Bulletin of Health,
Science and Technology
BHST
ISSN 0858-7531
Volume 14, Number 2, 2016 : 47-58

THE ROLE OF GDA NUTRITION LABELLING OF YOUNG FDA LEADERS AT SECONDARY SCHOOL IN CHAINAT PROVINCE

Arunrut Arunmuang[1*], Pagamas Maitreemit[2]

[1]Faculty of Pharmacy, Silapakorn University, Nakhonprathom, THAILAND
[2]Assistant Professor of Community Pharmacy Department. Faculty of Pharmacy. Silpakorn University, Nakhonprathom, THAILAND

*Corresponding author: E-Mail: a.arunmuang@gmail.com

Abstract: This survey research aims to examine the role of GDA nutrition labelling of young FDA leaders in Chainat province, the influence of young FDA leaders in Chainat province on GDA nutrition labelling, relationship between Predisposing - Enabling - Reinforcing factors, and the role of GDA nutrition labelling of young FDA leaders in Chainat province. The target group of this study includes 220 young FDA leaders and 340 young FDA members in Chainat province in the year of 2014, totally 560 persons. The instrument applied in this study is questionnaire for young FDA leaders and young members in Chainat province. Data collection was conducted from January 2015 to September 2015. The data was analyzed using frequency, percentage, mean, standard deviation and chi-square test. The results show that most of young FDA leaders in Chainat province perform their role about integration of GDA nutrition labelling into their learning (97.3 percent). The next parts include health promotion (96.4 percent), snack label investigation in school (94.5 percent), special activity (89.1 percent), and public relations and campaign (79.5 percent), respectively. The influence on young FDA members is the increase of their knowledge to high level and their understanding to moderate level. Factors associated with the role of young FDA leaders at statistical significant of .05 include education level, grade point average, average daily income of young FDA leaders, the level of understanding in awareness of the presence of young FDA club in the school, GDA class attendance, receiving scores from doing activities and finding source of information, for example, brochures, posters, health personnel and friends. However, other factors are not related with the role. This study could support the development of consumer protection in young FDA leaders' activities, making them perform the role about GDA nutrition labelling for Young FDA members, leading to appropriate behavior on snack consumption. Furthermore, these findings can be proposed to relevant agencies and schools for the development of young FDA leaders' performance in Chainat province.

Keywords: Role of GDA nutrition labelling, Young FDA leaders, Young FDA members

บทคัดย่อ: การวิจัยเชิงสำรวจครั้งนี้ มีวัตถุประสงค์เพื่อศึกษาบทบาทเกี่ยวกับสัญลักษณ์ทางโภชนาการแบบจีดีเอ ของแกนนำ อย.น้อย ระดับมัธยมศึกษา จังหวัดชัยนาท ศึกษาผลกระทบต่อสมาชิก อย.น้อย เกี่ยวกับสัญลักษณ์ทางโภชนาการแบบจีดีเอและศึกษาความสัมพันธ์ระหว่างปัจจัยนำ ปัจจัยเอื้อ และปัจจัยเสริมกับบทบาทเกี่ยวกับสัญลักษณ์ทางโภชนาการแบบจีดีเอของแกนนำ อย.น้อย ศึกษาในแกนนำ อย.น้อยและสมาชิก อย.น้อย ในปีการศึกษา 2557 จำนวน 560 คน ได้แก่ แกนนำ อย.น้อย 220 คน และสมาชิก อย.น้อย 340 คน เครื่องมือได้แก่แบบสอบถามสำหรับแกนนำและกลุ่มสมาชิก อย.น้อย เก็บรวบรวมข้อมูลจากแบบสอบถาม ตั้งแต่ มกราคม 2558 ถึงกันยายน 2558 วิเคราะห์ข้อมูล โดยใช้ความถี่ ร้อยละ และไคสแคว์ การวิจัย พบว่า แกนนำ อย.น้อย ปฏิบัติบทบาทฯ ด้านการบูรณาการสู่การเรียนการสอนมากที่สุด (ร้อยละ 97.3) รองลงมาคือ ด้านการส่งเสริมสุขภาพ (ร้อยละ 96.4), ด้านการตรวจสอบฉลากขนมขบเคี้ยวในโรงเรียน (ร้อยละ 94.5) ด้านกิจกรรมพิเศษอื่นๆ (ร้อยละ 89.1) และด้านการเผยแพร่ ประชาสัมพันธ์และรณรงค์ (ร้อยละ 79.5) ตามลำดับ ส่งผลกระทบต่อสมาชิก อ.น้อย ได้แก่ ระดับความรู้ฯ อยู่ในระดับสูง และระดับความเข้าใจฯ อยู่ในระดับปานกลาง ปัจจัยที่มีความสัมพันธ์กับบทบาทฯ ของแกนนำ อย.น้อย อย่างมีนัยสำคัญทางสถิติที่ 0.05 ได้แก่ ระดับการศึกษา เกรดเฉลี่ย รายได้เฉลี่ยต่อวันของแกนนำ อย.น้อย ระดับความเข้าใจฯ การรับรู้เรื่องการมีชุมนุม อย.น้อยในโรงเรียน การได้เข้าเรียนในชั่วโมง การเรียนการสอนฯ การได้รับคะแนนการทำกิจกรรมฯ จากครู และแหล่งข้อมูลที่ได้รับข่าวสารฯ ซึ่งได้แก่ แผ่นพับ โปสเตอร์ เจ้าหน้าที่สาธารณสุข และเพื่อน ส่วนปัจจัยอื่นๆ ไม่มีความสัมพันธ์กับบทบาทฯ ผลการศึกษาสามารถนำไปประกอบแนวทางการพัฒนางานคุ้มครองผู้บริโภคในกิจกรรม อย.น้อย เพื่อให้แกนนำ อย.น้อย ปฏิบัติบทบาทเกี่ยวกับสัญลักษณ์ทาง

