Use of Online Social Media and eHealth Literacy of Urban Youth in Phuket Province, Thailand
การใช้สื่อสังคมออนไลน์และการรู้เท่าทันสื่อสุขภาพของเยาวชนในอำเภอเมืองภูเก็ต

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Abstract

This study investigated online social media use behaviors of youth in urban area of Phuket Province in order to identify the eHealth literacy level and also determine differences in level of eHealth literacy relating to genders and level of education. Participants consist of elementary and high school students, the 4th to 12th graders. Questionnaire was used to collect data from 465 elementary and high school students, the 4th to 12th graders in September 2015. Results showed teenagers in different gender and level of education have different behaviors of using internet and social media. Moreover, the eHealth literacy skills are also different depending on genders and ages. Youths in Phuket have eHealth literacy in moderate level in conclusion. In order to promote eHealth literacy skill in youths, it should be included in the school curriculum since elementary school level.

Keywords: online social media, elementary school students, junior high school students, senior high school students, eHealth literacy

บทคัดย่อ

งานวิจัยนี้มีวัตถุประสงค์เพื่อศึกษาพฤติกรรมการใช้สื่อสังคมออนไลน์ และระดับความสามารถในการรู้เท่าทันสื่อสุขภาพอิเล็กทรอนิกส์ ตลอดจนเปรียบเทียบระดับความสามารถในการรู้เท่าทันสื่อสุขภาพอิเล็กทรอนิกส์ของเยาวชนที่มีเพศ และระดับการศึกษาแตกต่างกัน โดยใช้แบบสอบถามจำนวน 465 ชุด เก็บรวบรวมกลุ่มตัวอย่างที่ได้จากการสุ่มตัวอย่างอย่างง่ายในกลุ่มนักเรียนระดับประถมศึกษาตอนปลาย มัธยมศึกษาตอนต้นและตอนปลายของโรงเรียนในเขตเทศบาลเมืองภูเก็ตในช่วงเดือนกันยายน 2558 วิเคราะห์ข้อมูลโดยใช้การแจกแจงความถี่ ร้อยละ ค่าเฉลี่ย ส่วนเบี่ยงเบนมาตรฐาน การคำนวณค่าคะแนนทีและการวิเคราะห์ความแปรปรวน ผลการศึกษาพบว่า สื่อสังคมออนไลน์ที่ผู้ตอบแบบสอบถามส่วนใหญ่ใช้ทุกวัน ได้แก่ เฟซบุ๊ค (252 หรือ54.3%), ไลน์ (231 or 49.7%), การดูวีดิโอหรือฟังเพลงออนไลน์ (221 หรือ 47.7%) ประมาณ 3-4 ชั่วโมง/ วัน แหล่งสารสนเทศสุขภาพที่ส่วนใหญ่ใช้คือแพทย์และบุคลากรทางการแพทย์ (187 หรือ 40.39%) รองลงมาคือแหล่งอินเทอร์เน็ต (120 หรือ 25.32%); เนื้อหาที่สืบค้นมากที่สุดคือสารสนเทศเกี่ยวกับการดูแลสุขภาพที่สมบูรณ์ ($\overline{X}$ =1.75, SD=0.959) รองลงมาคือการใช้ยาเพื่อการรักษา ($\overline{X}$ =1.58, SD=0.899) ในภาพรวม

ผู้ตอบแบบสอบถามมีค่าเฉลี่ยของการรู้เท่าทันสื่อสุขภาพในระดับสูง ($\overline{X}$=3.52, SD=0.847). นักเรียนหญิงมีค่าเฉลี่ยของการรู้เท่าทันสื่อสุขภาพสูงกว่านักเรียนชายอย่างมีนัยสำคัญทางสถิติที่ระดับ 0.05 และพบว่านักเรียนที่มีระดับการศึกษาแตกต่างกันมีค่าเฉลี่ยการรู้เท่าทันสื่อแตกต่างกันอย่างมีนัยสำคัญทางสถิติที่ระดับ 0.05

คำสำคัญ: สื่อสังคมออนไลน์, นักเรียนประถมต้น, นักเรียนมัธยมต้น, นักเรียนมัธยมปลาย, การรู้เท่าทันสื่อสุขภาพ

Background

Traditional media devices and technologies have been progressively developed in order to use with Internet. Online and social media has become increasingly popular and important in every society. These media are used in all aspects of one's life, at home or office, for works or leisure and are expanded to healthcare system to provide healthcare information to many groups of people. Electronic information resources have recently become more and more popular and play a major role in health care system and social network technologies have become part of health education and wider health promotion.

Trend about good health care has been recently increased since many people want to have a good health and live longer. Therefore, browsing on Internet about health care is very a trendy activity in 21st century. Every day more people who have health problems and also concern with their health go online to find out ways to protect, rescue from the problems despite various problems with the quality of information or inefficiencies in accessing it (Risk & Petersen, 2002).

Having a well-being is not only for adult and elderly but also young people or teenagers to pay attention on it. Today's youth are using PC and mobile new media technologies at unprecedented levels. News reports that teens spend a lot of time watching TV, videos and movies, playing video games, reading, listening to music and checking social media (Wallace, 2015). Similarly, uses of online social media among Thai youths are rapidly increasing as confirmed in the studies of Bangkok University Research Center (2013), Jitsaeng (2014) and Wonganantnont (2014), to name a few, who have explored and reported upon the scope and nature of this media use among youths in Thailand.

