normative beliefs was 257.48 ( $SD = 55.80$ ) with scores ranging from 18 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 showed beliefs about maternal reaction and support to have the highest scores of all normative beliefs (Mean = 22.41,  $SD = .50$ ), thereby indicating early and middle Thai female adolescent to believe mothers to be significant persons to approve sexual abstinence intention during the school years and the adolescents had motivation to comply with their mothers. This might indicate that mothers take an important role in female adolescent sexual abstinence behavior during the school years. This finding concurred with previous findings that parental disapproval, especially mothers, affects female students' intention regarding sexual abstinence (Cha et al., 2007; Rhuchareonpornpanich et al., 2010; Fongkaew et al., 2012).

Additionally, grandfathers/grandmothers, parents, families, fathers and relatives were also found to be influential persons affecting sexual abstinence behavior during the school years among Thai female adolescents. In Thai society, parents and family are usually the primary learning sources of children and usually look forward to their children having brilliant futures. Parents always teach and monitor the rules of appropriate sexual behaviors for children to delay the transformation from childhood

to adulthood. Parents do not want their children engage in sexual intercourse during the school years because doing so facilitates failure in children's lives. The other results might be that remaining sexually abstinent is related to the cultural image of Thai "good" girl, including the sexually abstinent girls and their families are more respectable in society than the sexually experienced girls (Supametaporn, 2006). Accordingly, these cultural environments influence the girls' normative beliefs toward practicing sexual abstinence in their everyday lives.

However, the participants' beliefs about friends and boyfriends had the lowest scores (Mean = 19.97, *SD* = 6.01; Mean = 19.12, *SD* = 6.45, respectively), thereby signifying the inferior significance of peer norm (friends) and boyfriends in approving of sexual abstinence intention and motivation to comply with sexual abstinence than the others in this study. This finding was inconsistent with several studies finding peer norm (friends) approval or disapproval to influence decision-making about engaging in sexual behavior in adolescents (Santelli et al., 2004; Silver & Bauman, 2006; Cha et al., 2007; Bazargan & West, 2006). The above finding might be explained in that the most important person influencing the decision about sexual debut depends upon the stage of adolescence. During early adolescence, parents are the major influential forces in a child's life. Therefore, perceived parental attitude about premarital sex tends to have a stronger influence on whether or not a child initiates sexual activity (Maguen & Amistage, 2006). Parental norms are more important in early adolescence, but influence declines with age as peer norms become more important at later stages, thus indicating the inferior significance of peer norm (friends) and boyfriends in approving of sexual abstinence intention and motivation to comply in this study.

### **Control Beliefs toward Sexual Abstinence during the School Years**

Control beliefs were the third observed variable and an endogenous variable in this study which was measured by 17 items of control beliefs multiplied by 17 items of perceived powers toward sexual abstinence behavior during the school years. The results demonstrated that the measure of control beliefs score was quite high (Mean = 295.79, *SD* = 60.99) with scores ranging from 87 to 425. This result indicated female adolescents to perceive control over sexual abstinence behavior

during the school years as a supportive factor rather than a hindering factor. It also demonstrated female adolescents to have higher mean of perceived power over sexual abstinence during the school years.

On the other hand, the participants rated drinking alcohol as making it difficult to practice sexual abstinence at the lowest score (Mean = 9.36,  $SD = 5.82$ ). The finding indicates female adolescents to perceive drinking alcohol as the external factors to obstruct them in performing sexual abstinence and influencing their own power to practice sexual abstinence behavior during the school years.

### **Discussion of Hypothesis Testing**

According to the interpretation of the absolute magnitudes of the path coefficient, the standardized path coefficients with absolute values less than 0.10 indicated a small effect valued at approximately 0.30 to demonstrate a medium effect and  $\geq 0.50$  showed a large effect (Cohen, 1998). The major variable in this study, parent–daughter sexual abstinence communication, had standardized path coefficients with an absolute value of 0.20 judged from small to medium effect. Furthermore, this model explained 33% of sexual abstinence intention during the school years. The relationships among the study variables are subsequently discussed.

#### **Hypothesis Testing**

**Hypothesis I:** Parent-daughter sexual abstinence communication has a positive indirect effect on sexual abstinence intention during the school years among early and middle Thai female adolescents via behavioral beliefs, normative beliefs and control beliefs toward sexual abstinence.

As expected, parent-daughter sexual abstinence communication had a significant positive indirect effect ( $\beta = 0.20$ ,  $p < .001$ ) on sexual abstinence intention during the school years via behavioral beliefs, normative beliefs, and control beliefs ( $\beta = .25$ ,  $\beta = .17$ , and  $\beta = .22$ ,  $p < .001$ , respectively). This finding supported behavioral beliefs, normative beliefs, and control beliefs as the mediating factor of parent-daughter sexual abstinence communications on sexual abstinence intention during the school years among early and middle Thai female adolescents in this study.

The principal persons in the sexual socialization of children were their parents (Hutchinson & Wood, 2007) who are viewed as the primary sexual educators for their children and have been shown to be the most influential factors in adolescents' lives. The evidence supports that PTSC may influence adolescents' sexual values and perceptions of sexual norms, thereby leading to the development of sexual values more closely resembling the values of their parents and may also serve as a buffer against peer pressure on sexual activity (Whitaker & Miller, 2000; Schouten et al., 2007).

The total mean scores for parent-daughter sexual abstinence communication were found to be quite high (Mean = 87.16, *SD* = 20.09) with scores ranging from 29 to 125. When the three subscales, i.e. thoughts, actions and interactions were considered individually, the mean scores for each subscale were over 50% (Mean = 31.57, 26.75, and, 28.59, respectively) with the individual scores ranging from 10-50, 11-35, and 6-40, respectively. Thus, the perception of female adolescents toward the transmission process was indicated to focus on the statements related to the set of both verbal and nonverbal behaviors frequently used in families to practice sexual abstinence during the school years. These transmission processes influenced the behavioral beliefs, normative beliefs and control beliefs toward sexual abstinence during the school years among early and middle Thai female adolescents as describe below.

In Thai culture, Thai parents rigorously support their daughters in virginity and strictly oppose premarital sex because engaging in premarital sexual intercourse is considered culturally wrong (Gray & Punpuing, 1999). Thai girls are required to be docile, submissive, modest and disinterested in sex until marriage (Vuttanont et al., 2006). Although parent-teen sexual communication rarely occurs, parents always give a strong message related to the strategies for practicing sexual abstinence, such as the negative outcomes of early sexual intercourse, especially concerning unwanted pregnancy which would make life difficult or result in loss of educational opportunities. The above findings was supported by the mean score of parent-daughter sexual abstinence communication on, "My parents told me having sex during the school years may cause unintended pregnancy," And, "My parents told me pregnancy

during the school years would make life difficult,” were more than 50% (Mean = 3.05, SD = 1.19 and Mean = 3.37, SD = 1.25).

Additionally, parents and family in Thai society are usually the primary learning sources of children and usually look forward to their children having brilliant futures. Parents always teach and monitor the rules of appropriate sexual behaviors for children to delay the transformation from childhood to adulthood. Parents do not want their children to engage in sexual intercourse during the school years because doing so facilitates failure in children’s lives (Supametaporn, 2006). For these reasons, female adolescents perceived that practicing sexual abstinence during the school years would have many advantages, especially in terms of supporting their bright futures. It was also demonstrated that the participants rated “building a bright future” to also have importance (Mean = 21.73, SD = 5.10). The perception that parent-daughter sexual abstinence communications influence the behavioral beliefs toward sexual abstinence during the school years of their female adolescents was also supported.

The findings of this study also showed beliefs about maternal reaction and support to have the highest scores of all normative beliefs (Mean = 22.41, SD = .50), thereby indicating early and middle Thai female adolescent’s to believe that mothers were significant persons in approving of sexual abstinence intention during the school years. Furthermore, the adolescents were motivated to comply with their mothers. The above findings might indicate that mothers take an important role in female adolescent sexual abstinence behavior during the school years. Similarly, Rhuchareonpornpanich et al. (2010) found female adolescents to report higher levels of parental disapproval of sex as compared to males in their study on parenting and adolescent problem behaviors among adolescents aged 13-14 years. The above finding also supported that parent-daughter sexual abstinence communications influence the normative beliefs toward sexual abstinence during the school years of female adolescents.

Additionally, the results demonstrated the measure of control beliefs score to be quite high (Mean = 293.87, SD = 60.96) with scores ranging from 87 to 425. This result indicated female adolescents to perceive control over sexual abstinence behavior during the school years as a supportive factor rather than a hindering factor. It also demonstrated female adolescents to have higher mean for perceived power over sexual abstinence during the school years. Female adolescents rated the thinking of

family as convincing them to practice sexual abstinence during the school years at the highest score (Mean =22.64, SD= 4.59). On the other hand, the female adolescents rated drinking alcohol as making it difficult to practice sexual abstinence at the lowest score (Mean = 9.36, SD = 5.82). As reported in parent-daughter sexual abstinence communication, the score on the item, "My parents told me drinking alcohol may lead to sexual intercourse," was more than 50% (Mean= 3.03, SD= 1.25). The finding indicated female adolescents to perceive drinking alcohol as an external factor preventing them from performing sexual abstinence and influencing their own power to practice sexual abstinence behavior during the school years. When the total mean scores of parent-daughter sexual abstinence communication was considered, the mean was found to be quite high (Mean = 87.16, SD = 20.09) with individual scores ranging from 29 to 125. The same was true for the three subscales, i.e. thoughts, actions and interactions; the mean scores for each subscale were over fifty percent (Mean =31.57, 26.75, and, 28.59, respectively) with the individual scores ranging from 10-50, 11-35, and 6 - 40 respectively. The above findings indicated the perception of female adolescents toward the transmission process emphasis on the statements related to the set of behaviors used to practice sexual abstinence during the school years to influence female adolescents control beliefs toward sexual abstinence during the school years.

This finding is consistent with previous studies revealing adolescents more likely to not initiate sexual intercourse and have conservative values frequently to report larger numbers of topics to have been discussed with their mothers. In contrast, adolescents who were more likely to report the initiation of intercourse and more "liberal" sexual values usually reported a greater number of topics discussed with their friends (Di Iorio et al., 1999). Additionally, the above finding is congruent with many studies indicating parent-teen sexual communication to be viewed extensively as the single-most significant influence on adolescent sexual behaviors (Blake et al., 2001; Guzman et al., 2003; Hutchinson et al., 2003; Aspy et al., 2007; Hutchinson, 2007; Hutchinson & Montgomery, 2007) such as postponing sexual initiation, decreased unsafe sex, lower numbers of sexual partners and increased probability of using contraception.

The findings are congruent with Hutchinson and Montgomery (2007) who found greater amount of parent-teen sexual risk communication also be associated

with more conservative attitudes toward adolescent sexual behavior in general, more conservative attitudes toward personally engaging in sexual intercourse during the next three months and less perceived difficulty discussing sexual topics with partners in African American late adolescent colleague students. In addition, Villarruel and colleagues (2008) found behavioral, normative, and control beliefs to significantly mediate the effects of the parent–adolescent sexual risk communication intervention on general communication, sexual-risk communication and comfort with communication among Mexican parents.

In conclusion, the results of the overall model demonstrated the empirical data to support a causal relationship between indirect influence on parent-daughter sexual abstinence communications on sexual abstinence intention behavior during the school years via behavioral beliefs, normative beliefs, and control beliefs. Therefore, behavioral beliefs, normative beliefs, and control beliefs functioned as a cognitive mediator linking parent-daughter sexual abstinence communications and sexual abstinence intention among participants in the current study.

## **Hypothesis II**

**Hypothesis II:** Behavioral beliefs, normative beliefs, control beliefs toward sexual abstinence have a positive direct effect on sexual abstinence intention during the school years among early and middle Thai female adolescents.

The findings indicated behavioral beliefs, normative beliefs, and control beliefs toward sexual abstinence to have a significant positive direct effect on sexual abstinence intention during the school years ( $\beta = 0.25, p < .001$ ,  $\beta = 0.27, p < .001$ , and  $\beta = 0.41, p < .001$ , respectively).

This study showed all of the TPB components to significantly predict intention to practice sexual abstinence during the school years among early and middle Thai female adolescents. This finding was congruent with Fongkaew et al. (2006), who found behavioral beliefs, normative beliefs and control beliefs toward sexual intercourse to significantly explain 21.8% of the variance in intention to engage in sexual intercourse during the school years among adolescents in secondary school. Similarly, Cha et al. (2008) found all of the TPB components to be significant predictors explaining the men's intention in condom use in either the TPB or the

expanded model among Korean college students. The discussions of each of the three main constructs from the TPB are subsequently described.

### **Behavioral Beliefs toward Sexual Abstinence**

The findings indicated behavioral beliefs toward sexual abstinence to have a significant positive direct effect at a medium level ( $\beta = 0.25$ ,  $p < .001$ ) on sexual abstinence intention during the school years.

According to the TPB, the antecedents of attitude are behavioral beliefs concerning the possible outcomes of behavior and the evaluations of these outcomes. These are generated by favorable or unfavorable attitudes toward behaviors. Strong beliefs on positively valued outcomes will be caused by performing a behavior that has a positive attitude toward the behavior. On the contrary, strong beliefs on negative valued outcomes will be caused by performing a behavior with a negative attitude toward the behavior. As a result, a person will intend to perform a behavior if he or she has a positive evaluation of the behavior (Ajzen & Fishbein, 1980) such as female adolescents with more favorable attitudes toward sexual abstinence have higher levels of sexual abstinence intention. Therefore, the finding supports the theoretical proposition.