โภชนาการแบบจีดีเอ แก่สมาชิก อย.น้อย และนำไปสู่พฤติกรรมการบริโภคขนมขบเคี้ยวอย่างเหมาะสมต่อไป นอกจากนี้ยังสามารถนำผลการวิจัยเสนอต่อหน่วยงานและโรงเรียนที่เกี่ยวข้องเพื่อพัฒนาการดำเนินงาน อย.น้อยในจังหวัดชัยนาทต่อไป

คำสำคัญ บทบาทเกี่ยวกับสัญลักษณ์ทางโภชนาการแบบจีดีเอ, แกนนำ อย.น้อย, สมาชิก อย.น้อย

INTRODUCTION

Ministry of Public Health has been conducting national survey on health and nutritional conditions in the past 14 years. It was found that metabolic syndrome among Thai students was increasing. In fiscal year 1995-2009, overweight and obesity among Thai children increased 1.7 time. Only in first three months of fiscal year 2013, obese children were as much as 8.7% (Food and Drug Administration, 2014). Furthermore, 30-80% of these obese children will become fat adults with cardiovascular disease, diabetes, and hypertension. This is because most obese children usually consume snacks as they are available everywhere, colorful, and inexpensive. Our concern is that snacks normally consist of flour, sugar, oil, and monosodium glutamate. Flour is milled and bleached. It contains high sugar. If the children consume snacks regularly, their ingredients, especially flour and sugar, will be converted to fat and deposited at different parts of the body, causing obesity (Office of Consumer Protection, 2014). Although the snacks have nutrition labels on their packages, Thai children do not pay attention to traditional nutritional label since the characters are small, cramped, and complicated. The ingredients specified on the package are misleading. Corresponding to the survey on the situation of awareness, understanding, and application of nutrition label among Thai people, it was found that only 54.48% of the sample group understand about nutrition label (Food Control Division, 2010). Therefore, it must be improved to be more readable for the consumers. In the survey on opinions about nutrition label and appropriate form of nutrition label, 42% of the responders think that the current form of nutrition label should be specified together with other form. 99.8% of the responders agree with indication of additional GDA nutrition label (Jureerat Horkiet et al., 2010). In addition, the Ministry of Public Health aims to promote Thai people's health with nutritional foods and eliminate obesity. It emphasizes on reducing the consumption of sugar, oil, and salt. This will be a solution for obesity and various non-contagious chronic diseases. Moreover, the strategy "good health with Thai lifestyle" encourages the people to deal with risk factors of 5 diseases, namely diabetes, hypertension, heart disease, cerebrovascular disease, and cancer. It encourages the consumers, Thai children in particular, to read nutrition label and have understanding in the amount of nutrient received from each type of food. They should be able to apply the information in nutrition label with their daily food choice as appropriate with their physical needs (Food and Drug Administration, 2014).

