

**Thai Adolescents' Peaceful Problem Solving Model in Three Southern Border
Provinces : Invariant test Across Gender and School Types**

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Abstract

The purposes of this research were to development of Thai adolescences' peaceful problem solving model (TAPPS Model) and to invariant test across among gender and school types. The data were collected from a self-reported questionnaire administered to 800 students of public and Islamic private schools in three southern border provinces, Thailand. The research result found that of structural equation of TAPPS model consisted with the empirical data($\chi^2=10.68, p=.153$). The invariant test across the male and female group resulted in a statistically insignificant change in the chi-square value($\Delta\chi^2=12.50, \Delta df=4, p>.05$) but found statistically significant in the chi-square change value among school types($\Delta\chi^2=55.87, \Delta df=13, p<.05$). This finding suggest that TAPPS model can explain across gender but can not across school types.

Key words : peaceful problem solving, attitude, future orientation, mental health teacher and friends influence, school activities, situations, invariant test, structural equation modeling

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บทคัดย่อ

การวิจัยนี้มีวัตถุประสงค์เพื่อพัฒนาโมเดลการแก้ปัญหาแบบสันติวิธีของวัยรุ่นไทย (TAPPS model) และทดสอบความไม่ของแปรเปลี่ยนข้ามกลุ่มเพศและประเภทของโรงเรียน การเก็บรวบรวมข้อมูลใช้แบบสอบถามชนิดรายงานตนเอง จากนักเรียนจำนวน 800 คน จากโรงเรียนของรัฐและโรงเรียนอิสลามสอนศาสนา จากสามจังหวัดชายแดนภาคใต้ของประเทศไทย ผลการวิจัยพบโมเดลสมการโครงสร้างของโมเดลการแก้ปัญหาแบบสันติวิธี มีความสอดคล้องกับข้อมูลเชิงประจักษ์ ($\Delta x^2 = 12.50$, $\Delta df = 4$, $p > .05$) เมื่อมีการทดสอบความไม่แปรเปลี่ยนระหว่างเพศชายและหญิงพบว่าการแปรเปลี่ยนอย่างไม่มีนัยสำคัญทางสถิติ ($\Delta x^2 = 12.50$, $\Delta df = 4$, $p > .05$) แต่พบว่าค่าไค-สแควร์มีการเปลี่ยนแปลงอย่างมีนัยสำคัญทางสถิติระหว่างประเภทของโรงเรียน ($\Delta x^2 = 55.87$, $\Delta df = 13$, $p < .05$) ข้อค้นพบนี้แสดงให้เห็นว่า TAPPS model สามารถอธิบายข้ามกลุ่มเพศได้แต่ไม่สามารถอธิบายข้ามประเภทโรงเรียนได้

1. Introduction

Violence and aggression in schools are problems in many countries around the world. The problem seems particularly acute in Thai schools, where the news media report a variety of disturbing incidents, in the same way as it has happened in other countries, like US.

The United Nations' Children's Fund says school children and their teachers are increasingly the focus of

escalating violence in southern Thailand. The school teacher was shot dead in front of his young class. UNICEF says it's deeply concerned about the way schools are at the center of the conflict between Muslim militants and the Thai authorities.

Researches related to school violence and/or bullying have found a relation between these variables and the socioeconomic status in the classroom. A meta-analytic review of these socioeconomic statuses showed that popular children's array of competencies makes them likely recipients of positive peer nominations, whereas high levels of aggression and withdrawal are associated with rejected peer status. A consistent profile marked by less sociability and aggression emerged for neglected status, and controversial children had higher aggressive behavior than rejected children. Some other studies have shown relation between: peer relations and later behavioral adjustment particular types of children (aggressive and withdrawn) and a greater risk for being victimized and a relationship between rejected and controversial boys and being more aggressive than other boys. In the present study, we examine the incidence of school violence situations, in a representative sample of Madrid students. This general objective can be divided into these three specific ones: (1) to settle the incidence of the different modalities/roles

of peer harassment (victim, aggressor and observers); (2) to analyze the adjustment to the classroom environment (rejected, controversial, neglected, average and popular); and (3) the relationship between participating in the school violence situations and the classroom adjustment status.

Peace behavior in adolescence become central focus in social violence, however, literature review shows that the factors associated with this peace behavior are only little documented. This study will therefore development the peaceful problem solving model and testing invariance among gender and school type. The body of knowledge from the study of Thai Adolescents' Peaceful Problem Solving Model (TAPPS model) in Three Southern Border Provinces lead to know factors effecting adolescence peaceful behaviors, will be constructive to the academic and on the development peaceful behaviors in education organizations, particularly those located in the three southern border provinces in Thailand. More over the results of invariance test across gender and school type that is body of knowledge to suitable develop and explain student behaviors. In addition the research results that are information to support the educational systems policy maker.