As demonstrated, the results showed the total mean scores of the behavioral beliefs toward sexual abstinence to be at a rather high level. The mean score was 598.48 ( $SD = 114.03$ ) with an actual scores ranging from 240 to 825. When the behavioral beliefs measure was considered, the results demonstrated female adolescents to rate preventing unintended pregnancy the highest (Mean = 21.88,  $SD = 5.14$ ), while building a bright future was also important (Mean = 21.73,  $SD = 5.10$ ). The findings indicated female adolescents in this study to have more positive attitudes toward sexual abstinence during the school years based on prevention of unintended pregnancy and practicing sexual abstinence during the school years in support of a bright future. These findings identified the female adolescents' belief that sexual abstinence is viewed as an essential method for preventing them from the negative consequences of sexual intercourse, especially concerning unwanted pregnancy during the school years, and this method also

encouraged the female adolescents to have brilliant prospects. These findings concur with the findings of Fongkaew et al. (2012). The following results were discovered:

The teenagers also perceived their parents to have a major influence on their sexual behavior. Parents were likely to prohibit them from engaging in sexual relations, especially females. Parents provide examples of negative consequences to reinforce this abstinence message, such as having sex might cause pregnancy, which could result in expulsion from school, and boyfriends might not take responsibility for the child. Furthermore, sexually-transmitted diseases might be contracted; or the female adolescent might be punished by their parents.

The function of “attitude”, a chief predictor explaining the intention for sexual behavior in the TRA and the TPB, has been verified in previous studies (Cha et al., 2007; Wang et al., 2008; Buhi et al., 2011). For example, Cha and colleagues (2007) examined the efficiency of the TPB in explaining the intention to engage in premarital sex of Korean college students’ aged 18 to 25 years. They found premarital attitude to be the strongest predictor of intention for premarital sex in both genders; students with conservative attitudes toward premarital sex had a lower intention to engage in premarital sex. Similarly, Wang and colleagues (2008) examined the association between attitudes and female adolescents’ sexually risky behaviors, finding attitude toward premarital sex to be the only factor with independent impact on sexually risky behaviors. Recently, Buhi and colleagues (2011) tested an integrative theoretical framework for explaining adolescents’ sexual abstinence and intentions to remain abstinent, refining the framework to reflect which elements contribute more powerfully to the explanation of abstinence and intentions. According to the final model, the percentages of variance explained for Time 1 and Time 2 abstinence were 43.1% and 47.1%, respectively. The largest percentage of variance explained was beliefs (89.4%), intentions (75.6%), norms (66.9%), self-efficacy (59.8%) and self-standards (25.3%). Additionally, Villarruel and colleagues (2004) examined theoretical predictors (attitude, subjective norms, behavioral beliefs, normative beliefs and control beliefs) of sexual intercourse and condom use with a sample of Spanish-dominant Latino youth. The findings showed intentions to not have sexual intercourse to be related to behavioral beliefs that respondents would feel proud if they did not have sex and that their parents would be proud of them if they did not have sex.

Although the above studies have recommended that attitude explains the best part of the variance to perform the intention for sexual behavior, the vulnerable nature of these participants may have excluded this finding. The most significant determinants of behavioral intention depend on the particular behavior and particular population studied (Villarruel et al., 2004). Therefore, behavioral beliefs toward sexual abstinence had a positive direct influence on sexual abstinence intention in the parent-based expansion of the TPB model because behavioral beliefs are an important predictor of sexual abstinence intention during the school years among participants in the current study.

### **Normative Beliefs toward Sexual Abstinence**

The findings indicate normative beliefs toward sexual abstinence to have a significant positive direct effect at a medium level ( $\beta = 0.27$ ,  $p < .001$ ) on sexual abstinence intention during the school years. The results signify that normative beliefs might be a good factor to predict sexual abstinence intention during the school years in this study.

Normative beliefs are the belief that significant others approve or disapprove of an individual's performance of a particular behavior and the motivation to comply with the referents. These normative beliefs are the antecedents of subjective norms in the TPB (Ajzen & Fishbein, 1980). The subjective norm refers to the perceived social pressure to perform or not perform a behavior. The concept of social influence has also been assessed by social norms and normative beliefs in the TPB. Individuals' complex thoughts on subjective norms are perception of whether or not they are anticipated by friends, family and society to perform the recommended behavior. The most important referents for sexual abstinence intention during the school years among early and middle female adolescents demonstrated in this study were mothers, grandfathers/grandmothers, parents, other family members, father and relatives, respectively. The findings supported the significance of parents, especially of mothers and other significant persons in families who have influence on adolescents' sexual decisions not to have sex; this finding supports the conceptual framework that subjective norms are important predictors of sexual abstinence intention during the school years.

In addition, the data validated the significance of family in sexual decision-making by illustrating that many female adolescents had behavioral beliefs that their parents would feel proud if they did not have sex during the school years (Mean = 21.31, *SD* = 5.08). Villarruel et al. (2004) similarly found subjective norms to reflect normative beliefs concerning important referents and approval or disapproval of particular behaviors. These encompass participants' normative beliefs regarding mothers, fathers, friends and sexual partners, further suggesting the beliefs to be positively related to intentions to engage in sexual intercourse. Moreover, the results were congruent with the study finding sexually abstinent females to have greater perception of parental disapproval of premarital sex than sexually active African American adolescent females (Child et al., 2008).

In addition, the participants rated maternal beliefs' to strongly agree if they had sexual abstinence during the school years with the highest scores (Mean = 22.41, *SD* = 5.00), thereby distinguishing maternal influence on female adolescents' sexual abstinence intention as a significant person in adolescents' lives. As in most developing countries in Asia, childrearing is traditionally the duty of the mother in Thai society; the father plays his part on some occasions. Podhisita and Pattaravanich (1995) found adolescents to get along better with mothers than fathers. The findings point mothers out as the center of Thai families with important status. Additionally, Supametaporn (2006) found Thai female adolescents' to remain sexually abstinent because they recognize sexual abstinence as the way to achieving their goal, i.e. security in life. This goal came from parental expectations about security in the future. Moreover, this finding was consistent with Cha and colleagues (2007) who revealed female students to significantly perceive higher conservative subjective norms of premarital sex than male students, perceiving the conservative norms at a high level from mothers and fathers.

The results showed friends and boyfriends to be rated lower than the influence of others on normative beliefs toward sexual abstinence during the school years (Mean = 19.97, *SD* = 6.01; Mean = 19.12, *SD* = 6.45, respectively), thereby signifying less significance for peer norms (friends) and boyfriends than the others. This finding was inconsistent with several studies indicating peer norm (friends) approvals or disapproval to influence decision-making about adolescent engagement

in sexual behavior. Santelli and colleagues (2004) explored potential psychosocial predictors for the initiation of sexual intercourse among middle-school (Grades 7 - 9), inner-city youth, finding “sex norms” (personal and perceived peer norms about refraining from sex) as the single best predictor of the initiation of sexual intercourse ( $p < .001$ ). Similarly, Cha and colleagues (2007) found intention for sexual abstinence to be positively correlated with perceived disapproval of premarital sexual behavior from the referent group (peer) norms for more female than male students. The most influential norm for both genders in making the decision to engage in premarital sex was peers.

These findings were similar to Silver and Bauman (2006) who compared the knowledge, attitudes and demographic characteristics of 630 sexually experienced and 422 sexually inexperienced inner-city adolescents aged 14–17 years, finding most inexperienced adolescents to intend to remain virgins for the next 6 months; most had peer groups. The subjects were also perceived to be virgins and were more positive and confident about remaining abstinent. The above finding is similar to the findings of Bazargan and West (2006) who examined the correlates of the intention to remain sexually inactive among 502 Hispanic and African American high school students in Los Angeles, California. This study documented that students with a higher level of perceived peer pressure were less likely to claim to have remained sexually inactive.

The reason might be that the most important person influencing the decision about sexual debut to depend upon the stage of adolescence. During early adolescence, parents are the major influential forces in a child’s life. Therefore, perceived parental attitude about premarital sex tends to have a stronger influence on whether or not a child initiates sexual activity (Maguen & Amistage, 2006). Parental norms are more important in early adolescence, but influence declines with age; peer norms then become more important at later stages.

In summary, sexual behavior is governed by family and social influences; the analyses of empirical data revealed normative beliefs toward sexual abstinence to influence sexual abstinence intention during the school years. Normative beliefs toward sexual abstinence behavior predicted sexual abstinence intention as in previous literature examining adolescent sexual behaviors. Therefore, normative beliefs toward sexual abstinence also explain the significant variance of sexual abstinence intention

in early and middle Thai female adolescents. As a result, normative beliefs toward sexual abstinence are a predictor affecting sexual abstinence intention in early and middle female adolescents in the current study. A possible reason for the significance of the subjective norm is the broadened category of referent persons evident in this study (12 persons). The researcher did not specifically consider or select the most significant referent persons in the model testing, but used a summary score of all items to represent the subjective norm. When adding overestimated paths to the subjective norms, the other parameter coefficients in the model may have been affected.

### **Control Beliefs toward Sexual Abstinence**

The results demonstrated control beliefs toward sexual abstinence to have a significant positive direct effect at a medium level ( $\beta = 0.41$ ,  $p < .001$ ) on sexual abstinence intention during the school years. The findings of the model supported the direct influence of control beliefs on sexual abstinence intention as proposed in TPB theory (Ajzen, 1991). Additionally, control beliefs had the highest effect on sexual abstinence intention among the other constructs from the TPB in this study. This result implied that control beliefs might be the best factor to predict sexual abstinence intention during the school years among the early and middle Thai female adolescents in the current study.

Control beliefs are the beliefs of the ease or difficulty encountered in performing a behavior and the perceived power of a specific control factor in facilitating or impeding behavior performance (Ajzen, 2002). It represents the external factors perceived in assisting or impeding behavior performance and is antecedent to perceived behavioral control within the TPB (Ajzen, 1989). Perceived behavioral control reflects the perception that a person has sufficient resources and skills to perform the behavior and the confidence to do so adequately (Ajzen, 1985, 1991). This concept is closely related to self-efficacy, a construct central to social cognitive theory (Bandura, 1982). Because perceived behavioral control and self-efficacy share the same construct (Ajzen, 2002), many studies frequently interchangeably measure perceived behavior control with a self-efficacy scale in the studies guided by the TPB (Norris et al., 2003; Caron et al., 2004; Santelli et al., 2004; Srisuriyawet, 2006;

Powwattana & Ramasoota, 2008; Mathews et al., 2009; Buhi et al., 2011; Bazargan & West, 2006).

Powwattana and Ramasoota (2008) tested the differences among the predictors between sexually active and non-active female adolescents in congested communities in Bangkok Metropolis. This study found the sexually active group to have lower perceived sexual self-efficacy in terms of ability to say, "No," compared with the sexually non-active subjects ( $p < .01$ ). Srisuriyawet (2006) studied the psychosocial and gender-based determinants for sexual risk behaviors among adolescents in schools in a province of eastern Thailand. This study found low refusal self-efficacy to directly influence sexual experience among females, but not among males. Moreover, Butcharoen et al., (2012) studied the factors related to sexual risk behavior among early adolescents based on the PRECEDE-PROCEED Model. The participants comprised 150 Thai secondary school students in the Muang District of Lopburi province selected by cluster sampling. The results reported perceived self-efficacy in avoiding sexual risk behaviors to be negatively related to sexual risk behavior ( $p < .001$ ). Perceived self-efficacy in avoiding sexual risk behaviors, channels for accessing sexual media, living with parents and age were significant predictors and accounted for approximately 39.5% of the total variance in sexual risk behaviors.

The results in this study were also congruent with Bazargan and West (2006) who examined the correlates of the intention to remain sexually inactive among 502 Hispanic and African-American high school students in Los Angeles, California. This study documented that students with a lower level of behavioral and refusal skills for avoiding sexual activity were less likely to claim to remain sexually inactive. In addition, Buhi and colleagues (2011) tested an integrative theoretical framework in explaining adolescents' sexual abstinence and intentions to remain abstinent and refined the framework to reflect which elements contributed more powerfully to the explanation of abstinence and intentions. The study revealed self-efficacy in remaining sexually abstinent, the indirect effect through intention, to be significant at .05. The indirect effect through intention and abstinence at Time 1 was also significant at .05. In the final Wave 2 model, self-efficacy was the largest predictor of intention.

The above finding was also similar to the findings of Caron and colleagues (2004) who examined the effectiveness of AIDS/STDs peer education programs using Ajzen's Theory, looking at an intervention group and a control group. After nine months, the final sample comprised 698 (initial participants = 945) junior school students and 306 (initial participants= 477) high school students. In this study, a positive change in perceived control behavior in condom use explained that the senior students used condoms more consistently after the intervention program. Furthermore, Mathews and colleagues (2009) investigated the predictors of young adolescents' transition to first intercourse and found the transition to be significantly associated with intention to engage in sexual intercourse, poor self-efficacy in negotiating delayed sex and intimate partner violence. The model predicted 35% of the variance in intentions and 16% of the variance in transition.

However, other studies have reported abstinence self-efficacy to not predict the intention to engage in sexual behavior in other populations (Cha et al., 2007; Childs et al., 2008). For example, one study examined the efficacy of the TPB in explaining intention to engage in premarital sex in order to provide insight for a potential sex education program designed to reduce risky sexual behaviors in Korean college students. The findings indicated abstinence self-efficacy to be positively correlated with the intention for premarital sexual behavior of male students, but were not correlated with the intention for premarital sex of female students. Childs and colleagues (2008) examined antecedent (knowledge of HIV and spirituality) and psychosocial (attitude toward abstinence, attitude toward condom use, sexual self-efficacy and perceived parental attitudes toward premarital sex) factors derived from the theories of reasoned action and planned behavior as correlates and predictors of both sexual abstinence and sexual activity. This study found no significant correlations between engaging in sexual activity and sexual self-efficacy among 94 African-American adolescent females. Moreover, Santelli and colleagues (2004) explored potential psychosocial predictors for initiation of sexual intercourse among middle-school, inner-city youth. This study found self-efficacy to show a mixed effect: prevention in the seventh grade, but increasing risk in the eighth grade.

In summary, regarding the causal relationship of the direct influence of control beliefs on sexual abstinence intention during the school years, the data

supported control beliefs as a good predictor of sexual abstinence intention during the school years among early and middle Thai female adolescents and the best predictor among other variables in the current study. In addition, control beliefs were capable of consistently predicting sexual behaviors in previous literature. Therefore, control beliefs toward sexual abstinence also explained the significant variance in the parent-based expansion of the TPB model.