Thus, Food and Drug Administration has developed new nutrition label to be more readable. It issued Ministry of Public Health statement (182^{nd} issue) 1998 regarding nutritional label specified with type and amount of nutrient in the part of nutritional information. Later, there were issues of Ministry of Public Health statement (305^{th} issue) 2007 and 2011 regarding the indication of nutrition label on certain type of instant meals. It determines some snacks, including French fries, potato chips, popcorn, corn chips, crisp rice or rice krispies, crisp bread, crackers, biscuits, and wafers, to indicate calories, sugar, fat, and sodium in GDA format (Guideline Daily Amounts), allowing the consumers to use this in making their food choice appropriately for their health (Jureerat Horkiet, 2014). Furthermore, it realizes the importance and encourages the students to read the label before eating by conducting young FDA project and support young FDA leaders to disseminate the knowledge

and perform their roles for young FDA members. It is hoped that the students could be able to choose what to eat by reading GDA nutrition label properly.

In Chainat, Chainat Provincial Health Office has been supporting young FDA leader project since 2003 in accordance with the policy of Food and Drug Administration. There are 2 levels of young FDA leader schools, including primary schools (Khongrak Prachanukhro School, Thetsaban Ban Kluai School, Nhong Mamong Kindergarten School) and secondary schools (Chainatpittayakom School, Kuruprachasan School, and Hankhapittayakom School). From 2012, it has been emphasizing on the campaign of GDA nutrition label in young FDA activities. The pilot project was conducted in secondary schools using the same pattern. It continuously encourages young FDA leaders to be role models about GDA nutrition label for young FDA members as young FDA teaching brothers.

The researcher, as a responsible person in charge of young FDA project at provincial level, is therefore interested to examine the role of young FDA leaders at secondary schools in Chainat about GDA nutrition label and investigate the impact on young FDA members. Furthermore, the study will examine association between predisposing factor, enabling factor, and reinforcing factor and the role that influences young FDA members. The findings will be used to determine the guideline for teaching about GDA nutrition label for young FDA leaders. Young FDA leaders are expected to perform their roles in teaching about GDA nutrition label for young FDA members and other students. This will enable them to read food label correctly, make appropriate choice, and reduce overnutrition issue among Thai children.