2. Research objectives

The research objectives were :

1. To development the Thai Adolescents' Peaceful Problem Solving Model in Three Southern Border Provinces
2. To invariance test the Thai Adolescents' Peaceful Problem Solving Model in Three Southern Border Provinces across gender
3. To invariance test the Thai Adolescents' Peaceful Problem Solving Model in Three Southern Border Provinces across school types

3. Research hypotheses

1. The Thai adolescence's peaceful problem solving model was a fit with empirical data
2. The path coefficient in the Thai Adolescents' Peaceful Problem Solving Model in Three Southern Border Provinces was variance across gender
3. The path coefficient in the Thai Adolescents' Peaceful Problem Solving Model in Three Southern Border Provinces was variance across school types

4. Literature reviews

4.1 Peaceful Problem Solving Solution

Peace education hopes to create in the human consciousness a

commitment to the ways of peace. Just as a doctor learns in medical school how to minister to the sick, students in peace education classes learn how to solve problems caused by violence. Social violence and warfare can be described as a form of pathology, a disease. Peace education tries to inoculate students against the evil effects of violence by teaching skills to manage conflicts nonviolently and by creating a desire to seek peaceful resolutions of conflicts. Societies spend money and resources training doctors to heal the ill. Why should not they also educate their citizens to conduct affairs nonviolently? Peace educators use teaching skills to stop violence by developing a peace consciousness that can provide the basis for a just and sustainable future. A European peace educator has defined peace education as: "The initiation of learning processes aiming at the actualization and rational resolution of conflicts regarding man as subject of action." (von Stachr, 1974: 296). According to this definition, peace educators teach peacemaking skills. A Japanese peace educator states that peace education is concerned with peaceless situations (Mushakoji, 1974: 3). These include struggles for power and resources, ethnic conflicts in local communities, child abuse, and wars. Students in peace education classes study institutions that create

violence as well as the values that give credibility to those structures. An American peace educator, Betty Reardon, defines peace education as "learning intended to prepare the learners to contribute toward the achievement of peace" (Reardon, 1982: 38). She goes on to state that peace education "might be education for authentic security," (Reardon, 1982: 40) where a need for security motivates humans to communities and nations. Because individuals disagree about how to achieve security, there are many different paths to peace.

In addition to providing knowledge about how to achieve peace, peace educators promote a pedagogy based upon modeling peaceful democratic classroom practices. They share a hope that through education people can develop certain thoughts and dispositions that will lead to peaceful behavior. Key aspects of this disposition include kindness, critical thinking, and cooperation. Developing such virtues is an important part of peace education. However, it is not the complete picture. The struggle to achieve peace takes place at both individual and social levels. Peace educators work with individuals to point how the root problems of violence lie in broader social forces and institutions that must be addressed in order to achieve peace.

4.2 Peaceful attitude

In the first Handbook of Social Psychology called an attitude "the most distinctive and indispensable concept in social psychology." Despite a common agreement on the relevance of the concept, over decades, theorists have varied greatly in their opinions on the adequate definition of an attitude.

The first definition appeared in the literature relatively early, but it was so broad that it could describe virtually any psychological construct of interest. An attitude is "a mental and neural state of readiness, organized through experience, exerting a directive or dynamic influence upon the individual's response to all objects and situations with which it is related." Growing need to measure an attitude contributed to further narrowing of the concept. Most researchers have proceeded from the definition that "an attitude is the predisposition of the individual to evaluate a particular object in a favorable or unfavorable manner." Attitudes inextricably combine the affective and cognitive dimensions of our relationships to social objects. (Kelman.1980: 117-194)

The great interest in an attitude concept as such has been nurtured by the belief that an attitude was a direct precedent of a behavior, and therefore a key to predicting and explaining human

actions (Ajzen. 1991:179-211) Early studies advocated that attitudes were closely related to behaviors. For example, religious students had more positive attitudes towards the church than non-religious students and army recruits held a more positive attitude towards war than.

Usually, for researchers into attitudes consistency is a correlational question of whether people are similarly ordered on attitudinal and behavioral measures. An attitude-behavior relation is expressed in the probability of the performance of a certain behavior and depends on the level of an attitude and the difficulty of this behavior. Conceptually, an individual attitude is the motivational force that has to be strong enough to overcome the behavior-specific difficulty related to the realization of the behavior.

4.3 Authoritative parenting

This parenting style is also referred to as Democratic Parenting. It is characterized by parents' high expectations of compliance to their directions and rules, open dialogue about those rules and the child's behavior and generally a child-centered approach to parenting. The parents try to help their child to learn to be responsible for himself and to think about the consequences of his acts/behavior.

