Developing a Board Game to Foster Preventive Knowledge of Child Sexual Abuse at the Primary School Level

การพัฒนาเกมกระดานเรื่องการให้ความรู้ด้านการป้องกันการล่วงละเมิดทางเพศสำหรับเด็กระดับประถมศึกษา

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Abstract

The research aimed to develop a board game that could foster preventive knowledge of child sexual abuse among primary school students. It attempted to assess the appropriateness of the game and reveal the students' satisfaction with it. The study additionally measured the students' knowledge before and after playing the game, as well as showing adverse effects of sexual abuse as part of preventive knowledge. The board game in this study was developed as a response

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to the recent trends in child sexual abuse and relevant research. The study used a one-group pretest-posttest experimental design. Sixty students from a public primary school in Taweewattana District, Bangkok Metropolitan, were selected through selective random sampling. The students' knowledge and understanding of sexual abuse was measured through multiple-choice questions. The board game, pretest and posttest of the students' preventive knowledge of sexual abuse, and satisfaction survey were evaluated using the Items-Objective Congruence Index (IOC) and examined by experts. The derived data was later analyzed using a dependent t-test, mean, and standard deviation. The findings revealed that the developed board game could increase the students' preventive knowledge of sexual abuse. The game was assessed to be highly appropriate for them. Additionally, their satisfaction ranked high, reflecting their contentment with the game. Therefore, it was concluded that the board game can be an effective alternative tool to teach primary school students preventive knowledge of child sexual abuse.

Keywords: board game, child sexual abuse, elementary school

บทคัดย่อ

งานวิจัยนี้มีวัตถุประสงค์เพื่อพัฒนาเกมกระดานที่ให้ความรู้เกี่ยวกับการป้องกันการล่วงละเมิดทางเพศในนักเรียนระดับประถมศึกษา ประเมินความเหมาะสมของเกมและความพึงพอใจของนักเรียนที่มีต่อการเล่นเกมกระดาน โดยมีการวัดระดับความรู้ของนักเรียนก่อนและหลังเล่นเกม และแสดงให้เห็นถึงผลกระทบในทางลบของการล่วงละเมิดทางเพศซึ่งเป็นส่วนหนึ่งของความรู้เชิงป้องกัน เกมกระดานที่ใช้ได้รับการพัฒนาสืบเนื่องจากแนวโน้มสถานการณ์การล่วงละเมิดทางเพศในเด็กและงานวิจัยที่เกี่ยวข้อง งานวิจัยนี้เป็นงานวิจัยเชิงทดลองในรูปแบบ One-Group Pretest – Posttest Design โดยมีกลุ่มตัวอย่างคือ นักเรียนระดับประถมศึกษาจำนวน 60 คน

ของโรงเรียนแห่งหนึ่งในเขตคลองทวีวัฒนา จังหวัดกรุงเทพมหานคร ใช้วิธีการสุ่มตัวอย่างแบบคัดเลือก มีการวัดความรู้และความเข้าใจของนักเรียนเกี่ยวกับการล่วงละเมิดทางเพศโดยใช้แบบทดสอบแบบปรนัย เกมกระดาน แบบทดสอบความรู้ก่อนและหลัง และแบบประเมินความพึงพอใจที่ใช้ ได้รับการประเมินโดยวิธีการหาค่าความเที่ยงตรงของแบบสอบถาม (IOC) และการตรวจสอบจากผู้เชี่ยวชาญ สถิติที่นำมาใช้ในการวิเคราะห์ข้อมูลได้แก่ t-test แบบ Dependent ค่าเฉลี่ย และค่าเบี่ยงเบนมาตราฐาน ผลการวิจัยพบว่า เกมกระดานที่พัฒนาขึ้นสามารถเพิ่มความรู้ด้านการป้องกันการล่วงละเมิดทางเพศให้แก่นักเรียนได้ เกมกระดานมีความเหมาะสมกับนักเรียนในระดับสูง และนักเรียนมีความพึงพอใจในเกมสูง จึงกล่าวได้ว่าเกมกระดานเป็นเครื่องมือทางเลือกที่เหมาะสมในการให้ความรู้เรื่องการป้องกันการล่วงละเมิดทางเพศแก่นักเรียนในระดับประถมศึกษา

คำสำคัญ: เกมกระดาน การล่วงละเมิดทางเพศในเด็ก ระดับชั้นประถมศึกษา

Introduction

"The healthy development of children is crucial to the future well-being of any society" (UNICEF, n.d.). The statement emphasizes the significance of children's healthy development. Healthy development entails more than just eating and sleeping well; it also concerns being safe from violence and exploitation. Child sexual abuse, also known as child molestation, has caused many countries major problems and long-term consequences. The issue has jeopardized children's physical and mental well-being, which affects the country's development goals.