## **Strengths and Limitations of the Study**

### **Strengths of the Study**

The strengths of the study were an integrated theory-based study supported by several literatures and the quality of the methodology which can be described as follows:

The parent-based expansion of the theory of planned behavior was integrated by two robust theories. The first theory was based on Bronfenbrenner's work on the ecology of human development (1989). The second was the Theory of Planned Behavior which has been used to guide several studies in adolescent sexual behaviors. This integrated theory-based concept focused on personal and environmental factors and is appropriate and practical for developing the effective sex education programs conducted by nurses.

The quality of the methodology was maximizing external validity by using the appropriate sample size and sampling technique, using the acceptable psychometric properties of instruments and using the robust technique for testing the model of the sexual abstinence intention behavior of female adolescents as in the following presentation.

First, the study used the powerful analytical method, the Structural Equation Modeling (SEM) analysis, to test the hypotheses. The SEM analysis was able to solve the Type I error occurring from multiple regression hierarchical regression analysis because it enabled multiple predictor variables and multiple mediators in the model. Moreover, the SEM analysis could control measurement error, providing the information on the degree of fit of the entire model which was much

more flexible than regression. Consequently, the SEM is the most efficient and least problematic means of testing a mediation model (Hoyle & Smith, 1994).

Second, this study used the suitability data analysis by using an appropriate sample size and sampling technique to maximize external validity. The sample sizes were calculated from suitable formulas which were sufficient for the investigation of mediating by using the SEM. Furthermore, the sampling technique, a stratified multi-stage random sampling, is suitable and practical. Hence, in using the representative sample and probability sampling method, the biases of the finding could be minimized and accessed with increased external validity.

Finally, a particular strength of this study was that present instruments sought to ascertain the beliefs of sexual abstinence during the school years from the participants themselves rather than relying only on formerly developed instruments.

As mentioned above, all of the strengths of the research study guide cover the validity of the causal effects of cognition of both content and process, including the personal and environmental factors of adolescent sexual behaviors. It also strengthens the parent-based expansion of the TPB. In addition, the research hypotheses for the present study were tested in order to develop new knowledge on nursing science by using the robust methodology capable of confirming the validity of these research findings.

### **Limitations of the Study**

Although this research was very strong, the following research limitations should be addressed:

First, sexual behavior is a sensitive issue and is not generally discussed or disclosed in Thai culture. Hence making inquiries with the participants by questionnaires always concerns the honesty of the participants because the self-report data about these behaviors may not accurately reflect actual behavior. However, the researcher used several strategies to minimize these errors: 1) the participants had a unique identification (ID) number and no direct contact information; 2) an information letter describing the purpose of the study and the procedures of data protection addressed confidentiality issues and did not affect academic achievements; 3) concerning the confidentiality issue, the need for accurate and honest responses by the

participants on these particular questionnaires was readdressed before the students had completed the questionnaires; 4) the participants were also seated far apart to ensure individual privacy and 5) the participants submitted the completed questionnaires by themselves in a closed box provided by the researcher to reassure the subjects about confidentiality. These procedures might have helped minimize bias.

Second, Sexual Abstinence Behavior Scale contains items with several double negatives in the questions, which might have led to misunderstanding of the participants when they answered these items. Although this instrument was modified from the sexual intercourse behaviors scale which had been developed from adolescents' control beliefs toward sexual intercourse during the school years, 7 items did not correspond with the structure or content of control beliefs as defined by Ajzen and Fishbein.

Finally, the questionnaire was long. Overall, the measures contained 168 items and required approximately 45 minutes to complete. Some participants did not completely answer. This might have affected the participants' responses that might have provided inaccurate data.

## **Summary**

This chapter presented a discussion of the research findings with emphasis on interpreting participants' characteristics, the independent variables from the parent-based expansion of the TPB, including parent-daughter sexual abstinence communication, behavioral beliefs, normative beliefs, and control beliefs. The dependent variable was sexual abstinence intention during the school years. The hypothesis model testing, the strengths and limitations of the study were also discussed.

## **CHAPTER VI**

### **CONCLUSION**

This chapter presents the summary of the study, the research findings, the contribution and implication of the research findings and recommendations for future study.

#### **Summary of the Study**

Cross-sectional descriptive study was employed to test the causal relationships among parent-daughter sexual abstinence communication, behavioral beliefs, normative beliefs, control beliefs and sexual abstinence intention during the school years among early and middle Thai female adolescents. The hypothesized model was developed on the parent-based expansion of the TPB. The following two hypotheses were explored: (1) Parent-daughter sexual abstinence communication is a positive indirect effect on sexual abstinence intention during the school years among early and middle Thai female adolescents via behavioral beliefs, normative beliefs, and control beliefs toward sexual abstinence; (2) Behavioral beliefs, normative beliefs, and control beliefs toward sexual abstinence have a positive direct effect on sexual abstinence intention during the school years among early and middle Thai female adolescents. The hypothesized model comprised one exogenous variable: parent-daughter sexual abstinence communication and four endogenous variables: behavioral beliefs, normative beliefs, control beliefs and sexual abstinence intention during the school years

Five hundred and twenty-eight participants comprised early and middle Thai female adolescents aged between 12-16 years studying in Grades 7-9. A stratified multi-stage random sampling was used to select the participants from six secondary schools in Bangkok during June and July 2012. Fifteen cases with incomplete questionnaires and forty three participants who reported sexual experience were

excluded; four hundred and seventy participants remained in the study. The three instruments included a demographic questionnaire, the Parent-Daughter Sexual Abstinence Communication Questionnaire, the Sexual Abstinence Intention Questionnaire were used in data collection. The demographic questionnaire and the Parent-Daughter Sexual Abstinence Communication Questionnaire were developed by the researcher. The Sexual Abstinence Intention Questionnaire was modified from the questionnaire by Fongkaew and colleagues (2006). The validity and reliability of the instruments were tested. The reliability of all instruments were rated from “respectable” to “very good” with Cronbach’ alpha coefficients ranging from .75 to .94.

The characteristics of the participants were analyzed by descriptive statistics. The LISREL program, version 8.53, was used to examine the path analysis of the casual model among the parent-based expansion of the TPB to explain the relationships among these constructs in early and middle adolescent Thai females so the model could be tested and modified.

The descriptive statistics demonstrated the majority of the sample to comprise female students in Grade 9 (38.1 %) with grade point averages (GPA) ranging from 1.25 to 4.00. The average GPA was 3.4 ( $SD = .46$ ). The age ranged from 12 to 16 years with an average age of 13.4 ( $SD = .92$ ) and most of the participants (42.1 %) were 14 years of age. Most of the participants were Buddhists (94.1%) and approximately 51.4 % of participants reported receiving money from their fathers with monthly incomes over 1,500 baht (54.7 %). Almost two-third (64.3%) of the samples felt they had sufficient funds and were able to save money. In terms of family characteristics, 69.1 % of the participants lived with their parents and had 2 siblings (40.6 %). Most parents of the participants (65.7 %) were living together. Most parents had attained elementary educations (27.4 % of the fathers and 33.4 % of the mothers). In addition, 46.8 % of the fathers and 38.3% of the mothers were laborers. There were 43 participants (8.4 %) who reported having had sexual intercourse during their school years. Among these, 19 participants (44.2 %) had first sexual experience at 14 years of age. The lowest age at first sexual experience was 8 years. Nearly all of the participants report the reason for having first sexual experience to be love (25.6%). The partners at first sexual experience were boyfriends 88.4% ( $n=38$ ). Approximately 30.2 % of the participants had never used condoms while having sex. Approximately

39.5% of the participants had had only one partner and the highest number of sexual partner was 22 persons.

In testing the hypothesized model, the first model did not fit the empirical data. Therefore, the model was modified guided by the modification indices of the LISREL program. The output showed the largest modification index to be associated with whether the error should be correlated or allowed to be free in the Theta-epsilon matrix representing the expected drop in the chi-square value. Eventually, the model fit well with the data at  $X^2 = 0.24$ ,  $df = 1$ ,  $X^2/df = 0.24$ , p-value = 0.621, RMSEA = 0.000, GFI=1.00, AGFI=0.99. The modification model accounted for 33% ( $R^2 = 0.33$ ) of the explained variance in the intention to practice sexual abstinence behavior during the school years among early and middle Thai female adolescents.

The findings revealed parent-daughter sexual abstinence communications to have a significant positive indirect effect on sexual abstinence intention during the school years via behavioral beliefs, normative beliefs and control beliefs toward sexual abstinence. Hence, behavioral beliefs, normative beliefs, and control beliefs toward sexual abstinence were found to be the mediating factor of parent-daughter sexual abstinence communications on sexual abstinence intention during the school years. Additionally, behavioral beliefs, normative beliefs, and control beliefs toward sexual abstinence had a significant positive direct effect on sexual abstinence intention during the school years among the early and middle Thai female adolescents in this study.

## **Contribution and Implications of the Research Findings**

This part presented the contribution and implications of the research findings to nursing science, nursing practice, health care policy and nursing research for the future as follows:

### **Contribution to Nursing Science**

The research findings contributed to the literature on sexual abstinence behaviors among early and middle female adolescents. These findings demonstrated the relationships among protective factor, parent-daughter sexual abstinence communication associated with sexual abstinence intention during the school years

among early and middle Thai female adolescents via behavioral beliefs, normative beliefs and control beliefs. These contributed to the literature on adolescent sexual behavior by confirming and extending previous findings and providing new knowledge as described below.

First, the hypothesized model in this study was conceptualized within the integration of two vigorous theories, including Bronfenbrenner's Ecological Model and Theory of Planned Behavior, in addition to related literature on adolescent sexual behavior from the Western. Moreover, structural equation modeling was utilized to test a theoretically-derived model of the parent-based expansion of the TPB. The pattern of this causal relationship's contribution to advanced knowledge was examined and no study was found to have been conducted on this phenomenon. Moreover, Bronfenbrenner's work on the ecology of human development and the Theory of Planned Behavior were well supported to reflect validity.

Second, the findings provided knowledge about the influences of the whole set and the significance of individual variable constructs. It also provided direction for the development of interventions to promote sexual abstinence programs among early and middle Thai female adolescents. In this study, the findings indicated the parent-based expansion of the TPB to explicitly include parenting influences and indicated a conceptual framework for a family-based design to promote sexual abstinence behavior. In addition, perceived power and control beliefs were also found to have the highest effect on sexual abstinence intention among the other constructs from the TPB in this study. As a result, an intervention program to promote sexual abstinence during the school years among early and middle Thai female adolescents concerning this variable is appropriate.

Third, conducting in-depth, opened-ended elicitation interviews to discover behavioral beliefs, normative beliefs and control beliefs related to the particular behavior and target population under investigation to be examined were the strength of the TPB. This important procedure allowed grounding of the empirical measures and identified information to be used further in the process of designing specific interventions.

### **Implications for Nursing Practice**

The findings of the present study suggest several practice innovations that would help early and middle Thai female adolescents to not initiate early sexual behavior.

First, according to the research finding that parent-daughter sexual abstinence communications had a significant positive indirect effect on sexual abstinence intention during the school years; nurses should persuade and strengthen parents, especially mothers, who are significant persons to female adolescents as these people influence normative beliefs toward sexual abstinence behavior. Parents should be reassured that they can provide essential information about abstinence behavior and the refusal skill to engage in sexual intercourse to their children. In addition, education programs for parents should be developed to teach strategies for maintaining open communication with their children with emphasis on parent-adolescent sexual communications with influence on adolescent sexual behavior (Hutchinson et al., 2003). This program should be conducted both in school and community settings. For example, schools should take part by involving the “Parents Associations” of each school for the incorporation of parents in the programs. Nurses should convince parents of the importance of the programs. Intervention settings should contribute to serve as the priority among adolescents, families and communities.

Second, the differences in the predictors of sexual abstinence intention supported the assumption that most of the important determinants of behavioral intention depend on the particular behavior and population studied (Villarruel et al., 2004). This supported that perceived power and control beliefs had the highest degree of effect on sexual abstinence intention among the other constructs from the TPB in this study. As a result, nurses should conduct and design intervention programs to promote sexual abstinence during the school years among early and middle Thai female adolescents to enhance self-efficacy by providing strategies for performing sexual abstinence in addition to enhancing confidence.

Third, to stimulate and help female adolescents protect themselves from early engagement in sexual intercourse with negative outcomes, such as unintended pregnancy, nurses should start by assessing adolescent values regarding sexual abstinence during the school years and evaluating the consequences significant to

adolescents who practice sexual abstinence. This should include the favorable, unfavorable, advantageous and shortcoming aspects of sexual abstinence. Nurses should investigate adolescent skills and performance regarding sexual risk assessment and counseling them in order to deal with these issues effectively (Hutchinson et al., 2001).

Finally, nurses should give correct information to influence control beliefs, including supporting and hindering factors regarding sexual abstinence. For example, female adolescents can be persuaded to think about the supporting factors, such as their bright futures and families, avoidance of unintended pregnancy and concern about having STD/HIV infections as well as hindering factors, such as risk situations and alcohol consumption. Furthermore, nurses should improve female adolescents' refusal skills to have sex so they can protect themselves from risk situations. The nonjudgmental approach with open discussions about these issues would promote and develop perceived control toward sexual abstinence during the school years. Accurate information for female adolescents who are both sexually active and inactive is also important.

### **Implications for Health Care Policy**

As part of the health care policy, nurses should actively participate in health policymaking by accentuating ideas of course requirements at the secondary school level concerning promoting strategies for early and middle sexual abstinence behaviors. Promotion of sexual abstinence programs should be integrated into the school curriculum. Sex education programs should concentrate on self-control in practicing sexual abstinence during the school years and sex refusal skills as the significant factors influencing sexual abstinence behavior. It also focuses on the advantages of delaying sexual intercourse, especially in avoiding unintended pregnancy and building bright futures. In addition, social values, parental approval and pride in abstaining from sex during the school years should be addressed.

As mentioned above, parent-daughter sexual communication has reasonable influence on sexual abstinence intention when incorporated in parent-adolescent communication in sex education programs. Thus, nurses who act as

primary health care personnel could initiate intervention programs for health promotion in varied settings, such as schools and communities.