They do this is by providing clear and reasonable expectations and explanations on why they expect a certain behavior. They monitor their child's behavior to ensure that their rules are being followed through. It is done in a loving and warm manner. The emphasis is put on reinforcing the child's good behavior rather than emphasizing the bad. Parents give selected choices according to the child's abilities. This is done to help the child to learn and experience the consequences of his own choices and it lets him know that his opinion counts. The choices will evolve with the age of the child of course. Authoritative parents like to teach their children to behave by guiding their behavior rather than by punishing them. But don't think it means that those parents accept bad behavior, they are strict and demand obedience to their rules.

The other name of Democratic Parenting stems from the fact that the child is often given choices or his opinion is usually taken into account. It gives the child the impression that he is equal to his parents in value, even if he is not in life experience.

We have seen that for typically developing adolescents, the relationship with parents is likely to remain strong. Evidence suggests that well-adjusted adolescents tend to have high

quality relationships.(Armsden and Greenberg 1987 ; Noller 1994 : ; Wilks 1986).

4.4 Teacher and Peaceful Problem solving

When a teacher becomes deeply and regularly involved in teaching peace education, this can cause that teacher to take a long, deep look at his or her values and beliefs. Clearly, it can center a person on one's own thoughts, words, and deeds. In order to be a model for the students, the teacher has the opportunity of transformation and change of the inner self. Then the students can be helped to understand and feel what is a peaceful person who is a peacemaker, and the teacher will have a powerful, positive influence on hundreds and thousands of children and youth.

Adolescences are encouraged to construct their own knowledge when the teacher plans for problem solving. The teacher develops the framework for learning in problem solving, provides time, space, and materials. Change and growth through problem solving is modeled by adults and facilitated by the teacher in the classroom environment. When teachers articulate the problems they face and discuss solutions with children, children become more aware of the significance of the problem solving process. Being a

problem solver is modeled by the teacher and emulated by the children. Values and goals are clearly defined to include a child-centered curriculum, the development of communication skills, promotion of cooperative learning, and inclusion of diverse ideas. By being curious, observing, listening, and questioning, the teacher shares and models the qualities that are valued and promoted by the problem solving process.

Problem solving is the foundation of a adolescence learning. It must be valued, promoted, provided for, and sustained in the classroom. Opportunities for problem solving occur in the everyday context of a adolescences' life. By observing the youth closely, teachers can use the adolescences' social, cognitive, movement, and emotional experiences to facilitate problem solving and promote strategies useful in the lifelong process of learning. By exploring social relationships, manipulating objects, and interacting with people, children are able to formulate ideas, try these ideas out, and accept or reject what they learn. Constructing knowledge by making mistakes is part of the natural process of problem solving . Through exploring, then experimenting, trying out a hypothesis, and finally, solving problems, adolescence make learning personal and meaningful. Piaget states that adolescence understand only

what they discover or invent themselves. It is this discovery within the problem solving process that is the vehicle for adolescences' learning.(Natzel.n.d) There is empirical evidence suggesting that the relationship with teacher may play a significant role in adolescent behaviors For instance, longitudinal research has shown that an increase in the quality of the adolescent-teacher relationship (i.e. social support) corresponds to a decrease in psychological symptoms over time (Reddy, Rhodes, & Mulhall, 2003 : 119-138).

4.5 Peer and Peaceful method

The importance of Peer relationships: As children grow, develop, and move into early adolescence, involvement with one's peers and the attraction of peer identification increases. As pre-adolescents begin rapid physical, emotional and social changes, they begin to question adult standards and the need for parental guidance. They find it reassuring to turn for advice to friends who understand and sympathize – friends who are in the same position themselves. By “trying on” new values and testing their ideas with their peers, there is less fear of being ridiculed or “shot down”. But “peer Pressure” has negative connotations because the idea that someone, or something, lures our children into learning dangerous and destructive behavior

by discarding all parental behaviors and values scares adults. The peer group is a source of affection, sympathy and understanding; a place for experimentation; and a supportive setting for achieving two primary developmental tasks of adolescence

Research has shown that adolescences are induced directly or indirectly to make conventional and normative choices largely because of relationships with peers, (Sampson and Laub, 1993 ; Simons, Simons, Burt, Brody, and Cutrona, 2005). During this growth and socialization process, children observe and internalize behavioral norms and standards of conduct from those adults, and proceed down a pathway of general societal conformity. As adolescents continue to develop, however, the peer group has a much stronger impact in shaping their attitudes and actions.

4.6 Future Orientation

Future orientation is a "complex cognitive- motivational phenomenon". It helps to manage with developmental tasks by giving framework how to structure representations and evaluate life situations. Nurmi (1991) described future orientation through three basic processes: motivation, planning and evaluation. Many different things influence the development of individual's goals and plans. Interests, values and beliefs direct

the future orientation (Lanz and Rosnati, 2002). Personality, skills and cognitive factors influence the future orientation internally (Erikson, 1994 ; Nurmi, 1993). Also external context, such as historical time, culture, social and physical environment influence the thinking about the future (Nurmi, Poole and Kalakoski, 1994). It could be that also health behavior is associated with adolescents' future orientation. This study focuses on this topic.