1. Child Sexual Abuse Situations in Thailand

Child sexual abuse has been one of Thailand's long-lasting issues. The government and public sectors have addressed the issues by setting policies and launching campaigns to reduce child sexual abuse cases and protect children's lives. However, the country's record of child sexual abuse remains high. Some records, in particular, are believed to be missing from the country's data. Since 2007, there have been reports of increased violence against children, likely to increase yearly. According to the OBEC Student Protection Center (Thairath Online, 2020), 1,186 victims were sexually abused, between 2013 and 2019, with three out of four sexual offenders being people the students know. The number of reported cases has significantly increased. According to information from the Ministry of Public Health, most of the 9,000 children hospitalized in 2017 were sexually abused (UNICEF, n.d.). Thai Health Promotion Foundation (2018, as cited in the Report on Child and Youth Situation, 2020) reported that most of the child sexual offenders were children's family members and acquaintances (53 percent), strangers (38.2 percent), and people whom children knew through social media (8.8 percent). According to research on the sexual abuse experiences of children under 18 (grades 7 - 12), most sexual offenders were peers, relatives, and neighbors (Limprasert et al., 2020). Pavena Foundation for Children and Women reported that rape and abuse cases are increasing, and children aged 5 to 10 are particularly vulnerable. The foundation received a total of 10,147 complaints, with rape and obscenity. Pavena Foundation also significantly paid attention to two out of the six issues, and 863 cases were among them. As a result, the number of cases is higher than the record in 2019, which had only 786 cases or 9.80 percent higher (Matichon, 2020).

2. Child Sexual Abuse Trends

Online technology is essential in today's society. It makes our lives more convenient. Also, it has changed our cultures in various ways. Online activities, unlike physical activities, are active and take place at any time with no limitations. Children and parents: media use and attitudes report (2021) mentioned that the most popular devices for online activities are mobile phones, laptops, and tablets, and more than half of children aged 12 to 15 have a negative experience with strangers. Though sexual abuse is not reported as one of those experiences, it clearly shows that strangers can easily reach children. Young people are more likely to spend time online than to meet up with others in person. As a result, sexual offenders can exploit and seduce children through this channel. The Federal Bureau of Investigation (FBI) has found that over 50 percent of online sexual exploitation victims are students between 12 to 15 years old. 89 percent of sexual advances targeting children occurs in internet chatrooms and instant messages since online relationship has been established (Child Crime Prevention & Safety Center, 2020).

During the COVID-19 outbreak, many online platforms have been developed to help people study, work, etc. Child sexual abuse is committed on online platforms such as online games and teleconference software because children cannot go outside; as a result, they spend their time at home studying and playing. According to the INTERPOL (2020) report, the number of child sexual abuse cases reported is lower before the outbreak. However, it is expected that many cases will be reported once the lockdown restriction is eased. Because the children are separated from offenders, they will have a chance to report. It supports the idea that the offenders can be children's acquaintances. In addition, the number of transnational child sexual offenders is decreasing due to countries' policies on travel restrictions. However,

because of the restrictions, the offenders may find another way to commit the crime online, such as live streaming. Delays in reporting, reduced use of the INTERPOL ICSE database, insufficient numbers of specialists or people who support child sexual abuse investigations, and limitations in online communication and service are also factors in the decline in the number of child sexual abuse cases. Thus, the number of actual cases may be higher than that of the confirmed ones.

UNICEF (2020) is concerned about child sexual abuse on online platforms in Thailand. Due to the lockdown, Thai children and teenagers lack interaction with friends or peers. Instead, they frequently interact with acquaintances and strangers, who may sexually seek to exploit them, through online channels. These child sexual offenders will normally build relationships with the children and take the advantage of them. They may ask or seduce the children to share their sexual images or send sexual contents. The offenders may extort money from the children in exchange for not sharing the content.

Moreover, using online platforms can jeopardize individual privacy. Scammers or hackers can gain access to personal information or contacts. These dangers may come from strangers or people the children know.