### **Recommendations for Future Studies**

An advantage of this research is that it provides insights into the sexual abstinence of female secondary school students. This study discovered the need for future research in many areas. Other Thai early and middle female adolescents are both in schools and out of schools. Therefore, future research should be conducted with early and middle female adolescents who are not studying in school. Moreover, this study demonstrated that the aggregate model can explain 33 % of the variance, thereby signifying that are other predictors can explain 67% of the variance. Therefore, future studies are required to examine the impact of the other variables increasing the quality of sexual abstinence promotion. Although the family is viewed as one of the most proximal and significant influences on adolescent sexual behaviors, there are more distally, norms and expectations from communities, schools and society at large which may also exert influence through effects on the beliefs of parents or the adolescents themselves (Hutchinson & Wood, 2007). Then studies on the effect of these macro level influences are also considered external in the parent-based expansion of the TPB.

Additionally, a significant aspect of the subjective norm in this study is the broadened category of evident referent persons (12 persons) which did not specifically consider or select the most significant referent persons in the model testing, but used a summary score of all items to represent the subjective norm. Consequently, subsequent studies should be conducted on the specificity of the significance of the subjective norm to identify intervention targets.

Furthermore, there is also a need to revise and minimize the weaknesses of the instrument to be used for measuring the sexual abstinence as demonstrated in the weaknesses of the study in Chapter V while adding more strength to the quality of this instrument. In addition, the sexual abstinence intention scale should be ask firstly to reduce the social decide effect.

Finally, additional studies should be conducted from the perspective of parents and the dyad viewpoint on parent-daughter sexual communication for the holistic views capable of enhancing the body of knowledge on early and middle female adolescent sexual abstinence behavior.

## **Conclusion**

This chapter discussed a brief summary of the research findings on the factors predicting sexual abstinence intention during the school years among early and middle Thai female adolescents. The intention model underpinning the integration of the ecological model and the TPB was tested. The research findings indicate that parent-daughter sexual communication has a direct effect on intention and all three components from the construct of the TPB were also significant predictors on sexual abstinence intention. Among these, control beliefs had the highest degree of effect on sexual abstinence intention during the school years among early and middle Thai female adolescents. The research gained from this study can be used to develop effective intervention programs tailored for early and middle female adolescents and can be used as a source for further study and policy development in area of reproductive health.

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## **APPENDICES**

## APPENDIX A

### DOCUMENTARY PROOF OF ETHICAL CLEARANCE



คณะแพทยศาสตร์โรงพยาบาลรามาธิบดี มหาวิทยาลัยมหิดล  
 ๒๕๒ ถนนพระราม ๖ แขวงทุ่งพญาไท เขตราชเทวี กทม. ๑๐๔๐๐  
 โทร. ๐-๒๓๕๔-๖๒๖๕, ๐-๒๓๕๔-๖๒๖๖ โทรสาร ๐-๒๓๕๔-๖๒๖๓  
**Faculty of Medicine Ramathibodi Hospital, Mahidol University**  
 270 Rama VI Road, Ratchathewi, Bangkok 10400, Thailand  
 Tel. (+66) 2354-7275, (+66) 2201-1296 Fax (+66) 2354-7233


**Documentary Proof of Ethical Clearance**  
**Committee on Human Rights Related to Research Involving Human Subjects**  
**Faculty of Medicine Ramathibodi Hospital, Mahidol University**

MURA2012/196


<b>Title of Project</b>	Parent-daughter Communication and Sexual Abstinence Intention among Female Adolescents
<b>Protocol Number</b>	ID 04-55-41
<b>Principal Investigator</b>	Mrs. Janya Chareonsuk
<b>Official Address</b>	Faculty of Nursing Mahidol University

*The aforementioned project has been reviewed and approved by the Committee on Human Rights Related to Research Involving Human Subjects, based on the Declaration of Helsinki.*

Signature of Secretary  
 Committee on Human Rights Related to  
 Research Involving Human Subjects

  
 .....  
 Prof. Duangrudee Wattanasirichaigoon, M.D.

Signature of Chairman  
 Committee on Human Rights Related to  
 Research Involving Human Subjects

  
 .....  
 Prof. Boonsong Ongphiphadhanakul, M.D.

Date of Approval

May 8, 2012

## APPENDIX B

### PERMISSION LETTER FOR USING THE INSTRUMENT

วันที่ 21 กุมภาพันธ์ 2555

เรื่อง อนุญาตให้ใช้เครื่องมือ

เรียน นางจรรยา เจริญสุข

ตามที่ท่านได้ขออนุญาตใช้เครื่องมือวิจัยคือ “The Intention to Have Sexual Intercourse during the School Years Questionnaire” ซึ่งข้าพเจ้าและคณะได้พัฒนาขึ้น ข้าพเจ้าได้พิจารณาแล้ว เห็นสมควรให้ใช้เครื่องมือดังกล่าว โดยระบุให้ชัดเจนในวิทยานิพนธ์ว่าเครื่องมือดังกล่าวมาจากการพัฒนาของข้าพเจ้าและคณะ

จึงเรียนมาเพื่อทราบ

  
(รองศาสตราจารย์ ดร. วารุณี ฟองแก้ว)

## APPENDIX C

### ELICITATION STUDY INTERVIEW GUIDE

การสนทนากลุ่ม ผู้เข้าร่วมสนทนาได้แก่ นักเรียนหญิงที่กำลังศึกษาอยู่ระดับมัธยมศึกษาตอนต้นชั้นปีที่ 1-3 จำนวนชั้นปีละ 3 คน รวมทั้งสิ้น 9 คน อายุ 12- 15 ปี

ระยะเวลาที่ใช้ในการสนทนา ประมาณ 1 ชั่วโมง 30 นาที

#### ประเด็นการสนทนา

1. การสื่อสารระหว่างพ่อแม่/ผู้ปกครองเรื่องการละเว้น/ไม่มีเพศสัมพันธ์ในวัยเรียนกับบุตรสาววัยรุ่น
2. ความคิดเห็นของนักเรียนเกี่ยวกับการละเว้นเพศสัมพันธ์ในวัยเรียน

#### ประเด็นคำถาม

1. พ่อแม่/ผู้ปกครองเคยมีการพูดคุยสื่อสารกับท่านในประเด็นต่อไปนี้บ้างหรือไม่ อย่างไร
  - 1.1. ผลเสียของการมีเพศสัมพันธ์ในวัยเรียน
  - 1.2. การรักริ้วทวงตัว
  - 1.3. การคบเพื่อนต่างเพศและทักษะการปฏิเสธการมีเพศสัมพันธ์
2. ท่านมีความคิดเห็นอย่างไรต่อการละเว้น/ไม่มีเพศสัมพันธ์ในวัยเรียน
  - 2.1 ท่านคิดว่าอะไรคือ ข้อดี สำหรับวัยรุ่นที่ไม่มีเพศสัมพันธ์ในวัยเรียน
  - 2.2 ท่านคิดว่าอะไรคือ ข้อเสีย สำหรับวัยรุ่นที่ไม่มีเพศสัมพันธ์ในวัยเรียน
3. การรับรู้บรรทัดฐานเกี่ยวกับการละเว้น/ไม่มีเพศสัมพันธ์ในวัยเรียน
  - 3.1 ท่านคิดว่าบุคคลใดมีส่วนสำคัญในการสนับสนุนให้วัยรุ่นละเว้นการมีเพศสัมพันธ์ในวัยเรียน
  - 3.2 ท่านคิดว่าบุคคลใดมีส่วนสำคัญในการคัดค้านให้วัยรุ่นละเว้นการมีเพศสัมพันธ์ในวัยเรียน
4. การรับรู้ความสามารถในการควบคุมพฤติกรรม
  - 4.1 ปัจจัยอะไรที่เป็นแรงผลักดัน / ส่งเสริม ไม่ให้วัยรุ่นมีเพศสัมพันธ์ในวัยเรียน
  - 4.2 ปัจจัยอะไรที่เป็นอุปสรรค / ขัดขวางต่อการละเว้นการมีเพศสัมพันธ์ในวัยเรียนของวัยรุ่น



### ความเป็นมาของโครงการ

ปัจจุบันการมีพฤติกรรมเสี่ยงทางเพศ โดยเฉพาะการมีเพศสัมพันธ์ในวัยเรียน การมีเพศสัมพันธ์ที่ไม่ปลอดภัยและมีคู่นอนหลายคนของวัยรุ่นหญิงตอนต้นและตอนกลางเพิ่มขึ้นอย่างรวดเร็วตลอดช่วงระยะเวลาสามปีที่ผ่านมา พฤติกรรมเหล่านี้นำไปสู่ปัญหาที่สำคัญทางสาธารณสุขคือการตั้งครรภ์ที่ไม่พึงประสงค์ การทำแท้งที่ผิดกฎหมาย การติดเชื้อโรคติดต่อทางเพศสัมพันธ์และโรคเอดส์ รวมทั้งปัญหาทางด้านร่างกายและจิตสังคมอื่นๆที่ส่งผลกระทบต่อวัยรุ่น ครอบครัวและสังคม แนวทางสำคัญอันหนึ่งที่จะป้องกันปัญหานี้ได้ดีที่สุดคือการละเว้นการมีเพศสัมพันธ์ในวัยเรียนเพื่อชะลอการมีเพศสัมพันธ์ให้ช้าลง แต่อย่างไรก็ตามพบว่าการศึกษาส่วนมากในประเทศไทยมุ่งเน้นไปที่การมีเพศสัมพันธ์อย่างปลอดภัยหรือการใช้ถุงยางอนามัยในวัยรุ่นตอนปลาย มีเพียงส่วนน้อยที่ศึกษาประเด็นการละเว้นการมีเพศสัมพันธ์ในวัยรุ่นหญิง และงานวิจัยเหล่านี้จะเป็นการสำรวจพฤติกรรมที่ไม่มีกรอบแนวคิดทางทฤษฎีที่เน้นการปรับเปลี่ยนพฤติกรรมเป็นแนวทางในการศึกษา มีเพียงหนึ่งเรื่องที่ใช้ทฤษฎีการส่งเสริมพฤติกรรมสุขภาพของเพนเดอร์เป็นกรอบแนวคิดในการศึกษาวิจัย ดังนั้นผู้วิจัยจึงสนใจศึกษาพฤติกรรมการละเว้นเพศสัมพันธ์ของวัยรุ่นหญิงตอนต้นและตอนกลางโดยใช้กรอบแนวคิดทฤษฎีการวางแผนพฤติกรรม (Theory of Plan Behavior: TPB) ซึ่งมีการนำมาใช้อย่างแพร่หลายเกี่ยวกับพฤติกรรมป้องกันการติดเชื้อเอดส์ในกลุ่มวัยรุ่น ทฤษฎีนี้เน้นเกี่ยวกับปัจจัยภายในตัวบุคคลที่จะมีผลต่อการกระทำ ซึ่งได้แก่ ทัศนคติ การคล้อยตามกลุ่มอ้างอิงและการรับรู้ความสามารถของตนเองในการควบคุมพฤติกรรมนั้นๆ แต่อย่างไร

ก็ตามเมื่อกล่าวถึงพฤติกรรมทางเพศนอกจากปัจจัยภายในตัวบุคคลแล้ว การสื่อสารของพ่อแม่หรือผู้ปกครองนับว่าเป็นสิ่งสำคัญอย่างยิ่งที่มีอิทธิพลต่อความคิด ค่านิยม และการตัดสินใจในเรื่องเพศของวัยรุ่น ดังนั้นผู้วิจัยจึงสนใจที่จะศึกษาถึงอิทธิพลของการสื่อสารระหว่างบิดามารดาหรือผู้ปกครองต่อความตั้งใจในการละเว้นการมีเพศสัมพันธ์ของวัยรุ่นหญิงตอนต้นและตอนกลางโดยใช้กรอบแนวคิดทฤษฎีการวางแผนพฤติกรรมและการขยายกรอบทฤษฎีนี้โดยเพิ่มตัวแปรการสื่อสารเรื่องการละเว้นเพศสัมพันธ์ระหว่างบิดามารดาหรือผู้ปกครองกับบุตรสาววัยรุ่นร่วมด้วย เพื่อศึกษาถึงอิทธิพลของตัวแปรนี้ว่ามีผลอย่างไรกับความตั้งใจในการละเว้นการมีเพศสัมพันธ์ ซึ่งในท้ายที่สุดจะทำให้เข้าใจในตัวทำนายพฤติกรรมดังกล่าว และนำไปใช้เป็นแนวทางในการสร้างโปรแกรมการส่งเสริมพฤติกรรมนี้ในกลุ่มวัยรุ่นหญิงได้อย่างมีประสิทธิภาพ

### วัตถุประสงค์

เพื่อศึกษาปัจจัยทำนายความตั้งใจในการละเว้นเพศสัมพันธ์ของวัยรุ่นหญิงตอนต้นและตอนกลาง

### รายละเอียดที่จะปฏิบัติต่อผู้เข้าร่วมการวิจัย

- 1) ผู้วิจัยจะถามความสมัครใจของผู้เข้าร่วมวิจัยที่ได้รับการสุ่มคัดเลือกเข้าร่วมการวิจัย ผู้ร่วมวิจัยสามารถเปลี่ยนใจถอนตัวออกจากการศึกษาเมื่อใดก็ได้โดยไม่มีผลกระทบใดๆ ทั้งสิ้น
- 2) ผู้วิจัยจะอธิบายวัตถุประสงค์ และขั้นตอนการเก็บรวบรวมข้อมูล โดยจะดำเนินการรวบรวมข้อมูลโดยใช้แบบสอบถามประเมินตนเอง จำนวน 3 ชุด ใช้เวลาประมาณ 45 นาที ภายหลังจากที่ผู้เข้าร่วมวิจัยตอบแบบสอบถามเสร็จ ผู้วิจัยจะมอบปากกาสีน้ำเงิน 1 ด้าม เป็นการตอบแทนที่ผู้ร่วมวิจัยให้ความร่วมมือในการตอบแบบสอบถาม
- 3) ผู้วิจัยจะเปิดโอกาสให้ผู้เข้าร่วมวิจัยซักถามในสิ่งที่ไม่เข้าใจ เมื่อผู้เข้าร่วมวิจัย เข้าใจวัตถุประสงค์และขั้นตอนการเก็บรวบรวมข้อมูลในการศึกษารั้งนี้ และสมัครใจที่จะเข้าร่วมในการศึกษา ผู้วิจัยจะให้ผู้ร่วมวิจัยลงชื่อในหนังสือยินยอมโดยได้รับการบอกกล่าวและเต็มใจ