Context and situational conditions affect on the anticipated life-span development. Different areas of development, such as cognitive and social skills are learned in interaction with social environment. This influences on the quality and direction of person's future orientation, and gives it stability. There are many even contradicting values in our culture today. It can be hard to find values, which are right for oneself. This task can create insecurity. (Trommsdorff, 1986)

Adolescents' plans do not extent too far into the future. Their content is usually thought to come true by the end of second and in the beginning of third decade of life. According to Nurmi (1991) hopes and goals are most often about future occupation and education. Family/marriage, leisure activities and property-related issues are almost as common. In Nurmi (1989, 1993) research

girls mentioned education and family/marriage related goals more frequently than boys. Boys mentioned property-related goals more often (Nurmi, et al. 1993 ; Solantaus. 1987 ; Strough, Berg & Sansone. 1996).

4.7 Moral reasoning

Kohlberg defined moral reasoning as judgements about right and wrong. His studies of moral reasoning are based on the use of moral dilemmas, or hypothetical situations in which people must make a difficult decision. Kohlberg defined a subject's level of moral reasoning from the reasoning used defend his or her position when faced with a moral dilemma. He thought this more important than the actual choice made, since the choices people make in such a dilemma aren't always clearly and indisputably right. He noted that development of moral reasoning seemed to be related to one's age. Level 1. Preconventional Morality Stage 1. Obedience and Punishment Orientation. The child assumes that powerful authorities hand down a fixed set of rules which he or she must unquestioningly obey. Stage 2. Individualism and Exchange. At this stage children recognize that there is not just one right view that is handed down by the authorities. Different individuals have different viewpoints. Level II. Conventional Morality, Stage 3. Good

Interpersonal Relationships. At this stage children--who are by now usually entering their teens--see morality as more than simple deals. They believe that people should live up to the expectations of the family and community and behave in "good" ways. Good behavior means having good motives and interpersonal feelings such as love, empathy, trust, and concern for others. Stage 4. Maintaining the Social Order, Stage 3 reasoning works best in two-person relationships with family members or close friends, where one can make a real effort to get to know the other's feelings and needs and try to help. At stage 4, in contrast, the respondent becomes more broadly concerned with society as a whole. Now the emphasis is on obeying laws, respecting authority, and performing one's duties so that the social order is maintained. Level III. Post conventional Morality, Stage 5. Social Contract and Individual Rights. At stage 4, people want to keep society functioning. However, a smoothly functioning society is not necessarily a good one. A totalitarian society might be well-organized, but it is hardly the moral ideal. At stage 5, people begin to ask, "What makes for a good society?" They begin to think about society in a very theoretical way, stepping back from their own society and considering the rights and values that a society ought to uphold. They then evaluate existing

societies in terms of these prior considerations. They are said to take a "prior-to-society" perspective. Stage 6, Universal Principles. Stage 5 respondents are working toward a conception of the good society. They suggest that we need to (a) protect certain individual rights and (b) settle disputes through democratic processes. However, democratic processes alone do not always result in outcomes that we intuitively sense are just. A majority, for example, may vote for a law that hinders a minority. Thus, Kohlberg believes that there must be a higher stage, stage 6, which defines the principles by which we achieve justice. (Kohlberg, 1976 : 593-602)

Several research results found that moral reasoning affecting adolescence behaviors, beside gender effect on moral reasoning. (McGinnies Nordholm, Ward & Bhanthumnavin, 1974)

4.8 Mental health

Parents, practitioners, and policymakers are recognizing the importance of young people's mental health. Youth with better mental health are physically healthier, demonstrate more socially positive behaviors and engage in fewer risky behaviors (Resnick, 2000: 157-164). Conversely, youth with mental health problems, such as depression, are more . Furthermore, youths' mental health problems pose a significant financial and

social burden on families and society in terms of distress, cost of treatment, and disability (Saunders, 2003 : 175-200 ; Busch and Barry, 2007 : 1088-1095 ; Merikangas, et al. 2007: 1180-1188). Most mental health problems diagnosed in adulthood begin in adolescence. Half of lifetime diagnosable mental health disorders start by age 14; this number increases to three fourths by age 24 (Kessler, et al. 2005: 593-603). The ability to manage mental health problems, including substance use issues and learning disorders, can affect adult functioning in areas such as social relationships and participation in the workforce.

According to the Surgeon's General's report and WHO, mental health encompasses positive aspects of well-being and healthy functioning as well as negative aspects of mental disorder and dysfunction (United States Department of Health and Human Services, 1999 ; World Health Organization, 2004). Ideally, a comprehensive overview of adolescent mental health status would reflect both positive and negative aspects. A comprehensive overview would also recognize that family, community and social contexts influence mental health status. For example, exposure to violence can have adverse consequences for mental health status. However, research in the health and mental health fields has

traditionally focused on negative indicators of individual pathology. Available data reflect this emphasis, with relatively little focus on contextual influences (United States Department of Health and Human Services, 1999).