3. Education and Child Sexual Abuse

Education can be one of the most effective tools for reducing child sexual abuse. Many organizations have attempted to educate children about child sexual abuse. They teach children how to protect themselves, such as designing child sexual abuse manuals for young children, organizing workshops or pieces of training, and allocating funds to relevant organizations to conduct research and launch campaigns. According to Thai studies on child sexual abuse and self-protection, there are limited child sexual abuse prevention teaching tools

for children of various ages. Teachers in public schools are sometimes reluctant to discuss sexual abuse openly with their students because of social values and sensitive information. Books and educational materials do not sufficiently cover all aspects of child sexual abuse, including how to protect children from child molesters. According to observations, child sexual abuse contents and learning activities in the Health and Physical Subject only include questions and answers based on everyday situations. The book provides general information about child sexual abuse. Due to heavy workloads, teachers rarely adapt this topic for new learning activities, and some sexual contents may be related to close family members. According to the Thai Health Promotion Foundation (2018, as cited in the Report on Child and Youth Situation), more than half of child sexual offenders are family members and acquaintances (53 percent), strangers (38.2 percent), and social media users (8.8 percent). Furthermore, research on sexual abuse experiences of children under 18 or in grades 7 to 12 (Limprasert et al., 2020) reports that the most common forms of sexual abuse found are obscenity, unsuccessful acts of sexual abuse by force, and seduction. In terms of places, residences are the most unsafe, followed by schools.

As a result, various learning and teaching tools should be created to ensure that students learn and understand child sexual abuse effectively. Schools should allow open discussions about child sexual abuse in the classroom and find appropriate teaching tools to assist teachers and students in their teaching and learning process. When teaching child sexual abuse prevention to children, the topic should include the followings: physical and non-physical sexual abuse, characteristics of child sexual offenders, unsafe places, risky situations, personal information, negative consequences of child sexual abuse, and appropriately and safely responding to members of the family, caregivers, acquaintances, friends, and strangers. Furthermore, children are more likely to interact with others through online communities

and may be asked to share private information such as their addresses, phone numbers, and family members' information. As a result, schools and teachers must emphasize risk factors and situations in which the offenders try to seduce children to engage in online sexual activities, such as introducing pornography, encouraging children to engage in sexual acts, and other online sexual activities (Pennsylvania Coalition Against Rape, n.d.)

4. Game-Based Learning

A game plays a vital role in supporting and cultivating students' positive and negative emotions. Positive emotions are crucial for education and learning. Students' learning and higher-order thinking improve as their enjoyment level increases (Papadimitriou, 2020). The concept of game-based learning is widely accepted as a part of students' learning activities because it can attract students' attention to focus on what they are learning. It is learning with fun activities where lesson contents and topics are embedded. Trybus (2015, as cited in Pho & Dinscore, 2015) said, "game based-learning is to apply gaming principles into a real-life setting to engage users." Pho and Dinscore (2015) added that not only does game-based learning allow students to learn playfully, it can also help them to reach the learning objectives. Liu et al. (2020) researched the concept of game-based learning among 86 primary school students aged 9 to 10 years old. The research found that game-based learning positively affected the students' motivation and attraction and contributed to better learning outcomes when compared to the control group.

5. Didactic Games

Conceptually similar to game-based learning, didactic games have been seen in the teaching process. It can motivate

students to learn and participate in learning activities. According to Makarova et al. (2018) and Laybua (2016), didactic game is now used in the education system because it helps children develop their intelligence, learning interest, and creativity skills. Bloju (2015) says that didactic game is a learning method often used among primary school students. The students participate in activities that enhance their intellectual skills and knowledge; as a result, they can comprehend more complex ideas. Didactic game also develops thinking, observation, analytical, and decision-making skills, and draws students' attention. Significantly, it assists students in developing creativity and comprehending difficult lessons.

6. Board Game

The board game is also considered a type of didactic game popular among educators and teachers. It allows children to develop learning abilities while playing. It also uses a game-based learning concept, which focuses on designing learning activities. The board game guides students to the learning objective and promotes a student-centered learning environment. A game-based learning element, including a narrative or competition, can help increase enjoyment while learning, which results in the desired learning outcome (Papadimitriou, 2020).

When children play the board game, they have to plan strategies and communicate with other players (Salmina et al., 2011). Consequently, they will have a chance to practice analytical thinking and social interaction with each other. An element of a simulation game is also presented in the board game. According to Dale's Cone of Experience, children can understand 80 percent of what they have learned from simulating real-life situations; as a result, the board game can help students understand child sexual abuse more easily (Anderson, n. d.). In recent years, board games have become popular among

children and families in Thailand; various types of board games have been widely played. Some of them are used for after-school activities and in-school guidance classes. Some university courses, such as mathematics, English, and economics, use different board games to promote student participation and understanding. Board game has played an essential role in educating students about sexual abuse and raising awareness about it. Important aspects of child sexual abuse are embedded in the game, such as private parts, dangerous places, signs of sexual abuse, preventive behaviors, and who and how to call for help. The game rules and strategies create survival and competitive atmosphere. Coming Home Board Game, for example, focuses on locations where children may encounter sexual predators. The children will be asked to answer questions about potentially dangerous situations that may occur in specific places, such as a market, public park, school, or around their houses. It ensures that they know how to avoid such situations (Child Abuse and Neglect in Eastern Europe, 2007).