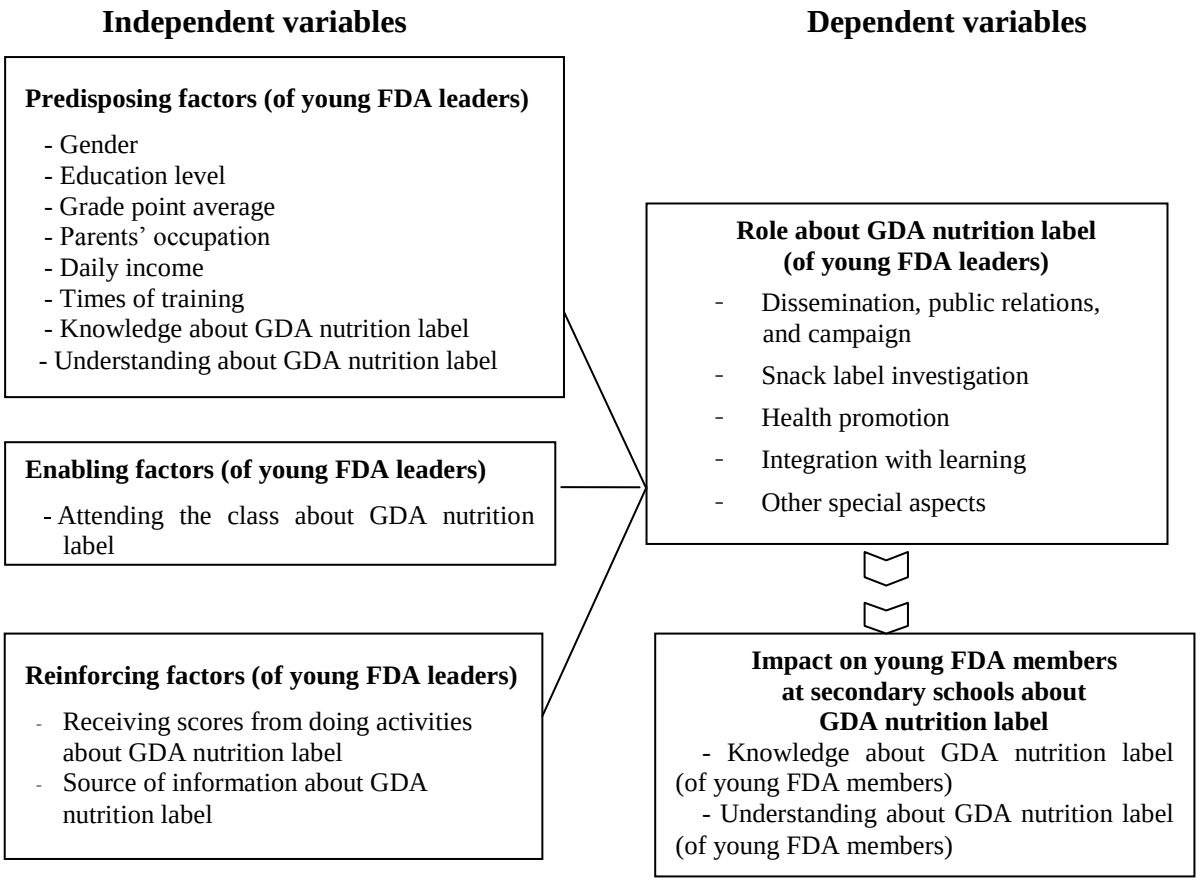

Figure 1. Research framework

MATERIALS AND METHODS

Population and sample group

1. The population consists of 220 young FDA leaders at secondary schools in Chainat, academic year 2014.

2. Sample group consists of 340 young FDA members at secondary schools in Chainat, academic year 2014. Systematic method was applied to select every 7^{th} sample from 2,260 name lists of young FDA members.

Research instruments

1. Questionnaire for young FDA leaders to examine their role about GDA nutrition label. The instrument was assessed and found reliability (KR-20) at 0.871.

2. Questionnaire for young FDA members to examine their knowledge and understanding about GDA nutrition label. The instrument was assessed and found reliability (KR-20) at 0.803 and 0.801.

Data collection

Advisors of young FDA club at Chainatpittayakom School, Kuruprachasan School, and Hankhapittayakom School handed out the questionnaire to the population and sample group in young FDA class at every schools. The responders were given 15 minutes for completing the questionnaires. Then the questionnaires were collected and returned to the researcher to check, calculate the score, and analyze the data.

RESULTS AND DISCUSSION

RESULTS:

From the study on 220 young FDA leaders, it was found that they were female (55.5%), studying at grade 12 (47.3%), grade point average 2.01-3.00 (49.1%), their parents were non-salary men (77.3%). Young FDA leaders earned more than 90 Baht per day on average (66.4%). They were trained about GDA nutrition label for 2 times or less (72.7). Young FDA leaders were aware about young FDA club in their schools (84.1%). They received scores from doing activities about GDA nutrition label (84.1%) and received information about GDA nutrition label from public health personnel (99.1%). The next items were young FDA activities in the school (97.3%) and brochure (66.8%), respectively. 340 FDA members are female (52.4%). They were studying at grade 10 (52.6) with grade point average at 3.01-4.00 (59.7%). Their parents were non-salary men (75.0%). Young FDA members earned more than 90 Bath per day (52.1%). They attended training about GDA nutrition label by young FDA leaders more than 2 times (62.9%). Furthermore, they received information about GDA nutrition label from young FDA activities in their schools (81.5). The next items were brochure (71.8%) and poster (67.4%).

In overall, young FDA leaders have knowledge and understanding about GDA nutrition label at high level, 80.5% and 54.5%, respectively as shown in Table 1.

Table 1. Number and percent of knowledge and understanding of young FDA leaders in overall image (n=220)

Level	Knowledge	Understanding
	Number (%)	Number (%)
High	177 (80.5)	120 (54.5)
Moderate	28 (12.7)	52 (23.6)
Low	15 (6.8)	48 (21.8)
	Mean = 2.7, SD= 0.6	Mean = 2.3, SD = 0.8

Young FDA leaders at secondary schools in Chainat perform their role about GDA nutrition label at high level, namely integration into learning (97.3%). The next items include investigation on snack label at school (94.5%), health promotion (90.5%), other special activities (89.1%), and dissemination, public relations and campaign (79.5%), respectively as shown in Table 2.

Table 2. Number and percent of role practice by young FDA leaders, classified by aspects

Aspect	Role practice (n=220)		
	High Number (%)	Moderate Number (%)	Low Number (%)
Dissemination, public relations, and campaign	175 (79.5)	22 (10.0)	23(10.5)
Investigation on snack label at school	208 (94.5)	0 (0.0)	12 (5.5)
Health promotion	199 (90.5)	13 (5.9)	8 (3.6)
Integration into learning	214 (97.3)	0 (0.0)	6 (2.7)
Other special activities	196 (89.1)	13 (5.9)	11 (5.0)

The influence on young FDA members at secondary schools in Chainat about GDA nutrition label. Such influence includes knowledge and understanding about GDA nutrition label of young FDA members at secondary school in Chainat. In overall, it was found that young FDA members' knowledge was at high level (55.9%) and their understanding was moderate (65.6%) as shown in Table 3.