### ประโยชน์และผลข้างเคียงที่จะเกิดแก่ผู้เข้าร่วมการวิจัย

การศึกษารั้งนี้เป็นการตอบแบบสอบถาม จึงไม่มีผลข้างเคียงที่จะกระทบต่อร่างกาย แต่อาจมีคำถามบางข้อที่อาจกระทบความรู้สึก และจำนวนข้อของแบบสอบถามที่มีจำนวนมากอาจทำให้ผู้ร่วมวิจัยรู้สึกเบื่อหน่ายได้ ดังนั้น ผู้ร่วมวิจัยสามารถปฏิเสธ หรือถอนตัวออกจากการศึกษาได้ตลอดเวลาที่ต้องการ โดยไม่มีผลกระทบใดๆ ทั้งสิ้น

### การเก็บข้อมูลเป็นความลับ

จะไม่มีการระบุชื่อผู้ร่วมวิจัย ในงานวิจัยครั้งนี้จะใช้รหัสซึ่งเป็นตัวเลขที่มุ่มขาวของแบบสอบถามการนำเสนอผลจะนำเสนอในภาพรวม และเนื่องจากการศึกษาวิจัยเรื่องนี้เป็นประเด็นที่เกี่ยวข้องกับเรื่องเพศซึ่งเป็นเรื่องที่ละเอียดอ่อนอย่างยิ่ง ดังนั้นเพื่อเป็นการเก็บรักษาความลับและพิทักษ์สิทธิของผู้ร่วมวิจัย โดยจะเสนอขอละเว้นการยินยอมจากผู้ปกครองจากคณะกรรมการจริยธรรมและวิจัยในคน ผู้วิจัยจะทำลายแบบสอบถามเหล่านั้นด้วยตนเอง ภายหลังจากเสร็จสิ้นการวิจัย

ถ้าท่านมีปัญหาข้อใจหรือรู้สึกกังวลใจกับการเข้าร่วมในโครงการวิจัยนี้ ท่านสามารถติดต่อกับประธานกรรมการจริยธรรมการวิจัยในคน สำนักงานวิจัยคณะฯ อาคารวิจัยและสวัสดิการ คณะแพทยศาสตร์โรงพยาบาลรามาธิบดี



หนังสือยินยอมโดยได้รับการบอกกล่าวและเต็มใจ  
(Informed Consent Form)

ชื่อโครงการ การสื่อสารระหว่างพ่อ แม่ / ผู้ปกครอง กับบุตรสาว และความตั้งใจละเว้นการมีเพศสัมพันธ์ของ  
วัยรุ่นหญิง

ชื่อผู้วิจัย นางจรรยา เจริญสุข

\*ชื่อผู้เข้าร่วมการวิจัย .....

อายุ .....

คำยินยอมของผู้เข้าร่วมการวิจัย

ข้าพเจ้า เด็กหญิง /นางสาว ..... ได้ ใ้ ท ร า บ  
รายละเอียด ของโครงการวิจัยตลอดจนประโยชน์ ที่จะเกิดขึ้นแล้วอย่างชัดเจน ไม่มีสิ่งใดปิดบังซ่อนเร้นและ  
ยินยอมให้ทำการวิจัยในโครงการที่มีชื่อข้างต้น และข้าพเจ้ารู้ว่าถ้ามีปัญหาหรือข้อสงสัยเกิดขึ้นข้าพเจ้าสามารถ  
สอบถามผู้วิจัยได้ และข้าพเจ้าสามารถไม่เข้าร่วมโครงการวิจัยนี้เมื่อใดก็ได้ โดยไม่มีผลกระทบต่อการศึกษาของ  
ข้าพเจ้า นอกจากนี้ผู้วิจัยจะเก็บข้อมูลเฉพาะเกี่ยวกับตัวข้าพเจ้าเป็นความลับและจะเปิดเผยได้เฉพาะในรูปที่เป็น  
สรุปผลการวิจัย การเปิดเผยข้อมูลเกี่ยวกับตัวข้าพเจ้าต่อหน่วยงานต่างๆที่เกี่ยวข้อง กระทำได้เฉพาะกรณีจำเป็น  
ด้วยเหตุผลทางวิชาการเท่านั้น

ลงชื่อ..... (ผู้เข้าร่วมการวิจัย)

..... (พยาน)

..... (พยาน)

วันที่ .....

คำอธิบายของผู้วิจัย

ข้าพเจ้าได้อธิบายรายละเอียดของโครงการ ตลอดจนประโยชน์ของการวิจัย แก่ผู้เข้าร่วมการ  
วิจัยทราบแล้วอย่างชัดเจนโดยไม่มีสิ่งใดปิดบังซ่อนเร้น

ลงชื่อ.....นางจรรยา เจริญสุข..... (ผู้วิจัย)

วันที่.....

หมายเหตุ : \* ผู้เข้าร่วมการวิจัย หมายถึง ผู้ยินยอมตนให้ทำวิจัย

## **APPENDIX E**

### **LIST OF CONTENT VALIDITY EXPERTS**

#### **List of five experts who validate content of the measurements:**

1. Dusadee Yoelao, Ph.D.  
Associate Professor  
Behavioral Science Research Institute, Srinakarinwirot University
2. Warunee Fongkaew, RN, Ph.D.  
Associate Professor  
Faculty of Nursing, Chiang Mai University
3. Sumalee Lirtmunlikaporn , RN, Ph.D.  
Assistant Professor  
Faculty of Nursing, Chiang Mai University
4. Noraluk Ua-Kit, RN, Ph.D.  
Assistant Professor  
Faculty of Nursing, Chulalongkorn University
5. Rungnapa Panitrat, RN, Ph.D.  
Assistant Professor  
Faculty of Nursing, Mahidol University

## APPENDIX F INSTRUMENTS

### The Parent-Daughter Sexual Abstinence Communication Questionnaire

**Instruction:** Mark × on the number that is the most appropriate to your decision.

- Very Often** refers to your perception that your parents always communicate or perform it to you
- Usually** refers to your perception that your parents more often than not communicate or perform it to you
- Sometimes** refers to your perception that your parents occasionally to communicate or perform it to you
- Not frequently** refers to your perception that your parents not regularly communicate or perform it to you
- Never** refers to your perception that your parents on no account to communicate or perform it to you

Statements	Never	Not frequently	Sometimes	Usually	Very Often
1. My parent talked to me that having sex during the school year may cause unwanted pregnancy.	1	2	3	4	5
2. My parent talked to me that got pregnancy during the school year may cause losing out on education or being fired from school.	1	2	3	4	5
3. My parent talked to me that got pregnancy during the school year make family disreputable.	1	2	3	4	5
4. My parent talked to me that got pregnancy during the school year make life difficult.	1	2	3	4	5
• • • •					
25. My parent talked to me that if a man who sincerely with a woman, he does not hesitate her to have sex during the school year.	1	2	3	4	5

**(Thai Version)**

**แบบสอบถามชุดที่ 1 การรับรู้เกี่ยวกับการสื่อสารเรื่องการละเว้นเพศสัมพันธ์ในวัยเรียน  
ระหว่างพ่อแม่ / ผู้ปกครองและบุตรสาววัยรุ่น**

- คำชี้แจง:** โปรดกาเครื่องหมาย × บนตัวเลขท้ายข้อความที่ตรงกับความเป็นจริง ข้อละ 1 คำตอบ
- เป็นประจำ** หมายถึง ท่านรับรู้ว่าคุณแม่มีการสื่อสารพูดคุยหรือปฏิบัติเช่นนั้นอย่างสม่ำเสมอแต่บ่อยครั้ง
- ค่อนข้างบ่อย** หมายถึง ท่านรับรู้ว่าคุณแม่มีการสื่อสารพูดคุยหรือปฏิบัติเช่นนั้นบ่อยครั้ง
- บางครั้ง** หมายถึง ท่านรับรู้ว่าคุณแม่มีการสื่อสารพูดคุยหรือปฏิบัติเช่นนั้นบ้างแต่ไม่บ่อยนัก
- นานๆครั้ง** หมายถึง ท่านรับรู้ว่าคุณแม่มีการสื่อสารพูดคุยหรือปฏิบัติเช่นนั้นบ้างแต่น้อยครั้งมาก
- ไม่เคยเลย** หมายถึง ท่านรับรู้ว่าคุณแม่ของท่านไม่เคยมีการสื่อสารพูดคุยหรือปฏิบัติเช่นนั้นเลย

พ่อแม่ / ผู้ปกครองของฉันพูดคุยกับฉันว่า	ไม่เคยเลย	นานๆครั้ง	บางครั้ง	ค่อนข้างบ่อย	เป็นประจำ
1. การมีเพศสัมพันธ์ในวัยเรียนอาจทำให้ตั้งท้องได้	1	2	3	4	5
2. การตั้งท้องขณะที่ยังเรียนอยู่ อาจทำให้ต้องหยุดเรียนหรือออกจากโรงเรียนได้	1	2	3	4	5
3. การตั้งท้องขณะที่ยังเรียนอยู่ ทำให้ครอบครัวอับอายและเสียชื่อเสียงได้	1	2	3	4	5
4. การมีลูกขณะที่ยังเรียนอยู่ ทำให้ชีวิตลำบากเพราะหาเลี้ยงตัวเองไม่ได้	1	2	3	4	5
.					
.					
.					
25. ถ้าผู้ชายที่รักผู้หญิงจริง จะไม่เร่งรัดให้ผู้หญิงมีเพศสัมพันธ์กับเขาในวัยเรียน	1	2	3	4	5

## The Sexual Abstinence Intention during the School Years Questionnaire

### 1. Behavioral beliefs toward sexual abstinence

The following questions refer to thing that may happen if you have sexual abstinence during the school year. Please mark × on the number that best describes how you belief.

<b>Do you agree that sexual abstinence would</b>	<b>Strongly disagree</b>	<b>Disagree</b>	<b>Unsure</b>	<b>Agree</b>	<b>Strongly agree</b>
1.Prevent AIDS and sexual transmitted diseases	1	2	3	4	5
2.Prevent unintentional pregnancy	1	2	3	4	5
3.Keep away from childrearing burden	1	2	3	4	5
· · ·					
33. Brings trouble to the relationship with a boyfriend.	1	2	3	4	5

### 2. Outcome evaluation

The following questions are the list of outcomes that may happen if you have sexual abstinence during the school year. Please mark × on the number that best describes how important each outcome is it, or it would be for you.

<b>Behavioral outcome from sexual abstinence during the school year</b>	<b>Not important at all</b>	<b>Not important</b>	<b>Unsure</b>	<b>Important</b>	<b>Very important</b>
34. Prevent AIDS and sexual transmitted diseases	1	2	3	4	5
35. Prevent unintentional pregnancy	1	2	3	4	5
36. Keep away from childrearing burden	1	2	3	4	5
· · ·					
67. Brings trouble to the relationship with a boyfriend.	1	2	3	4	5

**3. Normative beliefs**

What do you think about the responses of the following persons if you have sexual abstinence? Please mark × on the number that best describes what do you believe each of people mentioned approve or disapprove of the behavior?

<b>The following persons think that....</b>	<b>Definitely should not</b>	<b>Should not</b>	<b>Unsure</b>	<b>Should</b>	<b>Definitely should</b>
1. What my father thinks if I will have sexual abstinence during the school year	1	2	3	4	5
2. What my mother thinks if I will have sexual abstinence during the school year	1	2	3	4	5
3. What my teacher thinks if I will have sexual abstinence during the school year	1	2	3	4	5
.					
12. What my grandfather / grandmother thinks if I will have sexual abstinence during the school year.	1	2	3	4	5

**4. Motivation to comply**

Motivation to do what each referent thinks you should or should not have sexual abstinence. Please mark × on the number that comes closest to you how likely do you want to do whether each referent thinks about the possibility of you to have sexual abstinence?

<b>Your agree with the statements</b>	<b>Very little</b>	<b>Little</b>	<b>Un sure</b>	<b>Quite a bit</b>	<b>Very much</b>
13. How likely you want to do if your <b>father</b> wants you to have sexual abstinence?	1	2	3	4	5
14. How likely you want to do if your <b>mother</b> wants you to have sexual abstinence?	1	2	3	4	5
15. How likely you want to do if your <b>teacher</b> wants you to have sexual abstinence?	1	2	3	4	5
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32. How likely you want to do if your <b>grandfather / grandmother</b> want you to have sexual abstinence?	1	2	3	4	5

**5. Control beliefs**

Adolescents’ control beliefs regarding each factor that effect their behavioral performance. Please mark × on the number that best describes how easy or difficult is it, or would it be for you to have sexual abstinence during the school year.

<b>Condition that facilitate or impede sexual abstinence</b>	<b>Very difficult</b>	<b>Somewhat difficult</b>	<b>Unsure</b>	<b>Somewhat easy</b>	<b>Very easy</b>
1. Pay attention to study make me stick to sexual abstinence during the school year.	1	2	3	4	5
2. Awareness on self-esteem makes me stick to sexual abstinence during the school year.	1	2	3	4	5
3. Concern on future makes me stick to sexual abstinence during the school year.	1	2	3	4	5
.					
.					
.					
17. Although my boyfriend asks me to have sex, I can refuse and stick to sexual abstinence during the school year.	1	2	3	4	5

**6. Perceived powers**

Please mark × on the number that best describes how likely or unlikely is it, or would it be for you to have sexual abstinence during the school year.

<b>Likelihood of occurrences</b>	<b>Very unlikely</b>	<b>Unlikely</b>	<b>Unsure</b>	<b>Likely</b>	<b>Very likely</b>
18. A chance to pay attention on studying	1	2	3	4	5
19. A chance to awareness on self-esteem	1	2	3	4	5
20. A chance to concern on future	1	2	3	4	5
.					
.					
.					
34. A chance of a boyfriend ask you to have sex	1	2	3	4	5

**7. Sexual Abstinence Intention**

Please mark × on the number that best describes your intention to have sexual abstinence during the school year.