Furthermore, HOOC Board Game was developed as a result of research to educate primary students about child sexual abuse. The game uses traffic lights to classify different parts of a cartoon body. The red light represents the most dangerous parts that no one can ever touch, the orange light represents the warning areas, and the green light represents the parts that can be touched. Children must answer questions in a square where their tokens are moved to. According to the research findings, the board game was appropriate for primary school students, and their scores were higher than those of the control group who did not play the game (Dunn, 2011).

Child Protection Cards Game developed by Pirun Noiimjai (Parentone, 2017) focuses on preventing children from child kidnappings and seductions, and risky situations. The game development intends to respond to migrant children who

moved to Pattaya with their families and may be exposed to child sexual exploitation. The game is designed for children between 6 to 12 years old and is played in a group. The players take on the roles of child predators and children who are being targeted. The child predators will attempt to seduce or abduct children, and the children must sensibly respond. At the end of the session, it was found that the children could remember the patterns of child seduction and knew how to survive unsafe situations. The structures of the above- card game can be a guideline for developing a board game as they can cover essential topics of child sexual abuse and what the children should at least know to protect themselves from the situations.

The victims of child sexual abuse are often primary school students, mostly girls between 9 to 12 years old. According to Thai Center for the Protection of Child's Rights Foundation, common forms of the abuse include pornography, sexual or inappropriate touching of private parts, forcing a child to have sex, sexual photographing, etc. It may be assumed that young children can be exposed to those forms without knowing them. Therefore, they should be taught about child sexual abuse prevention more to avoid those situations or call for help immediately.

Some groups of students have recently developed a few board games on self-protection from sexual offenders for students and women, such as Escape from Danger, SPEAKUP! and others. These board games are based on circumstances in which children and women may encounter sexual offenders. Treher (2011) adds that learning through board games is an important tool for everyone in practicing and improving skills and knowledge. The well-designed board game provides a learning environment which could engage participants in the

learning and knowledge integration. The players can apply what they have learned in real-life situations.

Due to the limited number of teaching tools and the benefits of board games, the present study investigates the process of a board game development to determine its appropriateness and discover the students' satisfaction with it. Additionally, the study measures the students' knowledge after playing the game.

Objectives

The objectives of this present research are:

1) To develop the board game on child sexual abuse preventive knowledge for the primary school students

2) To assess the appropriateness of the board game

3) To reveal the students' satisfaction with the board game

4) To measure the students' knowledge before and after playing the board game through pretest and posttest

Research Methodology

This experimental research employed a one - group pretest- posttest design during the data collection. 60 primary school students aged 9 to 13 years old participated in the study. The students were enrolled in the first semester of 2019 at a public primary school in Bangkok Metropolitan's Taweewattana District. The sample group was chosen using selective random sampling. The sample was selected due to having physical, cognitive, social, and emotional changes that may attract child predators. Also, they are more likely to come into contact with strangers and sexual offenders in daily life. One Stop Service Center (OSSC), in 2009, reported that two-thirds of the victims were between 10 to 14 years

old (Panyayong, 2010, as cited in Tassaneeyara, 2014). Therefore, providing them with the knowledge about child sexual abuse prevention is crucial as it can grow their awareness of the potential dangers, including recognizing the characteristics of child sexual offenders.

Figure 1

Experimental Research: One-Group Pretest – Posttest Design

Pretest	Intervention	Posttest
P_1	X	P_2

P_1 = Child Sexual Abuse Preventive Knowledge Test (Pretest)

X = Save Me Kids Board Game

P_2 = Child Sexual Abuse Preventive Knowledge Test (Posttest)

The number of the students who participated in this experimental research was 60. The selection criteria were their physical and mental health, parental consent, ability to read and write, and the availability of the school schedule. Two classrooms were chosen for the research, which was sufficient for the data collection. The study used Taro Yamane Formula with a sampling error of 0.05 to calculate the sample size.

The study used the following statistics to analyze the data: mean and standard deviation for satisfaction results and dependent t- test for pretest and posttest results. Index of Item – Objective

Congruence (IOC) was used to ensure the validity and quality of the board game and pretest and posttest contents.

1. Research Instruments Development

The research instruments were the Save Me Kids Board Game, child sexual abuse preventive knowledge test (pretest and posttest), and students' satisfaction survey. The instruments were examined and evaluated by experts, and through the IOC. Before they were used to collect the data, the instruments were piloted to a group of students who shared similar characteristics to the sampled group.