Table 3. Number and percent of knowledge and understanding of young FDA members in overall image (n=340)

Level	Knowledge	Understanding
	Number (%)	Number (%)
High	190 (55.9)	106 (31.2)
Moderate	140 (41.2)	223 (65.6)
Low	10 (2.9)	11 (3.2)
	Mean =2.5 SD = 0.6	Mean = 2.3 SD = 0.5

In the study on factors associated with the role about GDA nutrition label performed by young FDA leaders at secondary schools in Chainat, it was found that young FDA leaders' education level, grade point average, average daily income, understanding, awareness of the presence of young FDA club in the school, class attendance, receiving scores from doing activities, and source of information about GDA nutrition label were

associated with role practice at statistical significance of .05. However, other factors were not related with the role as shown in Table 4-11.

Table 4. Relationship between young FDA leaders' education level and role practice

Role practice	Education level			Chi-Square	df	Sig.
	Grade 10	Grade 11	Grade 12			
Dissemination, public relations						
High	23(13.1)	65(37.1)	87(49.7)	14.225	4	0.006*
Moderate	9(40.9)	5(22.7)	8(36.4)			
Low	2(8.7)	12(52.2)	9(39.1)			
Total	34(100.0)	82(100.0)	104(100.0)			

* p≤ 0.05

Table 5. Relationship between young FDA leaders' average income and role practice

Role practice	Average income		Chi-Square	df	Sig.
	≤ 90 Bath	>90 Bath			
Dissemination, public relations					
High	48(64.9)	127(87.0)	16.857	2	<0.001*
Moderate	15(20.3)	7(4.8)			
Low	11(14.9)	12(8.2)			
Total	74(100.0)	146(100.0)			
Other special activities					
High	61 (82.4)	135 (92.5)	8.221	2	0.015*
Moderate	5 (6.8)	8 (5.5)			
Low	8 (10.8)	3 (2.1)			
Total	74(100.0)	146(100.0)			

* p≤ 0.05

Table 6. Relationship between young FDA leaders' awareness of the presence of young FDA club at their schools and role practice

Role practice	Awareness of young FDA club at school		Chi-Square	df	Sig.
	Present	Not present			
Dissemination, public relations					
High	152 (82.2)	23 (65.7)	16.251	2	0.001*
Moderate	12 (6.5)	10 (28.6)			
Low	21 (11.4)	2 (5.1)			
Total	74(100.0)	146(100.0)			

* p≤ 0.05

Table 7. Relationship between young FDA leaders' class attendance and role practice

Role practice	Class attendance		Chi-Square	df	Sig.
	Attend	Absent			
Dissemination, public relations					
High	**140 (80.9)**	**35 (74.5)**	9.991	2	0.007*
Moderate	**12 (6.9)**	**10 (21.3)**			
Low	**21 (12.1)**	**2 (4.3)**			
Total	**47 (100.0)**	**173 (100.0)**			

* p≤ 0.05

Table 8. Relationship between young FDA leaders' scores received from doing activities and role practice

Role practice	Scores received from activities		Chi-Square	df	Sig.
	Receive	Not receive			
Dissemination, public relations					
High	140 (82.8)	35 (68.6)	7.323	2	0.024*
Moderate	12 (7.1)	10 (19.6)			
Low	17 (10.1)	6 (11.8)			
Total	169 (100.0)	51 (100.0)			

* p≤ 0.05

Table 9. Relationship between young FDA leaders' grade point average and role practice

Role practice	Grade point average			Chi-Square	df.	Sig.
	1.00-2.00	2.01-3.00	3.01-4.00			
Health promotion						
High	6 (75.0)	97 (98.8)	96 (92.3)	13.551	4	0.021*
Moderate	0 (0)	9 (8.3)	4 (3.8)			
Low	2 (25.0)	2 (1.9)	4 (3.8)			
Total	8 (100.0)	108 (100.0)	104 (100.0)			

* p≤ 0.05

Table 10. Relationship between young FDA leaders' understanding and role practice

Role practice	Understanding			Chi-Square	df	Sig.
	High	Moderate	Low			
Health promotion						
High	119 (99.2)	51 (98.1)	44 (91.7)	7.436	2	0.027*
Low	1 (0.8)	1 (1.9)	4 (8.3)			
Total	120 (100.0)	52 (100.0)	48 (100.0)			

* p≤ 0.05

Table 11. Relationship between young FDA leaders' source of information and role practice