<b>Sexual abstinence intention during the school year.</b>	<b>Absolutely impossible</b>	<b>Impossible</b>	<b>Unsure</b>	<b>Possible</b>	<b>Absolutely possible</b>
1. If a boyfriend asks me to have sex, I resist refusing it.	1	2	3	4	5
.					
.					
.					
4. I intend to not having a boyfriend until 20 years.	1	2	3	4	5

I intend to have sexual abstinence until.....year olds.

**(Thai Version)****แบบสอบถาม ชุดที่ 2 เรื่องการละเว้น / ไม่มีเพศสัมพันธ์ในวัยเรียน****ตอนที่ 1 ความเชื่อเกี่ยวกับผลของการละเว้น / ไม่มีเพศสัมพันธ์ในวัยเรียน**

**คำชี้แจง:** ข้อความที่ 1-33 แสดงถึงสิ่งที่จะเกิดขึ้นจากการละเว้นการมีเพศสัมพันธ์ในวัยเรียน ทางด้านขวามือของข้อความเป็นตัวเลือกเกี่ยวกับความเชื่อของนักเรียน เกี่ยวกับการละเว้น/ไม่มีเพศสัมพันธ์ในวัยเรียน โปรดเขียนเครื่องหมาย X ลงบนตัวเลขในช่องคำตอบท้ายข้อความ ที่ตรงความเป็นจริงกับความเชื่อของท่านมากที่สุด

นักเรียนเห็นด้วยหรือไม่ว่า	ไม่เห็นด้วยอย่างยิ่ง	ไม่เห็นด้วย	ไม่แน่ใจ	เห็นด้วย	เห็นด้วยอย่างยิ่ง
1.การละเว้นการมีเพศสัมพันธ์ในวัยเรียนทำให้ไม่ติดโรคเอดส์/โรคติดต่อทางเพศสัมพันธ์	1	2	3	4	5
2. การละเว้นการมีเพศสัมพันธ์ในวัยเรียนทำให้ไม่ตั้งครภ์ขณะที่เรียนอยู่	1	2	3	4	5
3.การละเว้นการมีเพศสัมพันธ์ในวัยเรียนทำให้ไม่มีภาวะเสี่ยงคูถูกที่เกิดจากการตั้งครภ์	1	2	3	4	5
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.					
.					
33.การละเว้นการมีเพศสัมพันธ์ในวัยเรียนทำให้ชีวิตรักราวรื่น	1	2	3	4	5

**ตอนที่ 2 การประเมินผลลัพธ์ที่อาจเกิดขึ้นจากการละเว้น / ไม่มีเพศสัมพันธ์ในวัยเรียน**  
**คำชี้แจง:** ข้อความที่ 34-67 แสดงถึงผลที่อาจเกิดขึ้นจากการละเว้นเพศสัมพันธ์ในวัยเรียน ทางด้านขวามือเป็นตัวเลือกเกี่ยวกับการประเมินความสำคัญของผลที่เกิดขึ้นต่อตัวท่าน โปรดเขียนเครื่องหมาย X ทับบนตัวเลขในช่องคำตอบ ที่ตรงตามความเป็นจริงกับความ คิดเห็นของตัวนักเรียนมากที่สุด

ผลของการละเว้นเพศสัมพันธ์ในวัยเรียน	ไม่ สำคัญ เลย	ไม่ ค่อย สำคัญ	ไม่ แน่ใจ	สำคัญ	สำคัญ มาก
34. การไม่ติดโรคเอดส์/โรคติดต่อทาง เพศสัมพันธ์ขณะที่เรียนหนังสืออยู่เพราะละเว้น เพศสัมพันธ์ในวัยเรียน เป็นสิ่งที่	1	2	3	4	5
35. การไม่ตั้งครรถ์ขณะที่เรียนหนังสืออยู่เพราะ ละเว้นเพศสัมพันธ์ในวัยเรียน เป็นสิ่งที่	1	2	3	4	5
36. การไม่มีภาระเลี้ยงดูลูกขณะที่เรียนหนังสือ อยู่เพราะละเว้นเพศสัมพันธ์ในวัยเรียน เป็นสิ่งที่	1	2	3	4	5
37. การทำให้พ่อแม่ภาคภูมิใจเพราะละเว้น เพศสัมพันธ์ในวัยเรียน เป็นสิ่งที่	1	2	3	4	5
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.					
.					
66. การที่ชีวิตรกราบรื่นเพราะละเว้น เพศสัมพันธ์ในวัยเรียนเป็นสิ่งที่	1	2	3	4	5

**ตอนที่ 3 ความเชื่อเกี่ยวกับความคิดเห็นของบุคคลสำคัญที่มีอิทธิพลต่อพฤติกรรมการ  
ละเว้นเพศสัมพันธ์ในวัยเรียน**

**คำชี้แจง:** ข้อความที่ 1-12 เป็นความคิดเห็นของบุคคลสำคัญที่มีอิทธิพลต่อนักเรียน เกี่ยวกับ  
พฤติกรรมการละเว้น/ไม่มีเพศสัมพันธ์ในวัยเรียน จงอ่านข้อความเหล่านี้ แล้วเขียน  
เครื่องหมาย X ทับบนตัวเลขในช่องตัวเลือก ที่ตรงกับความคิด หรือความเชื่อของตัว  
นักเรียนมากที่สุด

บุคคลที่มีอิทธิพลต่อนักเรียน	ไม่ควรทำ อย่างยิ่ง	ไม่ ควร ทำ	ไม่ แน่ใจ	ควรทำ	ควรทำ อย่างยิ่ง
1. การที่ฉันละเว้นเพศสัมพันธ์ในวัยเรียนพ่อ ของฉันคิดว่า	1	2	3	4	5
2. การที่ฉันละเว้นเพศสัมพันธ์ในวัยเรียนแม่ของ ฉันคิดว่า	1	2	3	4	5
3. การที่ฉันละเว้นเพศสัมพันธ์ในวัยเรียนครู อาจารย์ของฉันคิดว่า	1	2	3	4	5
• • •					
12. การที่ฉันละเว้นเพศสัมพันธ์ในวัยเรียนปู่ย่า ตายายของฉันคิดว่า	1	2	3	4	5

**ตอนที่ 4 แรงจูงใจในการละเว้นเพศสัมพันธ์ในวัยเรียนของนักเรียน ตามความคิดเห็นของบุคคลสำคัญที่มีอิทธิพลต่อนักเรียน**

**คำชี้แจง:** ข้อความที่ 13-24 เป็นความคิดเห็นของบุคคลสำคัญที่มีอิทธิพลต่อนักเรียนเกี่ยวกับพฤติกรรมการละเว้น/ไม่มีเพศสัมพันธ์ในวัยเรียน ทางด้านขวามือเป็นระดับความเชื่อของนักเรียนที่จะปฏิบัติตามความเห็นของบุคคลนั้นๆ จงอ่านข้อความ แล้วเขียนเครื่องหมาย X ลงในช่องตัวเลือก ที่ตรงกับความคิด หรือความเชื่อของตัวนักเรียนมากที่สุด

นักเรียนจะทำตามผู้ที่มีอิทธิพล	น้อยที่สุด	น้อย	ไม่แน่ใจ	มาก	มากที่สุด
13.ฉันละเว้นเพศสัมพันธ์ในวัยเรียนตามความเห็นของพ่อ	1	2	3	4	5
14.ฉันละเว้นเพศสัมพันธ์ในวัยเรียนตามความเห็นของแม่	1	2	3	4	5
15.ฉันละเว้นเพศสัมพันธ์ในวัยเรียนตามความเห็นของครู	1	2	3	4	5
• •					
24. ฉันละเว้นเพศสัมพันธ์ในวัยเรียนตามความเห็นของปู่ย่าตายาย	1	2	3	4	5

**ตอนที่ 5 ความเชื่อเรื่องความสามารถในการควบคุมพฤติกรรมการละเว้นเพศสัมพันธ์ในวัยรุ่น**

**คำชี้แจง:** ข้อความที่ 1-17 เป็นสถานการณ์ที่ส่งผลสนับสนุนหรือขัดขวางพฤติกรรม การละเว้นเพศสัมพันธ์ในวัยรุ่น จงอ่านข้อความเหล่านี้ แล้วเขียนเครื่องหมาย X ทับบนตัวเลขในช่องตัวเลือก ที่ตรงกับความเชื่อของนักเรียนต่อการควบคุมตนเองในการละเว้นเพศสัมพันธ์ในวัยรุ่นมากที่สุด

สถานการณ์ที่เป็นแรงผลักดันหรือยับยั้ง	ยากมาก	ค่อนข้างยาก	ไม่แน่ใจ	ค่อนข้างง่าย	ง่ายมาก
1. การที่ฉันตั้งใจเรียน ทำให้ฉันละเว้นเพศสัมพันธ์ในวัยรุ่นได้	1	2	3	4	5
2. การเห็นคุณค่าของตัวเองทำให้ฉันละเว้นเพศสัมพันธ์ในวัยรุ่นได้	1	2	3	4	5
3. การที่นึกถึงอนาคตตนเองทำให้ฉันละเว้นเพศสัมพันธ์ในวัยรุ่นได้	1	2	3	4	5
.					
.					
.					
17. ถ้ามีแฟน ถึงแม้ว่าเขาต้องการมีเพศสัมพันธ์กับฉันในขณะที่ฉันยังเป็นนักเรียนอยู่ ฉันสามารถที่จะปฏิเสธได้	1	2	3	4	5

**ตอนที่ 6 การรับรู้ความสามารถในการควบคุมปัจจัยหรือสถานการณ์ที่สนับสนุนหรือขัดขวางการทำให้เกิดพฤติกรรมการละเว้น / ไม่มีเพศสัมพันธ์ในวัยเรียน**

**คำชี้แจง:** ข้อความที่ 18-34 เป็นสถานการณ์ที่ส่งผลด้านสนับสนุนหรือขัดขวางต่อพฤติกรรมการละเว้น / ไม่มีเพศสัมพันธ์ในวัยเรียน ด้านขวามือเป็นตัวเลือกการรับรู้ ความเป็นไปได้ ต่อการเกิดสถานการณ์นั้นๆ ตลอดช่วงระยะเวลาที่ท่านยังเรียนหนังสืออยู่ จงอ่านข้อความเหล่านี้ แล้วเขียนเครื่องหมาย X ทับลงบนตัวเลขในช่องตัวเลือก ที่ตรงกับความคิดหรือความเชื่อของท่านมากที่สุด

สถานการณ์	เป็นไปได้ หรือไม่ อย่างยิ่ง	เป็นไปได้ ไม่ได้	ไม่แน่ใจ	เป็นไปได้	เป็นไปได้ อย่างยิ่ง
18.โอกาสที่ฉันจะตั้งใจเรียน	1	2	3	4	5
19.โอกาสที่ฉันจะเห็นคุณค่าของตัวเอง	1	2	3	4	5
20.โอกาสที่ฉันจะนึกถึงอนาคตของตัวเอง	1	2	3	4	5
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.					
.					
34. ถ้ามีแฟน โอกาสที่แฟนฉันต้องการมีเพศสัมพันธ์กับฉัน	1	2	3	4	5

ตอนที่ 7 ความตั้งใจของนักเรียนในการละเว้น / ไม่มีเพศสัมพันธ์ในช่วงเวลาที่ศึกษาอยู่  
 คำชี้แจง: ข้อความที่ 35-38 เป็นข้อความเกี่ยวกับความตั้งใจของนักเรียนในการละเว้น  
 เพศสัมพันธ์ในขณะที่เรียนอยู่ จงอ่านข้อความ แล้วเขียนเครื่องหมาย X ลงบนตัวเลขในช่อง  
 ตัวเลือก ที่ตรงกับความคิด ของท่านมากที่สุด

ความตั้งใจในการละเว้นเพศสัมพันธ์ ในวัยเรียน	ไม่น่า เป็นไปได้ เลย	ไม่น่าเป็น ไปได้	ไม่ แน่ใจ	เป็นไปได้	เป็นไปได้ อย่างยิ่ง
1. ถ้ามีแฟน ถึงแม้ว่าเขาจะร้องขอให้ฉันมี เพศสัมพันธ์กับเขา ฉันยืนยันที่จะปฏิเสธ	1	2	3	4	5
• • •					
4. ฉันตั้งใจว่าจะไม่มีแฟนจนกระทั่งอายุ 20 ปี	1	2	3	4	5

ฉันตั้งใจจะละเว้นเพศสัมพันธ์จนกระทั่งอายุ.....ปี

## Demographic Data Questionnaire

**Instruction:** This survey wants to ask you some question about your personal information. Please fill out the form and circle the answers that apply to you.

1. Age.....years
2. Level of education.....
3. The average grade point (GPA).....
4. Religion
  1. Buddhist      2. Christian
  3. Muslim      4. Others (Please specify).....
5. Number of Sibling.....
6. Person who living with
  1. Father and mother    2. Father or mother    3. A boyfriend
  4. Friend (same sex)    5. Relative (Please specify).....
  6. Alone                    7. Others (Please specify).....
7. Income (Baht per month)
  1. Below 1,000            2. 1,000-1,500            3. 1,501-2,000
  4. 2,001- 2,500            5. 2,501-3,000            6. 3,001-3,500
  7. More than 3,500
- .
- .
- .
15. Sexual experience
  1. Never
  2. Ever having sex
    - 2.1 Age at first sex .....years
    - 2.2 Reason for first sex (can answer may more than 1 item)
      1. Want to trial      2. Love              3. Forced
      4. Drinking alcohol    5. Stay alone together
      6. Other.....
    - 2.3 Person who had sex with
      1. Boyfriend            2. Friend              3. Acquaintance
      4. Stranger              5. Other.....
    - 2.4 Condom use during having sex
      1. Never      2. Sometime              3. Often
      4. Every time
    - 2.5 Number of partner.....