1.1 Board Game Development

Content development: The board game contents were identified and analyzed to obtain only the most crucial information suitable for primary school students. The contents mainly covered knowledge of child sexual abuse, preventive knowledge, and the effects of child sexual abuse, which were presented through situations in the board game. The board game contents were from prevention manuals, school books, and other publications written by government agencies and non-profit organizations, and relevant board games such as child sexual abuse and race games, video games, and other activities. The board game contents focused on potentially risky situations that students may encounter in their everyday life. The board game also explained why close friends of family, relatives, and acquaintances could be identified as child sexual offenders apart from strangers. Drugs and alcohol were presented as commonly used by the predators.

Rules of the board game: the board game incorporated the best features of different board games, such as Coming

Home Board Game, HOOC Board Games, Child Protection Cards Game, Snakes and Ladders, Bingo Game, and Fearsome Floors, some of which were designed to prevent child sexual abuse. The game features and rules were modified to create simulation-based learning, which gives players the impression of dangerous situations during the game. The board game set, including a board game, cards, tokens, dice, and fake money, was reviewed and revised following expert recommendations to ensure its effectiveness, attractiveness, and challenges to young students. The process of board game development was inspired by B. J. Dodge's first step of board game design to ensure the quality of board games for primary school students or young learners and maximize their learning abilities during the game. The game also used primary colors to draw the attention of players. The colors help the students to concentrate on the game and enhance their learning memory (Olurinola & Tayo, 2015). The developed board game can be considered a strategy game where players must focus on the game story, work as a team, and overcome obstacles until reaching their destination (Silverman, 2013, as cited in Promsri, 2016). The experts examined the contents of the board games and evaluated them using the IOC Index to ensure content validity. The minimum acceptable index is IOC $\geq$ 0.50. After the evaluation, each item scored 1.0 and 0.67, respectively or 0.98 on average, which was acceptable.

The game design was revised to make it more attractive and up-to-date. The board game questions were corrected to make them precise and simple for children. Moreover, the game board and rules were evaluated and adjusted according to the experts' suggestions to make them clear and straightforward.

1.2 Child Sexual Abuse Preventive Knowledge Test Development

The contents of the Child Sexual Abuse Knowledge Test (Pretest and Posttest) were from relevant research and books on sex education and prevention, child protection videos, and sexual abuse prevention manuals. The study ensured that the test was consistent with the contents of the board game. The pretest and posttest were composed of twenty-four multiple-choice questions and one open-ended question in which students can apply their knowledge when answering it. The experts used the IOC to assess the validity of the content in the pretest and posttest. The IOC acceptable index is IOC $\geq$ 0.50. After the evaluation, each item scored 1.0 and 0.67, respectively, or 0.92 on average, which was acceptable. Furthermore, the process also ensured that the language used in both tests suited the students' abilities; so that, they would be able to understand the questions and select the correct answers.

1.3 Students' Satisfaction Survey Form Development

The survey was conducted to investigate the students' satisfaction with the board game activity using five-point Likert Scales (Preedakorn, 2014). It is divided into three sections:

1) Child sexual abuse knowledge included the following topics: increasing child sexual abuse knowledge, what situations can be classified as child sexual abuse, the effects of child sexual abuse, surviving child sexual abuse, and protecting oneself from child sexual abuse.

2) Teaching child sexual abuse through board games included the following components: the ability of board games to explain child sexual abuse, the ability of board games to make students understand

child sexual abuse, the interest of board games in attracting students, how simple game rules are, and sharing board games with others.

3) Overview of the activity included the benefits of the activity, the enjoyment of the activity, the appropriate duration of the activity, adapting the activity to the classroom, and reorganizing board game activity.

The survey could provide the researchers with students' feedback on board game learning. To ensure the validity, experts used the IOC. The IOC acceptable index is IOC $\geq$ 0.50. After the evaluation, each item scored 1.0 and 0.67, respectively, or 0.89 on average, which was acceptable.

1.4 Experimental Procedure

From April to August 2019, the research instruments were piloted to a group of students who shared similar characteristics to the sampled group. The board game was then used to collect the data from the sample group of 60 primary school students. Because child sexual abuse has always been such a sensitive subject, a small orientation on the board game activity was designed to emphasize the purpose of the activity and allow the students to ask any questions they might have. The board game activity was organized both in the morning and afternoon. The students were divided into six groups of ten students each, and they played in pairs. One of the research team members explained the rules of the game and monitored the students while they were playing. When the students played the board game, they would answer questions about each card they had drawn. They would receive a tiny card for their bingo card if they could provide the correct answer. The students who could fill five squares in a horizontal, vertical, or diagonal row would be announced the winners.