Role practice	Source of information	
	Brochure	**Poster**
Dissemination, public relations		
High	129 (87.8)	123 (87.2)
Moderate	7 (4.8)	9 (6.4)
Low	11 (7.5)	9 (6.4)
Total	147 (100.0)	141 (100.0)
Chi-Square	19.651	14.281
Df	2	2
Sig	<0.001*	0.001
Investigation on snack label at school		
High	143 (97.3)	137 (97.2)
Low	4 (2.7)	4 (2.8)
Total	147 (100.0)	141 (100.0)
Chi-Square	6.419	5.217
Df	1	1
Sig	0.016*	0.030*
Health promotion		
High	140 (95.2)	134 (95.8)
Moderate	5 (3.4)	2 (1.4)
Low	2 (1.4)	5 (3.5)
Total	147 (100.0)	141 (100.0)
Chi-Square	12.145	14.320
df	2	2
Sig	0.002*	0.001*

* $p \leq 0.05$

Role practice	Source of information
	Personnel
Integration into learning	
High	213 (97.7)
Low	5 (2.3)
Total	218 (100.0)
Chi-Square	17.002
df	1
Sig	0.05*

* $p \leq 0.05$

Role practice	Source of information	
	Friend	**Brochure**
Other special activities		
High	35 (81.4)	136 (92.5)
Moderate	2 (4.7)	7 (4.8)
Low	6 (14.9)	4 (2.7)
Total	43 (100.0)	147 (100.0)
Chi-Square	9.067	6.172
df	2	2
Sig	0.014*	0.038*

* $p \leq 0.05$

DISCUSSION

1. In result of the study on role practice about GDA nutrition label, it was found that young FDA leaders performed all aspects of their role at high level, including integration into learning, which was highest (97.3%). The next aspects include investigation on snack label at school (94.5%), health promotion (90.5%), other special activities (89.1%), and dissemination, public relations and campaign (79.5%). Corresponding to results of the study by Public and Consumer Affairs Advertisement Control Division, Food and Drug Administration (2009), which examines researches and evaluates young FDA project in 2009 regarding the evaluation on the use of young FDA manual. About the use of integrative health product manual, it was found that there were pilot experiments in the use of integrative health product at the schools in 4 regions, at least 100 schools in each region, totally over 400 schools. The project successfully achieved its objectives. Public health personnel, both at district level and provincial level, visited to encourage young FDA leaders. They supported food safety mobile unit from Food and Drug Administration.

2. About the influence on knowledge and understanding in GDA nutrition label among young FDA members, it was found that young FDA members had good knowledge (55.9%). Corresponding to the study by Woraluck Anantakul (2014), who studied on perception, knowledge, and consumption behavior in eating snacks specified with GDA nutrition label among students in Ratchaburi. She found that most of the samples had good knowledge. However, this is opposed by the study of Aorathai Jaiboon et al. (2014), who examined health knowledge and proficiency of GDA nutrition label among secondary school students in Nan province. They found that about half of the students had poor knowledge about GDA nutrition label. Only 4.6% of them had good knowledge. In contrast with the study by Public Health Office of Chainat (2012), which examine knowledge and understanding about GDA nutrition label or "sugar-fat-salt label" on snack package, case study: young FDA in academic year 2012. It discovered that young FDA members had poor knowledge about GDA nutrition label. This suggests that the level of young FDA members' knowledge might be affected by role practice of the current young FDA leaders. Since 2012 was the year when GDA nutrition label was implemented. It was considered as new knowledge and there was no role assigned to young FDA leaders. Young FDA members have moderate level of knowledge (65.6%). Corresponding with the study by Jureerat Horkiet et al. (2011), who investigate factors that influence awareness and understanding about GDA nutrition label on snack package. Case study on young FDA found that most of the samples understand about GDA nutrition label at moderate level. In contrast with the study by Public Health Office of Chainat (2012), which examines about knowledge and understanding about GDA nutrition label or "sugar-fat-salt label" on snack package. Case study on young FDA of Chainat in academic year 2012 found that young FDA members had poor understanding about GDA nutrition label. This might be due to role practice by young FDA leaders. Corresponding with the result, young FDA members receive information about GDA nutrition label mostly from young FDA activities at school.

3. In relationship between predisposing factor, enabling factor, and reinforcing factor and young FDA leaders' role practice about GDA nutrition label, it was found that:

Education level is related to the role of dissemination and public relations corresponding to learning activity arrangement manual for young FDA at high school. It is provided by Food and Drug Administration (Food and Drug Administration, 2010). Such manual is applied as guidance for arranging young FDA activities at school. Its content becomes more complex as education level increase. Such role consists of speaking in front of flagpole, wire broadcasting, creating educational board, handing out brochure, arranging

exhibition and display, walking campaign, and announcing on website. These activities are determined in learning plan.