**(Thai Version)****แบบสอบถามข้อมูลส่วนบุคคล**

**คำชี้แจง:** แบบสอบถามข้อมูลส่วนบุคคลเป็นแบบสอบถามข้อมูลทั่วไปเกี่ยวกับตัวนักเรียน โปรดเติมคำในช่องว่าง และ วงกลม คำตอบที่ตรงกับข้อมูลของท่านตามความเป็นจริง

1. อายุ.....ปี
2. กำลังศึกษาอยู่ระดับชั้นมัธยมศึกษาปีที่.....
3. คะแนนเฉลี่ย (GPA) ปีการศึกษาที่แล้ว.....
4. นับถือศาสนา
  1. พุทธ
  2. คริสต์
  3. อิสลาม
  4. อื่นๆ (โปรดระบุ).....
5. มีพี่น้อง.....คน
  - 
  - 
  - 
  -
15. ท่านเคยมีเพศสัมพันธ์หรือไม่
  1. ไม่เคยมี
  2. มีแล้ว
    - 2.1 ครั้งแรกเมื่ออายุ.....ปี
    - 2.2 ท่านมีเพศสัมพันธ์ครั้งแรกเพราะเหตุใด (ตอบได้มากกว่า 1 ข้อ)
      - 1) อยากลอง
      - 2) ความรัก
      - 3) ถูกบังคับ/ ไม่สมัครใจ
      - 4) ดื้อของมีนเมา
      - 5) อยู่กันเพียงลำพัง
      - 6) อื่นๆ .....
    - 2.3 ท่านมีเพศสัมพันธ์ครั้งแรกกับใคร (ตอบได้มากกว่า 1 ข้อ)
      - 1) คนรัก / แฟน
      - 2) เพื่อน
      - 3) คนรู้จัก
      - 4) คนไม่รู้จัก / แผลกหน้า
      - 5) อื่นๆ โปรดระบุ .....
    - 2.4 มีการใช้ถุงยางอนามัยขณะมีเพศสัมพันธ์หรือไม่
      - 1) ไม่เคยใช้เลย
      - 2) เคยใช้นานๆครั้ง
      - 3) ใช้บ่อยครั้ง
      - 4) ใช้ทุกครั้ง
    - 2.5 ท่านเคยมีคู่นอนมาแล้ว ..... คน

## APPENDIX G

### NUMBER AND PERCENTAGE OF THE STUDY VARIABLES

**Table G1** Number and Percentage of Individual Parent-Daughter Sexual Abstinence Communication Measure (n= 470)

Variables/Items	Never	Some times	Not Sure	Usually	Very often	Missing
	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
<b>Parent-daughter sexual abstinence communication</b>	47(10.0)	109(23.2)	159(33.8)	83(17.7)	72(15.3)	0(0)
1) My parents told me having sex during the school years may cause unwanted pregnancy.						
2) My parents told me pregnancy during the school years may result in loss of educational opportunities or expulsion from school.	59(12.6)	89(18.9)	137(29.1)	108(23.0)	77(16.4)	0(0)
3) My parents told me pregnancy during the school years would ruin my family's reputation.	103(22)	92(19.6)	123(26.2)	90(19.1)	61(13.0)	1(0.2)
4) My parents told me pregnancy during the school years would make life difficult.	47(10.0)	75(16.0)	101(21.5)	144(30.6)	101(21.5)	2(0.4)
5) My parents told me pregnancy during the school years may not work out as expected.	77(16.4)	91(19.4)	109(23.2)	117(24.9)	76(16.2)	0(0)
6) My parents told me having sex during the school years may result in AIDS and sexually transmitted diseases (STDs).	81(17.2)	99(21.1)	128(27.2)	95(20.2)	66(14.0)	1(0.2)
7) My parents told me having sex during the school years would give me low self-esteem.	81(17.2)	85(18.1)	107(22.8)	96(20.4)	101(21.5)	0(0)
8) My parents gave me an example about sex from the media to warn me about not having sex during the school years.	58(12.3)	81(17.2)	123(26.2)	103(21.9)	105(22.3)	0(0)
9) My parents told me a story about their experiences to warn me not to have sex during the school years.	51(10.9)	99(21.1)	110(23.4)	107(22.8)	103(21.9)	0(0)
10) When faced with other people's inappropriate manners, my parents warned me to not have sex during the school years.	27(5.7)	58(12.3)	100(21.3)	144(30.6)	141(30.0)	0(0)
11) My parents told me to dress appropriately.	28(6.0)	49(10.4)	86(18.3)	120(25.5)	189(39.6)	1(0.2)
12) My parents told me drinking alcohol may lead to sexual intercourse.	64(13.6)	100(21.3)	128(27.2)	110(23.4)	67(14.3)	1(0.2)
13) My parents told me to avoid going outside alone with a boy.	31(6.6)	46(9.8)	60(12.8)	118(25.1)	215(45.7)	0(0)

Variables/Items	Never	Some times	Not Sure	Usually	Very often	Missing
	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
14) My parents told me to avoid going outside alone with a boy in inappropriate places.	43(9.1)	57(12.1)	79(16.8)	88(18.7)	200(42.6)	3(0.6)
15) My parents told me to avoid staying alone with a boy in private places.	35(7.4)	50(10.6)	65(13.8)	116(24.7)	204(43.4)	0(0)
16) My parents told me to avoid being touched by a boy.	46(9.8)	64(13.6)	86(17.7)	132(28.1)	144(30.6)	1(0.2)
17) I have seen my parents have sex.	4(0.9)	8(1.7)	7(1.5)	18(3.8)	432(91.9)	1(0.2)
18) My parents are a good role model for expressing love.	47(10.0)	63(13.4)	110(23.4)	106(22.6)	141(30.0)	3(0.6)
19) My parents told me having sex during the school years is premature.	41(8.7)	74(15.7)	96(20.4)	121(25.7)	137(29.1)	1(0.2)
20) My parents told me that if I have a boyfriend, I have to stay under adult supervision.	61(13.0)	48(10.2)	80(17.0)	116(24.7)	165(35.1)	0(0)
21) My parents told me I need to behave properly if I have a boyfriend.	68(14.5)	39(8.3)	93(19.8)	111(23.6)	156(33.2)	3(0.6)
22) My parents taught me a refusal skill to refuse sex during the school years.	88(18.7)	54(11.5)	88(18.7)	100(21.3)	137(29.1)	3(0.6)
23) My parents told me I should not have a boyfriend during the school years.	35(7.4)	80(17.0)	79(16.8)	104(22.1)	168(35.7)	4(0.9)
24) My parents told me I should inform my parents before going outside with a boyfriend.	34(7.2)	36(7.7)	51(10.9)	97(20.6)	247(52.6)	5(1.1)
25) My parents told me a man who sincere about a woman would not force her to have sex during the school years	53(11.3)	54(11.5)	79(16.8)	95(20.2)	186(39.6)	3(0.6)

**Table G2** Number and Percentage of Behavioral Beliefs toward Sexual Abstinence  
(n= 470)

Do you agree that sexual abstinence would	Strongly disagree	Disagree	Unsure	Agree	Strongly agree	Missing
	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
1) Prevent AIDS and sexually transmitted diseases.	8(1.7)	6(1.3)	20(4.3)	97(20.6)	338(71.9)	1(0.2)
2) Prevent unintentional pregnancy.	10(2.1)	7(1.5)	13(2.8)	68(14.5)	371(78.9)	1(0.2)
3) Keep away from childrearing burdens.	9(1.9)	8(1.7)	12(2.6)	114(24.3)	326(69.4)	1(0.2)
4) Make parents felt proud.	11(2.3)	5(1.1)	12(2.6)	103(21.9)	339(72.1)	0(0)
5) Keep away from losing out on educational opportunities.	14(3.0)	2(0.4)	11(2.3)	84(17.9)	358(76.2)	1(0.2)
6) Building a bright future.	12(2.6)	4(0.9)	13(2.8)	76(16.2)	364(77.4)	1(0.2)
7) Keep virginity.	7(1.5)	6(1.3)	32(6.8)	126(26.8)	298(63.4)	1(0.2)
8) Prevention of obsessing over sex.	7(1.5)	10(2.1)	46(9.8)	121(25.7)	285(60.6)	1(0.2)

Do you agree that sexual abstinence would	Strongly disagree	Disagree	Unsure	Agree	Strongly agree	Missing
	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
9) Create more chances to choose a good guy as a spouse in the future.	4(0.9)	13(2.8)	59(12.6)	92(19.6)	301(64.0)	1(0.2)
10) Prevent disreputable behavior.	5(1.1)	8(1.7)	35(7.4)	125(26.6)	297(63.2)	0(0)
11) Make virginal image.	13(2.8)	9(1.9)	80(17.0)	126(26.8)	239(50.9)	3(0.6)
12) Praise from friends in virginity.	6(1.3)	13(2.8)	111(23.6)	164(34.9)	175(37.2)	1(0.2)
13) Build more confidence.	2(0.4)	7(1.5)	57(12.1)	157(33.4)	246(52.3)	1(0.2)
14) Build more self-esteem.	9(1.9)	2(0.4)	19(4.0)	87(18.5)	353(75.1)	0(0)
15) Decreased chances to try sex.	40(8.5)	33(7.0)	71(15.1)	79(16.8)	246(52.3)	1(0.2)
16) Prevent guilty feelings.	40(8.5)	26(5.5)	73(15.5)	131(27.9)	200(42.6)	0(0)
17) Decreases chances to express love.	29(6.2)	24(5.1)	80(17.0)	134(28.5)	202(43.0)	1(0.2)
18) Decreases chances to gain experience from sex.	34(7.2)	19(4.0)	61(13.0)	84(17.9)	271(57.7)	1(0.2)
19) Decreases enjoyment of sex.	34(7.2)	18(3.8)	54(11.5)	76(16.2)	288(61.3)	0(0)
20) Prove love to a boyfriend.	125(26.6)	44(9.4)	83(17.7)	77(16.4)	140(19.8)	1(0.2)
21) Out-dated.	19(4.0)	10(2.1)	50(10.6)	67(14.3)	318(67.7)	6(1.3)
22) Not cool.	20(4.3)	14(3.0)	39(8.3)	60(12.8)	335(71.3)	2(0.4)
23) Broke up with my boyfriend.	28(6.0)	17(3.6)	72(15.3)	102(21.7)	249(53.0)	2(0.4)
24) Suppressed sexual desire	36(7.7)	23(4.9)	91(19.4)	87(18.5)	230(48.9)	3(0.6)
25) Receipt of praise from parents.	28(6.0)	15(3.2)	61(13.0)	147(31.3)	216(46)	3(0.6)
26) Increases chances to choose further study or work.	17(3.6)	8(1.7)	44(9.4)	97(20.6)	303(64.5)	1(0.2)
27) Prevents social problems.	19(4.0)	11(2.3)	24(5.1)	136(28.9)	279(59.4)	1(0.2)
28) Makes me happy to be a virgin	7(1.5)	7(1.5)	64(13.6)	167(35.5)	222(47.2)	3(0.6)
29) Prevents ruining family reputation	8(1.7)	6(1.3)	36(7.7)	166(35.3)	253(53.8)	1(0.2)
30) Gains appreciation from friends.	15(3.2)	9(1.9)	79(16.8)	177(37.7)	184(39.1)	6(1.3)
31) Insults because nothing is gained from sexual experiences.	26(5.5)	20(4.3)	44(9.4)	85(18.1)	293(62.3)	2(0.4)
32) Made me ashamed of friends who had had sex.	31(6.6)	18(3.8)	54(11.5)	71(15.1)	293(62.3)	3(0.6)
33) Brings trouble to the relationship with a boyfriend.	35(7.4)	22(4.7)	91(19.4)	117(24.9)	203(43.2)	2(0.4)

**Table G3** Number and Percentage of Outcome Evaluations towards Sexual Abstinence during the School Years (n=470)

Behavioral outcome from sexual abstinence during the school year	Not important at all	Not important	Unsure	Important	Very important	Missing
	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
1) Prevent AIDS and sexually transmitted diseases.	5(1.1)	5(1.1)	18(3.8)	115(24.5)	327(69.6)	0(0)
2) Prevent unintentional pregnancy.	2(0.4)	7(1.5)	18(3.8)	98(20.9)	344(73.2)	1(0.2)
3) Keep away from childrearing burdens.	5(1.1)	4(0.9)	18(3.8)	131(27.9)	310(66.0)	2(0.4)
4) Make parents felt proud.	1(0.2)	5(1.1)	21(4.5)	129(27.4)	314(66.8)	0(0)
5) Keep away from losing out on educational opportunities.	2(0.4)	2(0.4)	19(4.0)	121(25.7)	324(68.9)	2(0.4)
6) Build a bright future.	2(0.4)	7(1.5)	13(2.8)	117(24.9)	331(70.4)	0(0)
7) Keep virginity.	1(0.2)	6(1.3)	31(6.6)	172(36.6)	259(55.1)	1(0.2)