Meanwhile, they would have to flee from child predators trying to pursue them. 60 primary students completed a child sexual abuse knowledge test (Pretest) for 25 minutes. The sample group of 60 students had an hour to play the Save Me Kids board game. After the game, the students had another 25 minutes to complete the child sexual abuse knowledge test (Posttest). Finally, the student rated the satisfaction survey form 10 minutes before reviewing the overall activity summary.

Findings

1. Results of Child Sexual Abuse Preventive Knowledge Test (Pretest and Posttest)

The child sexual abuse knowledge test results revealed that the students scored higher after playing the board game, confirming the alternate hypothesis. As described in the table below, the posttest mean score was $\bar{x}$ = 17.81, S.D.= 4.50, while the pretest mean score was $\bar{x}$ = 16.68, S.D.= 4.06. The mean difference was 1.14, and the t- value was 3.25. The pretest and posttest had a significant difference in mean scores of the child sexual abuse knowledge test at a significance level of $p<.05$.

The results of child sexual abuse knowledge test were divided into four categories. The first and the second were knowledge of child sexual abuse, and protection and prevention of child sexual abuse. The third was effects of child sexual abuse. The last category was responding appropriately to situations involving child sexual abuse. As shown in the test results, the questions that the majority of students accurately responded to were:

- Knowledge of child sexual abuse: All students could name potential unsafe places, but less than 40 percent could identify the causes of sexual abuse in the board game.

- Child sexual abuse prevention and protection: all students knew how to respond to their fathers' friends who picked them up from school without informing the students or teacher beforehand. 81.7 percent could give an example of an effective way to protect themselves from child sexual abuse.

- Effects of child sexual abuse: 88.1 percent of the students understood why the offenders used drugs with children for sexual abuse, but only 43.3 percent of them could tell the effects of child sexual abuse.

- Response to situations involving child sexual abuse: 93.3 percent of the students could express how they would react if one of their friends encountered a sexual abuse.

Despite some limitations during the data collection, which resulted in lower scores on key questions, the developed board game can still contribute to students' knowledge of child sexual abuse, as illustrated by the test results shown in the figure below.

Figure 2

Results of Child Sexual Abuse Knowledge Test Before and After the Board Game Activity

Test	$\bar{X}$	*S.D.*	$\bar{D}$	$S.D._D$	*T*	*Sig. (1-tailed)*
Pretest	16.68	4.06	1.14	2.71	3.25*	0.0009
Posttest	17.81	4.50				

2. Results of the Student Satisfaction Survey Form

The results of the students' satisfaction survey showed that the students were very satisfied with the board game activity, which can be described as follows:

- The increasing knowledge under students' knowledge of child sexual abuse increased receiving $\bar{x}$= 4.42, S.D. = 1.103
- Being able to explain child sexual abuse under teaching child sexual abuse through the board game received $\bar{x}$= 4.63, S.D. = .869
- Interest and attractiveness of the board game under over all activity received $\bar{x}$ = 4.65, S.D. = .876.

In summary, the students could successfully acquire the knowledge of child sexual abuse and were satisfied with the board game. They agreed that the board game activity was interesting and attractive. It can also be implied that students of this age prefer playing games as part of their learning.

In terms of the activity, the students suggested the provision of more educational games. Furthermore, schools were advised to run board game activities regularly. After children encounter child sexual abuse, self-protection should be taught.

Discussion

1. Results of Research Instruments Development

Save Me Kids Board Game, students' satisfaction survey form, and child sexual abuse preventive knowledge test (pretest and posttest) were validated using the IOC Index and examined by experts. Before being used to collect the data from the sample group, the

instruments were revised and improved based on their advice and recommendations.

During the development stages, the study used a board game, pretest and posttest, and a satisfaction survey. These were all done to students who had never played the game and had the same characteristics as the sample group in order to obtain feedback needed to better develop the instruments. The word choices, risk situations, and sentences of the pretest, posttest, and board game contents were seen complicated as some students did not have sufficient ideas about them before. Some satisfaction survey questions were difficult for the students to understand. All research instruments were adjusted and improved based on the students' feedback and the recommendations of three experts.