Grade point average is associated with the role of health promotion. This is because most young FDA leaders have good school record (2.01-4.00). Such role consists of surveying on students' eating behavior, surveying and taking care of students' sanitation, and supporting the project of health issue at school. This requires young FDA leaders with intelligence, which means learning ability of a person, being able to adapt oneself to the problem appropriately, able to achieve socially valuable goal of activities, able to think logically, able to adapt oneself to the environment and society effectively (Faculty of Medicine, Ramathibodi Hospital, Mahidol University, 2016).

Daily income of young FDA leaders is associated with the role of dissemination, public relations and other special activities. This is because young FDA leaders have to perform such role outside their class or on holidays. Personal expenses increase as they have to perform such role outside their class. Therefore, daily income of young FDA leaders is related to such role.

Level of understanding is associated with integration into learning. Such role consists of sciences, health education, social studies, mathematics, and learner development activity. This offers proper understanding to young FDA leaders as GDA nutrition label is integrated with learning at school by performing such role regularly. Obviously, most young FDA leaders perform the role of integration into learning in the part of awareness of the presence of young FDA club at school (84.1%).

Class attendance is associated with the role of dissemination and public relations because it allows young FDA leaders to gain more knowledge about GDA nutrition label in young FDA club and classroom. They can bring this knowledge to perform more of their role about dissemination and public relations, namely speaking in front of flagpole, wire broadcasting, creating educational board, handing out brochure, arranging exhibition and display, walking campaign, and announcing on website.

Receiving scores from doing activities about GDA nutrition label is associated with the role of dissemination and public relations. This because the sores given by their teachers will encourage and motivate them to perform more of their role in dissemination and public relations, namely speaking in front of flagpole, wire broadcasting, creating educational board, handing out brochure, arranging exhibition and display, walking campaign, and announcing on website

Source of information about GDA nutrition label include:

- Brochure and poster are associated with the role of dissemination, public relations, investigation on snack label at school and health promotion.

- Public health personnel are associated with the role of integration into learning. This is because most young FDA leaders usually receive information about GDA nutrition label from public health personnel (99.1%). Moreover, public health personnel have their part in determining integrative learning curriculum together with the advisors of young FDA leaders. They continuously support the instructor in teaching and demonstrating for young FDA leaders.

- Friends and brochure are associated with the role of other special activities. This is because such role consists of building young FDA at school, expanding to the community, young FDA teaching brother activity, and sharing health knowledge. Such activity relies on sharing and interaction among friends and juniors. Furthermore, brochure is the main source of information received by most young FDA leaders and passed on among young FDA members. This can be noticed as most young FDA leaders and members receive the information about GDA nutrition label from brochure (66.8% and 73.0 respectively).

CONCLUSION

Young FDA leaders at secondary schools in Chainat perform their role about GDA nutrition label at high level. The influence on young FDA members is the increase of their knowledge to high level and their understanding to moderate level. This study could support the development of consumer protection in young FDA leaders' activities, making them perform the role about GDA nutrition labelling for Young FDA members, leading to appropriate behavior on snack consumption. Furthermore, these findings can be proposed to relevant agencies and schools for the development of young FDA leaders' performance in Chainat province.

ACKNOWLEDGMENTS

I would like to acknowledge the support from Asst. Prof. Dr. Pagamas Maitreemit, Community Pharmacy Department, Faculty of Pharmacy, Silpakorn University who was my advisor and Dr. Yaowalak Amrumpai who the Chairman of the audit thesis, Asst. Prof. Dr. Nattiya Kapol and Asst. Prof. Dr. Tassanee Silawan who were the qualified members to please provide many suggestions.I am greateful to Mr. Chaiwat Singhirunnusorn who was Expert level Pharmacist at Chainat Health Provincial Office that gave me advices to improve the tools which were used in my study. I also wish to thank my family that support and encourage me to successful working.

REFERENCES

Chainat Provincial Public Health Office. 2014. Chainat Oryornoi Program. Chainat Province: Chainat Provincial Public Health Office

Chaiwat Singhirunnusorn. 2010. Dietary Supplement Product Consumption Behavior of Secondary schoolSchool Students under Supervision Region 2 of Ministry of Public Health Chainat Province: Chainat Provincial Public Health Office.