4.9 Moderator variables

4.9.1 Student gender

Gender acts as a changing factor in some areas of research. In Finland content of future orientation does not differ as much between male and females as in some other cultures (Nurmi, 1991). More differences are reported in the area of health. Among women, health behavior-features correlate less with health than is the case with men (Pulkkinen, 1993). Successes in school, being pro-social and good adjustment to the schoolwork were all associated with men's good health (Pulkkinen, 1993). Girls show more worrying, symptoms and negative affectivity. Boys have been found to perceive themselves healthier than girls. Although adolescents seldom mention health as their worry, many are related to healthy behavior, for example appearance (Spruijt - Metz & Spruijt, 1997). In some cases health behavior is affected by different factors with males and females. Social characteristics for instance did not predict female drinking in Pulkkinen's (1983) research as it did for males. In

the present study one of our interests is whether gender mediates the possible associations between future orientation and health behavior.

There may be many reasons for the observed sex differences in patterns of aggressive behavior. Since males are physically stronger than females, they are more likely to apply physical means, which are more effective and less dangerous for them than for females. Reviews also agree on the fact that males in general are physically more aggressive than females.

4.9.2 School Types :

Public and Islamic Private Schools

Islamic education in southern Thailand can generally be divided into three types. The first type is the government-sponsored school. This type of schooling offers Islamic education in conjunction with the national curriculum. The language of instruction is Thai. The second type is a private Islamic school. In some areas, this school is referred to as a *madrassa(h)*. The private Islamic school may offer non-Koranic subjects such as science and math, as well as the teaching of foreign languages (Arabic and English). These schools are usually registered with the government. The third type is a *pondok*. This school is very simple in structure; generally, it is attached

to a mosque. The name, pondok, refers to the huts that the boys stay in while pursuing their studies. A pondok school is deeply personal and intimate, and is traditionally built around its teacher, the local imam, or its founder (who could be both). The language of instruction at many pondoks is Malay. The teaching of Malay and Jawi are important features of the cultural heritage of Islamic education in southern Thailand. At all the Islamic schools in Thailand, it is required that girls wear hijab, or headscarfs. Boys are expected to wear kopiah, or caps. Moreover, unlike the traditional pondok, Islamic private schools confer on their students the requisite, nationally recognized qualification that enable them to pursue further studies in the national tertiary education system. While their counterparts at the pondok are known in the local parlance as tok guru, religious teachers in Islamic private schools are also staffed by instructors of academic and vocational subject such as science, mathematic, English, and computer studies. There are currently some 327 Islamic private schools in southern Thailand (include Satun) that are supervised by the Educational Region Two Office (Yala) in conjunction with the Islamic Private School Association. On the 298 from the three southern province of Pattani, Yala, and Narathiwat, 125 schools enjoy 100 percent of their budget covered

by government funding (the discrepancy is largely procedural and this figure will eventually be 100 percent as well) (Liow.2009:57-59)

Public schools are administered by the government, and the private sector comprises schools run for profit and fee-paying non-profit schools which are often run by charitable organizations - especially by Catholic diocesan and religious orders that operate over 300 large primary/secondary schools throughout the country. Village and sub-district schools usually provide pre-school kindergarten (anuban) and elementary classes, while in the district towns, schools will serve their areas with comprehensive schools with all the classes from kindergarten to age 14, and separate secondary schools for ages 11 through 17.

Our research divided school type into two types for invariance test across group between public and Islamic private schools.

5. Methodology

5.1 Population and Sample

Population is a students that studying in mathayomsuksa 3 in three southern border provinces in Thailand. The sample consisted of 800 students comprised 400 students, male be equal to female students from public schools and 400

students from Islamic private schools students by cluster sampling technique.

5.2 Research instruments

In this study, the research instrument of external and internal variables, Peaceful Problem Solving Solution ($\alpha = 0.84$), Authoritative parenting ($\alpha = 0.78$), Teacher and Peaceful Problem solving ($\alpha = 0.81$), Peer and Peaceful method ($\alpha = 0.87$), Future Orientation ($\alpha = 0.85$), Moral reasoning ($\alpha = 0.86$), and Mental health ($\alpha = 0.77$) were based on the conceptual. 5-point Likert scale was used by the researcher to ask the respondents to rate the item from "strongly disagree" to "strongly agree" for variables in the model, except moral reasoning variables was assessed using situational questions with three choices, And moderator variables, gender and school type, were assessed using by check list.