1.1 Contents of the Board Game

The board game contents were developed based on recent trends, research, and relevant publications. They were presented in the form of multiple-choice questions and answers, making it simple to manage and analyze during the data collection. The multiple-choice form would allow students to consider what might happen and what appropriate responses might be. The keywords included terms related to sexual education and abuse, such as breast, genital, kissing, grabbing, hug, seduction, violation, etc. They covered risky situations or dangerous places such as going home alone, taking public transportation, properly helping strangers, dealing with acquaintances when feeling insecure, seeking help, and protecting oneself (Handbook for Integrated Sex Education and Life Skills, 2015). The contents of child sexual abuse appeared to be sensitive for a group of vulnerable children of these ages; thus, they were carefully examined and identified using the IOC Index to verify the validity and appropriateness. Throughout the board game, the highest-scoring

questions were 27 (or 90 percent of all questions). Three questions (10 percent of all questions) received lower scores. Based on the evaluation, however, the entire contents of the board game scored 1.0 and 0.67, respectively, or 0.98 on average. And this was acceptable. Thus, it can be concluded that the board game contents were appropriate for the students and reliable.

1.2 Child Sexual Abuse Preventive Knowledge Test (Pretest and Posttest)

The child sexual abuse preventive knowledge test was examined and validated using the IOC Index to ensure its validity. Before the final data-gathering process, the test was piloted to a group of students who shared similar characteristics to the sample group. The child sexual abuse knowledge test initially consisted of 30 questions. However, it was discovered that there were too many questions for the students, as some of them could not complete the test within the expected time, and some could not concentrate. Some terminologies were difficult for the students to understand. The test questions were then reduced to 25 items. In addition, the pretest and posttest questions were revised to ensure that the students would understand and thus avoid misinterpretation. According to the experts' evaluation, there were nineteen questions with the highest score, making up 76 percent of all questions. 6 questions, or 34 percent of all items, received the lowest scores. The IOC acceptable index is IOC $\geq$ 0.50. After evaluation, each item scored 1.0 and 0.67, respectively, or 0.92 on average, which was acceptable.

1.3 The Students' Satisfaction Survey Form

This survey was to find the students' satisfaction with the board game, contents, and activities. The survey was developed using the IOC Index to assure content validity and consistency.

Three experts verified and provided recommendations to develop the survey. The overall contents of the satisfaction survey scored higher than 0.5, which reflected its reliability and consistency. According to the experts' assessment, ten questions received the highest score or 66.67 percent. There were five questions, or 33.33 percent, which were less consistent but scored higher than 0.5, which is IOC acceptable index. After evaluation, each item scored 1.0 and 0.67 respectively, or 0.89 on average. Thus, the students' satisfaction survey form can be used to assess students' satisfaction with the board game activity.

2. Results of Board Game Activities

The contents of Save Me Kids board game covered knowledge of child sexual abuse, preventive knowledge, and the effects of child sexual abuse. The board game contained a manual detailing its objective and specific terms, question cards, protection cards, lucky cards, fake money, dice, child tokens, child sexual offender tokens, bingo cards, and tiny cards. There were five groups of students, ten students per group, playing each board game set, so five sets of board games were distributed. The students worked in pairs throughout the activity, receiving child tokens, bingo cards, fake money, and protection cards. One of the research members was assigned to be a part of the game to explain the game rules, some situations, and terms. The players had to roll a dice, moved their tokens to a square, and escaped from the offender tokens on the board game, similar to Snakes and Ladders. They had to plan where to move the tokens because the offender tokens moved every time after all players finished each round. While the players were escaping, they had to answer a question about child sexual abuse situations

and gave the correct answers to win a tiny card for their bingo card. During the game, they could trade the protection card with others. If the players could not finish the game within an hour due to receiving duplicated tiny cards, they would be given the option of selecting the question cards to answer, called Bonus Time. The pair who could complete five squares on the bingo card was declared the winner.

The research found that the students actively participated and enjoyed the entire game as the board game created an atmosphere of competition and enjoyment. The students understood the objectives of the board game and responded to each question and instruction correctly; however, few students needed more explanations during the activity. Therefore, it could be assumed that the board game was appropriate for the students at this level, as suggested by the experts. In addition, the students' active participation firmly showed that they were satisfied with the board game, which corresponded to the satisfaction survey results. After playing the game, the students were asked to complete the posttest, and the results showed that their knowledge of child sexual abuse prevention was higher compared to that of their pretest. Most students, or over 70 percent, could reach the minimum passing score. Thus, it could be assumed that the board game contributed to the student's knowledge.

Conclusion

The developed board game, known as Save Me Kids Board Game, addresses child sexual abuse trends and situations that students may face daily. The board game contents are classified into

three aspects: knowledge of child sexual abuse, preventive knowledge, and the effects of child sexual abuse because the students need to understand child sexual abuse in real-life settings and how it relates to them. The preventive knowledge will help them appropriately respond to such situations for their safety, and the effects of certain situations will make them aware of how dangerous child sexual abuse can be. For those reasons, B. J. Dodge's board game design was applied to embed and integrate those key ideas of child sexual abuse into the board game as follows:

- The content development stage applied content analysis and incubation to extract important information needed, creating new ideas.