Chaiwat Singhirunnusorn. 2009. Knowledge and behavior on health product consumption of the secondary school student of Chainatpittayakom school, Chainat province. : Chainat Provincial Public Health Office.

Division of food control. Food and Drug Administration and Suan Dusit University. 2010. Survey of Nutrition Signpost in Thai Population 2009, Nonthaburi Province: The War Veterans Organization Press.

Faculty of Medicine Ramathibodi Hospital. Mahidol University. 2016. What is intelligence? Access on May, 2 from http://med.mahidol.ac.th/ramamental/generalknowledge/child/ 05152014- 1100.

Food and Drug Administration. 2014. Fact sheets of Guideline Daily Amounts (GDA). Nonthaburi Province: Food and Drug Administration.

Food and Drug Administration. 2013. Manual of standard evaluation of Oryornoi leader schools.

Jiraporn Yodtheon et al. 2012. National surveys in Use of GDA nutrition labeling 2012 Nonthaburi Province: The War Veterans Organization.

Jureerat Huarkieat et al. 2010. Study of Consumer's Opinions about Additional Information on Nutrition label Nonthaburi Province: Division of Food, Food and Drug Administration , Ministry of Public Health.

Jureerat Huarkieat. 2011. Factors affecting perception and understanding of nutrition signpost in Guideline Daily Amounts (GDA) on snacks labeling: A case study in Oryor noi Master Degree thesis Department of Home Economics, Faculty of Agriculture, Kasetsart University.

Jureerat Huarkieat. 2014. Handout Document Food Products Labelling follow the Notification of the Ministry of Public Health No. 182 "Nutrition Labeling."

Ministry of Public Health. 2014. Strategy. Indicator and Data Collection Approach of Ministry of Public Health on budgeting fiscal year 2014. Nonthaburi Province: Printed Date not Available.

Public and Consumer Affair Division. Food and Drug Administration. 2005. Manual of Oryornoi activities, Nonthaburi Province: The War Veterans Organization Press.

Public and Consumer Affair Division. Food and Drug Administration. 2009. "Research and evaluation of Oryornoi Program in 2009". Proceedings of Oryornoi program in 2009, Consumer Affair Division, Food and Drug Administration

Public and Consumer Affair Division. Food and Drug Administration. 2014**.** Work performance of Oryornoi program in accordance with Oryornoi school standard criteria fiscal year 2014. Accessed on April 24 from h ttp://www.Oryornoi.com/dbnoi/ index.php

Prapaisri Sirichakwal, Prapasri Puwastien and Achiraya Kamchansupasin. 2008. Consumer's attitude knowledge and understanding toward nutrition labeling and use. Nutrition labeling announcement improving program, Nonthaburi Province: Food and Drug Administration.

Wannee Sukjan. 2003. "Knowledge of nutrition labels of graduate students, Faculty of Education, Chiangmai University" Master's Thesis, Nutritional Science, Faculty of Science, Chaingmai University. Bangkok Metropolitan: Date not available.

Bureau of Food Food and Drug Administration ,Ministry of Public Health. 2012. Learning guideline of nutrition labeling in Guideline Daily Amounts (GDA) Nonthaburi Province: Food and Drug Administration.

Bureau of Food, Food and Drug Administration. 2015. Study of understanding and nutrition signpost of front-of-pack labeling use in Thai population. Nonthaburi Province: Food and Drug Administration.

Chainat Provincial Public Health Office. 2012. Knowledge and understand of nutrition signpost in Guideline Daily Amounts (GDA) on snacks labeling: A case study in Oryornoi school year 2012. Chainat province: Chainat provincial public health office.

Wuralak Anontakul. 2014. Perception Knowledge and consumption behavior of snacks with nutrition signpost in Guideline Daily Amounts of students at Ratchaburi Province . Ratchaburi Province: Printed not available.

Food and Drug Administration. 2010. Manual Manual of learning plan on students development activities: Oryornoi of Secondary schoolstudents. Nonthaburi Province: The War Veterans Organization.

Office of the Consumer Protection Board. 2014**. "**Snack Advertising Control Prevent Obesity in Children" Accessed on April 12 2016 **"**http://www.thaihealth.or.th/node/9755.

Sumalee Sila. 2014. "Snacks Cause obesity in children" OCPB ,office of the consumer protection board. Accessed on April 12 http://www.ocpb.go.th/list_column.asp? Page PosIt ion=10

Bureau of Food. 2011. Survey Guideline Daily Amounts (GDA) on Ready-to-Eat Foods labeling Food and Drug Administration, Ministry of Public Health , Nonthaburi Province.