5.2 Statistics for Data Analysis

This research, the use of invariance testing refers to an assessment of a path coefficient that has been used for more than one group in order to discover if the path coefficient is equivalent and invariant across groups. When parallel data exists for more than one group, invariance tests using a confirmatory factor analysis for measurement model and

using structural equation modeling approach for structure model provide a way of assessing the equivalence of solutions across multiple groups. In this research was invariance tests on structure model only, the researcher constrains any one, any set, or all parameters to be invariant across multiple groups. In this study, we were interested in evaluating the invariance of the coefficient of the structure model across the among groups (male-female students and public schools - Islamic private schools students) comprising the sample to see if these structures are invariant in terms of coefficient matrix across the groups. If the path coefficient structure is invariant across groups this provides evidence that the derived model can be used with some confidence in a range of among groups in educational settings. This procedure, referred to as the forward (or sequential constraint imposition) approach to testing for path coefficient across groups, is based on a chi-square square difference test ($\Delta\chi^2$) between two nested models: a constrained model (constrained equal parameters) and unconstrained model (unconstrained parameters) for specific parameters—path coefficients. Invariance of the parameters being tested is accepted if the Chi-square difference ($\Delta\chi^2 = \chi^2_{\text{constr.}} - \chi^2_{\text{unconst.}}$) is not statistically significant at a pre-specified level of significance ($p > .05$).

Additionally, NFI, CFI, RMSEA, GFI, AGFI and RMR statistics were used single or separated model fit evaluation.

6. The Research result

6.1 Adequacy of the Structural Equation modeling of the TAPPS Model

Figure 1 summarizes the results of structural equation modeling of

TAPPS model. The TAPPS modeling yielded consistency of the hypothesized causal relationships with the data ; $\chi^2 = 10.68$, $p = .15301$; $RMSEA = 0.027$; $GFI = 1.00$, $AGFI = 0.98$, and $RMR = 0.063$. Those fit statistics index show that the TAPPS model good fit the data. And we used this model to the base line model for invariance test.

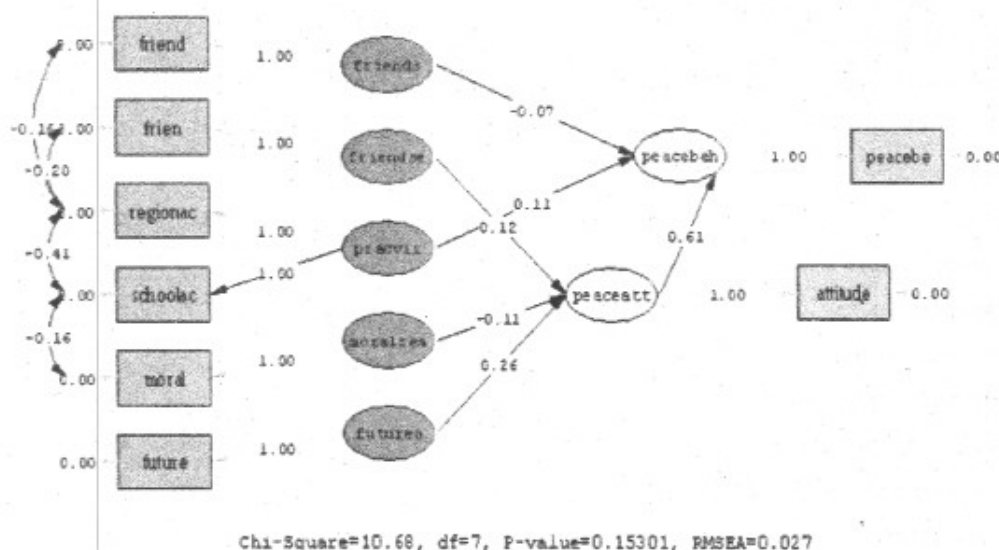


Figure 1: the results of structural equation modeling of TAPPS model

The parameter estimates of the hypothesized model were free from offending values. All path coefficients of the casual structure were statistically significant, and were of practical importance. The research result indicated that attitude on peaceful variable was relatively more influential than was another variables in affecting the peaceful problem solving behavior. The total

standardized effect size of peaceful attitude was 0.39 directly on peaceful problem solving, whereas, future orientation variable and approximate friend activities effecting directly peaceful problem solving were 0.26 and 0.12, respectively, via peaceful attitude variable. This model was explained variance of peaceful problem solving about 40 percent.