- Rules of the board game stage applied chunking, drafting, and aligning to incorporate the information and game design in order. The game rules were designed at this stage. Game elements, tokens, cards, and board games, were created along with other mechanisms to ensure the board game's theme and attractiveness to players.

- Evaluation stage applied incubating and drafting. The board game was piloted to children with similar characteristics to the sample group to confirm appropriateness, satisfaction, and understanding of the knowledge set.

The students could gain preventive knowledge through unsafe situations, places, and game characters that were presented on the board game. The game's contents appropriately illustrate essential terms of child sexual abuse, such as kissing, hugging, touching, private parts of girls and boys, interaction with adults and friends, emergency numbers, and dangerous places. The game rules

and elements enable students to think and plan when they confront unsafe situations or child predators and rescue their friends. After playing the board game, the students can understand the terms and situations associated with child sexual abuse. They can identify sexual abuse and know how to avoid and protect themselves. The posttest results also show that the students can remember unsafe situations and private body parts, similar to the HOOC Board Game. The study of HOOC Board Game showed that students tended to remember unsafe touch more than safe touch. In addition, the students who played the board game had higher posttest scores than those in the control group. As a result, they were able to integrate the knowledge into their daily life for their safety.

Moreover, the results of satisfaction survey show that the students believed their knowledge improved from playing the game and were more aware of the adverse effects of child sexual abuse. The game can provide important information about child sexual abuse. The students also expressed that the game could be used as part of a classroom lesson and that they would like to see the board game organized in the future. Notably, they recommended the teaching of self-protection after being abused. The students were also found to be enthusiastic and enjoyed playing the board game with their peers.

The research findings also indicate that the developed board game can increase students' knowledge of sexual abuse and can be one of the alternative teaching tools for the child sexual abuse topic.

Recommendations

The results of this research clearly suggest that teachers should teach students about child sexual abuse in order to make them aware of the problem. The board game "Save Me Kids" can be as an alternative teaching tool to facilitate the learning of child sexual abuse because the game covers potential risk situations, characteristics of child sexual offenders, and how to respond to risky situations. During COVID-19 lockdown, children stayed home and had fewer physical interactions with friends. Therefore, they may have spent their time on online platforms or applications; as a result, many of them were likely to interact with sexual offenders through those channels. Child sexual offenders may seduce children to share private information or pictures with them. They may ask the students for money in exchange for that information (UNICEF, 2020). Save Me Kids Board Game can be one of the preventive tools that enables children to protect themselves from child sexual abuse.

Lastly, there should be more research similar to the Save Me Kids board game in light of current trends in child sexual abuse, both offline and online. In terms of prevention, the board game should cover harmful sexual behavior from adults and other children because young children are more likely to engage in harmful sexual behavior with their friends or family members (Trew et al., 2021). The board game should also be specially designed in line with the social contexts of each region in Thailand.

Policy Recommendations for School Administrators

Child sexual abuse should be introduced to students at a young age in the school setting because it can help them become familiar with the situations. Reminding them to dial an emergency

number, such as 191, is necessary whenever they are in an unsafe situation. Like other emergency preparedness for children, school administrators should include child sexual abuse in lesson plans for each level and encourage teachers to design and organize activities for students to learn and practice. The key concepts of child sexual abuse that children must understand as a foundation to increase protective behavior include private body parts, unsafe and safe touch, and how to protect themselves in unsafe or uncomfortable situations. Apart from the board game, teaching resources can be varied depending on available resources and classroom environments. DVD, video theatrical plays, puppets, comics, coloring books, discussion, practice, and role-playing, are used in school-based sexual abuse prevention programs, which is effective in terms of protective behavior and child sexual prevention knowledge.

Moreover, school policies should be set to address child sexual abuse appropriately. Safeguarding policies should respond to "reports or concerns" of child sexual abuse both outside and online, as sexual abuse can occur inside and outside school and on online platforms. The school must be aware that recognizing the degree of child sexual abuse or other abusive situations can mislead students or school staff into understanding that certain types of abuse are acceptable and normal. On the other hand, not only can sexual abuse be committed by adults, but it can also occur among students as the students can sometimes abuse their peers (Department of Education, 2021). Therefore, the school is responsible for raising awareness and establishing safeguarding policies and preventive mechanisms to handle sexual abuse because sexual abuse in any form, physical or non-physical, is unacceptable.

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