Behavioral outcome from sexual abstinence during the school year	Not important at all	Not important	Unsure	Important	Very important	Missing
	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
8) Prevent obsess over sex.	4(0.9)	4(0.9)	40(8.5)	170(36.2)	248(52.8)	4(0.9)
9) Create more chances to choose a good guy as a spouse in the future.	6(1.3)	14(3.0)	52(11.1)	159(33.8)	238(50.6)	1(0.2)
10) Prevent disreputable behavior.	2(0.4)	11(2.3)	32(6.8)	179(38.1)	246(52.3)	0(0)
11) Make virginal image.	8(1.7)	13(2.8)	64(13.6)	187(39.8)	197(41.9)	1(0.2)
12) Praise from friends in virginity.	9(1.9)	13(2.8)	76(16.2)	202(43.0)	166(35.3)	4(0.9)
13) Build more confidence.	1(0.2)	10(2.1)	43(9.1)	178(37.9)	236(50.2)	2(0.4)
14) Build more self-esteem.	6(1.3)	2(0.4)	36(7.7)	153(32.6)	273(58.1)	0(0)
15) Decreases chances to try sex.	73(15.5)	77(16.4)	86(18.3)	35(7.4)	199(42.3)	0(0)
16) Prevent guilty feelings.	15(3.2)	12(2.6)	50(10.6)	178(37.9)	214(45.5)	1(0.2)
17) Decreases chances to express love.	47(10.0)	63(13.4)	108(23.0)	61(13.0)	191(40.6)	0(0)
18) Decreases chances to gain experience from sex.	88(18.7)	76(16.2)	74(15.7)	49(10.4)	182(38.7)	1(0.2)
19) Decreases enjoyment of sex.	67(14.3)	59(12.6)	64(13.6)	47(10.0)	233(49.6)	0(0)
20) Prove love to a boyfriend.	51(10.9)	15(3.2)	68(14.5)	134(28.5)	199(42.3)	3(0.6)
21) Out-dated.	102(21.7)	68(14.5)	55(11.7)	39(8.3)	198(42.1)	8(1.7)
22) Not cool.	95(20.2)	93(19.8)	68(14.5)	47(10.0)	166(35.3)	1(0.2)
23) Broke up with my boyfriend.	45(9.6)	35(7.4)	62(13.2)	54(11.5)	272(57.9)	2(0.4)
24) Suppressed sexual desire.	99(21.1)	87(18.5)	96(20.4)	42(8.9)	143(30.4)	3(0.6)
25) Receipt of praise from parents.	10(2.1)	16(3.4)	45(9.6)	154(32.8)	244(51.9)	1(0.2)
26) Increases chances to choose further study or work.	6(1.3)	10(2.1)	36(7.7)	100(21.3)	317(67.4)	1(0.2)
27) Prevents social problems.	2(0.4)	11(2.3)	42(8.9)	144(30.6)	266(56.6)	5(1.1)
28) Makes me happy to be a virgin.	4(0.9)	9(1.9)	57(12.1)	156(33.2)	241(51.3)	3(0.6)
29) Prevents ruining family reputation.	3(0.6)	9(1.9)	46(9.8)	148(31.5)	262(55.7)	2(0.4)
30) Gains appreciation from friends.	13(2.8)	20(4.3)	70(14.9)	181(38.5)	186(39.6)	0(0)
31) Insults because nothing is gained from sexual experiences.	32(6.8)	34(7.2)	67(14.3)	60(12.8)	275(58.5)	2(0.4)
32) Make me ashamed of friends who had had sex.	33(7.0)	27(5.7)	64(13.6)	48(10.2)	297(63.2)	1(0.2)
33) Brings trouble to the relationship with a boyfriend.	11(2.3)	10(2.1)	75(16.0)	132(28.1)	241(51.3)	1(0.2)

**Table G4** Number and Percentage of Normative Beliefs toward Sexual Abstinence (n=470)

The following persons think that....	Definitely should not	Should not	Unsure	Should	Definitely should	Missing
	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
1) Father	8(1.7)	8(1.7)	7(1.5)	55(11.7)	392(83.4)	0(0)
2) Mother	7(1.5)	8(1.7)	7(1.5)	48(10.2)	400(85.1)	0(0)
3) Teacher	5(1.1)	6(1.3)	12(2.6)	52(11.1)	395(84.0)	0(0)
4) Myself	7(1.5)	4(0.9)	16(3.4)	54(11.5)	389(82.8)	0(0)
5) Friend	3(0.6)	5(1.1)	36(7.7)	107(22.8)	319(67.9)	0(0)
6) Relative	6(1.3)	3(0.6)	19(4.0)	63(13.4)	379(80.6)	0(0)
7) Sibling	7(1.5)	6(1.3)	25(5.3)	102(21.7)	329(70.0)	1(0.2)
8) Boyfriend	5(1.1)	9(1.9)	72(15.3)	100(21.3)	284(60.4)	0(0)
9) Parent	7(1.5)	1(0.2)	17(3.6)	56(11.9)	386(82.1)	3(0.6)
10) People in community	6(1.3)	7(1.5)	28(6.0)	93(19.8)	335(71.3)	1(0.2)
11) Family	7(1.5)	4(0.9)	16(3.4)	51(10.9)	391(83.2)	1(0.2)
12) Grandfather/Grandmother	7(1.5)	4(0.9)	16(3.4)	54(11.5)	389(82.8)	0(0)

**Table G5** Number and Percentage of Motivation to Comply (n = 470)

Your agreement with the statements	Very much	Little	Unsure	Quite a bit	Very much	Missing
	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
1. How likely you want to do if your <b>father</b> wants you to practice sexual abstinence?	11(2.3)	5(1.1)	22(4.7)	108(23.0)	324(68.9)	0(0)
2. How likely you want to do if your <b>mother</b> wants you to practice sexual abstinence?	7(1.5)	3(0.6)	17(3.6)	85(18.1)	358(76.2)	0(0)
3. How likely you want to do if your <b>teacher</b> wants you to practice sexual abstinence?	7(1.5)	4(0.9)	26(5.5)	102(21.7)	331(70.4)	0(0)
4. How likely you want to do if <b>you</b> want you to practice sexual abstinence?	5(1.1)	2(0.4)	26(5.5)	75(16.0)	362(77.0)	0(0)
5. How likely you want to do if your <b>friend</b> wants you to practice sexual abstinence?	10(2.1)	13(2.8)	56(11.9)	134(28.5)	257(54.7)	0(0)
6. How likely you want to do if your <b>relative</b> wants you to practice sexual abstinence?	6(1.3)	5(1.1)	34(7.2)	109(23.2)	316(67.2)	0(0)
7. How likely you want to do if your <b>sibling</b> wants you to practice sexual abstinence?	7(1.5)	9(1.9)	40(8.5)	133(28.3)	281(59.8)	0(0)
8. How likely you want to do if your <b>boyfriend</b> wants you to practice sexual abstinence?	6(1.3)	13(2.8)	79(16.8)	123(26.2)	249(53.0)	0(0)
9. How likely you want to do if your <b>parent</b> wants you to practice sexual abstinence?	7(1.5)	3(0.9)	16(3.4)	91(19.4)	352(74.9)	1(0.2)
10. How likely you want to do if <b>people in community</b> want you to practice sexual abstinence?	5(1.1)	14(3.0)	41(8.7)	130(27.7)	279(59.4)	1(0.2)
11. How likely you want to do if your <b>family</b> wants you to practice sexual abstinence?	5(1.1)	4(0.9)	20(4.3)	92(19.6)	348(74.0)	1(0.2)
12. How likely you want to do if your <b>grandfather/ grandmother</b> want you to practice sexual abstinence?	5(1.1)	1(0.2)	26(5.5)	78(16.6)	360(76.6)	0(0)

**Table G6** Number and Percentage of Control Beliefs toward Sexual Abstinence (n= 470)

Condition that facilitate or impede sexual abstinence	Very difficult	Some what difficult	Unsure	Some what easy	Vey easy	Missing
	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
1) Pay attention to studies makes me adhere to sexual abstinence during the school years.	7(1.5)	6(1.3)	44(9.4)	104(22.1)	305(64.9)	4(0.9)
2) Awareness of self-esteem makes me adhere to sexual abstinence during the school years.	3(0.6)	5(1.1)	29(6.2)	85(18.1)	342(72.8)	6(1.3)
3) Concern about a bright future makes me adhere to sexual abstinence during the school years.	3(0.6)	4(0.9)	22(4.7)	68(14.5)	369(78.5)	4(0.9)
4) Think of my parents makes me adhere to sexual abstinence during the school years.	6(1.3)	2(0.4)	22(4.7)	62(13.2)	378(80.4)	0(0)
5) Although I drink alcohol, I adhere to sexual abstinence during the school years.	143(30.4)	66(14.0)	151(32.1)	46(9.8)	61(13.0)	3(0.6)
6) Although I have sexual drive, I adhere to sexual abstinence during the school years.	137(29.1)	59(12.6)	141(30.0)	38(8.1)	93(19.8)	2(0.4)
7) Think about the negative consequences after having sex made me adhere to sexual abstinence during the school years.	6(1.3)	8(1.7)	48(10.2)	80(17.0)	327(69.6)	1(0.2)
8) Concern about having AIDs or STDs makes me adhere to sexual abstinence during the school years.	6(1.3)	5(1.1)	28(6.0)	75(16.0)	356(75.7)	0(0)
9) Although I go outside alone with a boyfriend on Valentine's or Loi Krathong festival days, I adhere to sexual abstinence during the school years.	24(5.1)	17(3.6)	105(22.3)	92(19.6)	232(49.4)	0(0)
10) Concern about childrearing burdens makes me adhere to sexual abstinence during the school years.	7(1.5)	4(0.9)	52(11.1)	74(15.7)	333(70.9)	0(0)
11) Although a boyfriend asks me to break up a relationship, I insist on refusing sex with him.	8(1.7)	10(2.1)	60(12.8)	67(14.3)	323(68.7)	2(0.4)
12) Although I have pressure from friends who are kissing or hugging with their boyfriends at a party, I ask to go home early.	6(1.7)	18(3.4)	64(13.6)	114(24.3)	268(57.0)	0(0)
13) Although I stay alone together with a boyfriend in a private room, I can refuse to have sex with him	14(3.0)	16(3.4)	53(11.3)	111(23.6)	274(58.3)	2(0.4)
14) Although I watch pornography, I adhere to sexual abstinence during the school years.	13(2.8)	16(3.4)	76(16.2)	96(20.4)	269(57.2)	0(0)
15) In case of hugging or kissing from a boyfriend, I can refuse to have sex with him.	14(3.0)	13(2.8)	70(14.9)	108(23.0)	265(56.4)	0(0)
16) Although my friends encourage me to have sex, I can adhere to sexual abstinence during the school years.	8(1.7)	8(1.7)	54(11.5)	101(21.5)	299(63.6)	0(0)

Condition that facilitate or impede sexual abstinence	Very difficult	Some what difficult	Unsure	Some what easy	Vey easy	Missing
	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
17) Although my boyfriend has asked me to have sex, I can refuse and adhere to sexual abstinence during the school years.	4(0.9)	8(1.7)	49(10.4)	94(20.0)	315(67.0)	0(0)
18. A chance to pay attention on studying	2(0.4)	1(0.2)	16(3.4)	136(28.9)	315(67.0)	0(0)
19. A chance to awareness on self-esteem	1(0.2)	2(0.4)	20(4.3)	101(21.5)	346(73.6)	0(0)
20. A chance to concern on future	0(0.0)	4(0.9)	10(2.1)	80(17.0)	376(80.0)	0(0)
21. A chance to think of a parent.	3(0.6)	2(0.4)	15(3.2)	55(11.7)	394(83.8)	1(0.2)
22. A chance to drink alcohol.	34(7.2)	38(8.1)	131(27.9)	81(17.2)	186(39.6)	0(0)
23. A chance to have sexual drive.	27(5.7)	24(5.1)	66(14.0)	91(19.4)	260(55.3)	2(0.4)
24. A chance to think about the negative consequences after having sex.	16(3.4)	15(3.2)	58(12.3)	100(21.3)	277(58.9)	4(0.9)
25. A chance to concern about AIDs and STDs	31(6.6)	21(4.5)	49(10.4)	74(15.7)	289(61.5)	6(1.3)
26. A chance to go outside alone with a boyfriend on Valentine's or Loi Krathong festival days.	33(7.0)	58(12.3)	134(28.5)	99(21.1)	144(30.6)	2(0.4)
27. A chance to concern about childrearing burdens.	62(13.2)	36(7.7)	44(9.4)	65(13.8)	262(55.7)	1(0.2)
28. A chance of a boyfriend asks to break up a relationship.	91(19.4)	57(12.1)	159(33.8)	49(10.4)	111(23.6)	3(0.6)
29. A chance to have pressure from friends who are kissing or hugging with their boyfriends at a party.	44(9.4)	84(17.9)	170(36.2)	66(14.0)	105(22.3)	1(0.2)
30. A chance to I stay alone together with a boyfriend in a private room.	19(4.0)	48(10.2)	108(23.0)	96(20.4)	197(41.9)	2(0.4)
31. A chance to watch pornography.	16(3.4)	42(8.9)	119(25.3)	93(19.8)	199(42.3)	1(0.2)
32. A chance of hugging or kissing from a boyfriend.	13(2.8)	42(8.9)	127(27.0)	86(18.3)	201(42.8)	1(0.2)
33. A chance of my friends encourage me to have sex	14(3.0)	27(5.7)	90(19.1)	100(21.3)	237(50.4)	2(0.4)
34. A chance of a boyfriend ask me to have sex	16(3.4)	15(3.2)	121(25.7)	89(18.9)	227(48.3)	2(0.4)

**Table G7** Number and Percentage of Sexual Abstinence Intention during the School Years (n= 470)

Variables / Items	Absolutely impossible	Impossible	Unsure	Possible	Absolutely possible	Missing
	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
1) In case a boyfriend asks to have sex, I resist by refusing.	31(6.6)	14(3.0)	43(9.1)	91(19.4)	291(61.9)	0(0)
2) I make sure I never allow a boy to hug, kiss or touch my sexual organs.	33(7.0)	17(3.6)	46(9.8)	79(16.8)	295(62.8)	0(0)
3) I intend to practice sexual abstinence until I am 20 years old.	14(3.0)	8(1.7)	67(14.3)	115(24.5)	264(56.2)	2(0.4)
4) I intend to not have a boyfriend until I am 20 years old.	54(11.5)	59(12.6)	209(44.5)	52(11.1)	94(20.0)	2(0.4)

## **BIOGRAPHY**

<b>NAME</b>	Mrs. Janya Chareonsuk
<b>DATE OF BIRTH</b>	January 14, 1967
<b>PLACE OF BIRTH</b>	Angthong, Thailand
<b>INSTITUTE ATTENDED</b>	Mahidol University, Thailand, 1986-1989 Bachelor of Science (Nursing and Midwifery) Mahidol University, Thailand, 1991-1994 Master of Science (Maternal and Child Health Nursing) Mahidol University, Thailand, 2008-2012 Doctor of Philosophy (Nursing)
<b>SCHOLARSHIP</b>	Faculty of Nursing, Mahidol University
<b>RESEARCH GRANTS</b>	Thailand Nursing and Midwifery Council, Thailand
<b>HOME ADDRESS</b>	594/341 Pinklow Condominium 2, Talingchun Bangkok 10170, Thailand Tel. (662) 412-4931 E-mail: chareonsukj@yahoo.com
<b>EMPLOYMENT ADDRESS</b>	Obstetric and Gynecological Nursing Department, Faculty of Nursing, Mahidol University, 2 Siriraj, Bangkok Noi, Prannok Road, Bangkok 10700, Thailand Tel. (662) 419-7466-80 Ext. 1809
<b>PRESENTATION</b>	Poster Presentation (ICOWHI 19 <sup>th</sup> International Congress)