6.2 Gender and School Types Invariant Test of the TAPPS Model

Another objective of this study was to examine the structural invariance of TAPPS model across two likely moderators, gender and school types. To test gender-invariant, a simultaneous analysis on both the male ($n_1 = 400$) and female ($n_2 = 400$) samples was conducted, first without constraining the structural paths; the results derived a baseline chi-

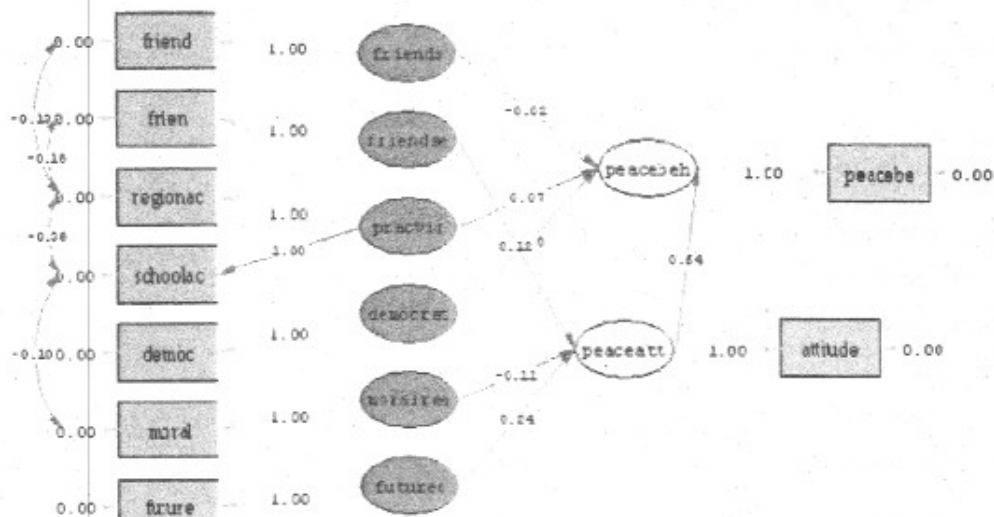
square value. Next, structural paths were constrained to be equal for the male and female groups. The analysis of this constrained TAPPS model produced another chi-square value, which was then tested against the baseline value for statistically significant differences. A similar procedure was used to examine the school types invariant of TAPPS model. The results of the multiple group SEMs are presented in Table 1.

Table 1 show the invariance test across gender

model	Global Goodness of Fit Statistics						Group Goodness of Fit Statistics			
	χ^2	df	p	NF I	CF I	RMSEA	male		female	
							GFI	RMR	GFI	RMR
unconstrained	41.96	41	.429	.99	1.00	.008	.99	.031	.99	.035
constrained	54.46	54	.457	.97	1.00	.005	.99	.034	.98	.037
$\Delta\chi^2 = 12.50 = 13$ $p > .05$ whereas $\chi^2_{(0.1)} = 22.362$										

Table 1 show the invariance test across the male and female groups resulted in a no statistically insignificant change in the chi-square value, $\Delta\chi^2 = 12.50$, $p > .05$ (critical = 22.362). Simply said, the difference in the chi-square values between the unconstrained model and the constrained model did not produce a poorer-fit model. Consideration the goodness of fit indices

(GFI and RMR) found that little difference between models. The path coefficients did not vary significantly across gender. In another word, the research result suggested that use only one model for both male and female that we show constrained model standardized coefficient in figure 2.



Chi-Square=54.46, df=54, P-value=0.45673, RMSEA=0.005

Figure 2 : The TAPPS model for male and female adolescence

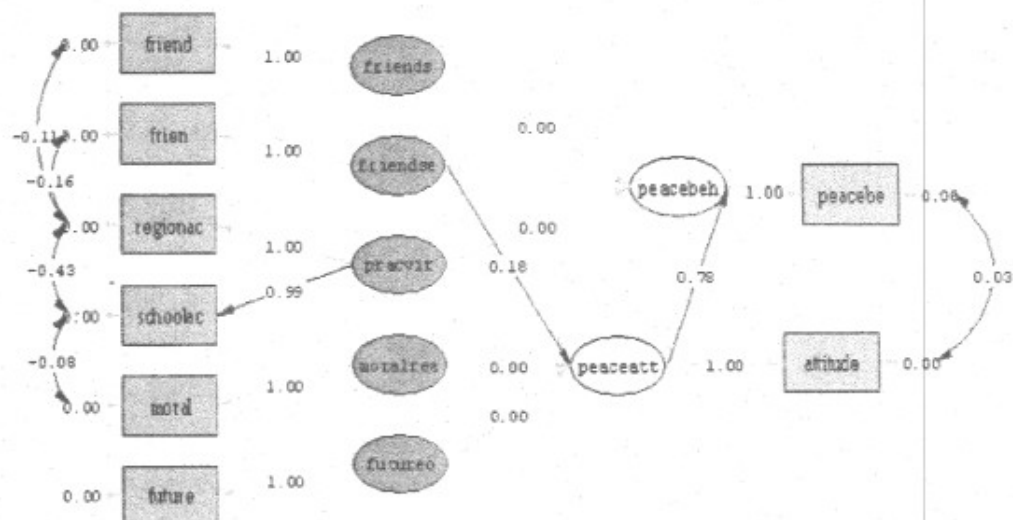
Table 2 show the invariance test across the school types

model	Global Goodness of Fit Statistics						Group Goodness of Fit Statistics			
	χ^2	df	p	NFI	CFI	RMSEA	public school		Islamic private school	
							GFI	RMR	GFI	RMR
unconstrained	27.28	29	.55637	.98	1.0	.000	.99	.035	.99	.028
constrained	83.15	42	.00016	.94	.97	.051	.97	.048	.98	.037
$\Delta\chi^2 = 55.87$ $\Delta df = 13$ $p > .05$ whereas $\chi^2_{.05, 13} = 22.362$										

On the contrary, the school-invariant test was statistically significant, $\Delta\chi^2 = 55.87$,

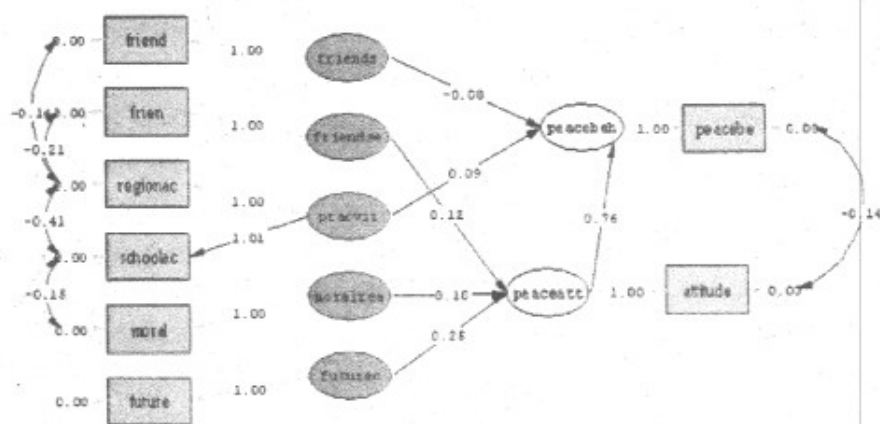
$p < .05$ (critical $\chi^2_{.05, 13} = 22.362$). Specifically, the constrained TAPPS model was much worse than the unconstrained model. Both the global goodness of fit and group goodness of fit statistics of constrained model were show that less fit the empirical data than the unconstrained model. Similarly, group goodness of fit statistics showed that different both indices

(GFI and RMR) between public and Islamic private school models. This shows that the path coefficients varied across the two levels of school types (public school and Islamic private school). Thus, school types moderated the causal relationships in the T



Chi-Square=32.97, df=33, P-value=0.46887, RMSEA=0.000

Figure 3 : The TAPPS model for public schools



Chi-Square=32.97, df=33, P-value=0.46887, RMSEA=0.000

Figure 4 : The TAPPS model for Islamic private schools

7. Conclusion and discussion

The findings of the present study have expanded the existing body of knowledge on TAPPS model in several ways. The overall TAPPS model that developed by the researchers was good fit the empirical data. And we found that the most important variable effect on adolescent's peaceful problem solving in Thailand was a peaceful attitude variable. The evident that the attitude was a good predictor of behavior. This finding that children observe and internalize behavioral norms and standards of conduct from those adults, and proceed down a pathway of general societal conformity. As adolescents continue to develop, however, the peer group has a much stronger impact in shaping their attitudes and actions.(Hirschi. 1969 ; Warr. 1993 ; Erikson. 1968). The invariance test across gender variable, found that The path coefficients in the models did not vary significantly across gender. It is justifiable then to conclude that gender did not interact with the exogenous variables to influence the Thai adolescence problem solving in southern border provinces. Hence, gender is not a moderating variable. So, we can use the TAPPS model to explained across male and female. Consideration the invariance test across school types, research result showed that the path coefficients in TAPPS model varied across the school types, because school type interacted significantly with the exogenous variables. Thus, school types moderated the causal relationships in the TAPPS model. Show that Schools contexts such as school climate, policies, and environments that are effect on student behaviors. This has been motivated by observational studies that have shown that a positive school climate is associated with better student outcomes such as better emotional well-being (Vritanen, Kivimaki, Luopa et al. 2009 : 554-560) and lesser violence (Brookmeyer, Fanti, and Henrich.2006 : 504 - 514) or risk behaviors. (Bond, Butler, Thomas, et al.2007 : 9-18). So, this study suggested separate the TAPPS model to explained public schools and Islamic private schools students.

supported from Several studies that attitude-behavior consistency may be greater when the overt behavior or a behavioral commitment is assessed in advance of the attitude measurement (Bellin and Kriesberg. 1967 ; Fendrich. 1967; Green. 1967, 1969; Kamenetsky, et al. 1965; Potter and Klein. 1957). Beside we found that peer influence (friendse variable in the base line model) effecting peaceful attitude, probably during this growth and socialization process,

8. References

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