Developmentally, youths at this stage of life are striving to establish a sense of independence and self-identity, and gain acceptance from their peers. At this period, it is a critical time when health-risk behaviors (eg, substance use and high-risk sexual behaviors) are often initiated (Jessor, 1982). Socialmedia has emerged as a potentially powerful medium for communication with youths around their health choices. Youths have access to more health information than in the past and possess the capacity to take an active role in tasks such as self-monitoring their health and adhering to medications. It was found that common health topics searched included high-risk sexual behaviors, alcohol, tobacco, and other drug use, Internet safety, mental health issues, medical conditions (Yonker at al., 2015). If eHealth among the youth is to realize its potential for improving their health, the knowledge on their use of social media and eHeath literacy should be understood. The gap between what is provided and what youth can access must be acknowledged and remedied.

This study could shed lights on uses of online social media and eHealth literacy among youth in urban area. The results could be useful for teachers, librarians, parents and healthcare providers to actively and appropriately address online social media use and eHealth literacy issues of youth.

Objectives

The purpose of the study was to assess online and social media use behavior and eHealth literacy among students in Phuket Province. The specific aims were to: (1) study online and social media use behaviors; (2) identify the self-reported eHealth literacy levels, and (3) determine differences in levels of eHealth literacy among the students with different gender and level of education.

Literature Review

The term of electronic health information has been named as "eHealth" since 2000(Stellefson et. al., 2011).The construct of eHealth literacy represents a foundational skill set that combines six forms of literacy that extend beyond traditional definitions of health literacy and numeracy to include: (1) traditional, (2) information, (3) media, (4) health, (5) scientific, and (6) computer (Norman & Skinner, 2006). As far as evaluation is concerned, no identified studies described validated computer-based health literacy screening instruments. However, the eHealth Literacy Scale (eHEALS) is a reliable measure of patients' perceived skills at finding and using electronic health information.

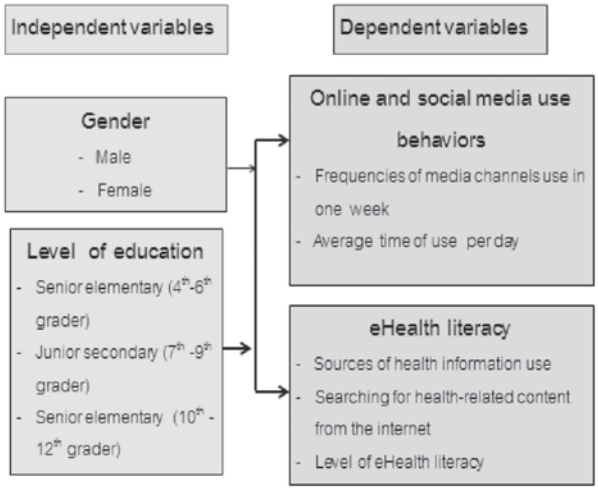
As eHealth is relevant to healthcare and Internet thus using consumer-directed eHealth resources, from online interventions to informational websites and engaging with eHealth requires a skill set, or literacy, of its own in order tofind and read text, use information technology, and appraise health information from electronic sources and apply the knowledge gained to addressing or solving a health problem. Inadequate health literacy inflates healthcare inefficiencies; low literacy individuals use fewer preventive services and less health information technology, and they have higher rates of emergency department utilization, poorer overall health status and greater risk of death (Collins et al., 2012).

The differences of people's status, opportunity and environments could impact to the use and access of electronic resources (Neter & Brainin, 2012). Study of information technology use and literacy found that as literacy skill levels rise, the perceived usefulness of computers, diversity and intensity of Internet use, and use of computers for task-oriented purposes rise with it, even when factors such as age, income, and education levels are taken into account (Veenhof, Clermont & Sciadas, 2005). As internet and online social media have enormous health information, people should have knowledge to make decision about information they found. Balatsoukas et al. (2015) found that social support, peer pressure, and information sharing in online communities may affect health behaviors and effectiveness of online social networking within health promotion interventions. Furthermore, if there are positive and sustained effects, then social network technologies could increase the effectiveness and efficiency of many public health campaigns, therefore eHealth literacy could bring ideas and knowledge to people about electronic health information (Stellefson et. al., 2011).

Yonkeret et al. (2015) identified 288 studies involving social media for interacting with adolescents and young adults in order to achieve positive health outcomes. Results revealed the ways in which social media was leveraged by these studies, among several of studies, included health information. Several studies used more than one social media platform and addressed more than one health-related topic. They concluded that social media technologies offer an exciting new means for engaging and communicating with adolescents and young adults; it has been successfully used to engage this age group, identify behaviors, and provide appropriate intervention and education.

Conceptual Framework

Based on the aforementioned review, demographical and psychological factors affect uses of online social media, sources of health information and type of content searched and level of eHealth literacy. Specifically, in this study only gender and level of education of the samples were determined as seen in diagram below.



Research Method

Population and sample

Population comprised of 19,415 students who enrolled in fourth to twelfth grade of the schools in Municipality are of Muang Phuket District. (Phuket Primary Educational Area, 2016). The sample size calculation based on Yamane table with reliability of 95 and error ±5 yield minimum required sample size of 392. Two schools with highest number of secondary students (Satree Phuket School) and elementary students (Plukpunya Municipality School) were selected. One class of each grade level was randomly selected. Students in the selected class were asked to answer the questionnaire by their teachers. Total of 465 questionnaires were completed and used in data analysis.

Measurement

Questionnaire was used to collect data on personal data, income and social media used and eHealth literacy of the samples. The measurements included:

1. Personal data: Gender, level of education, GPA, income of parents and age of the respondents were collected in this study.

2. Online and social media use: The survey on online and social media use comprised of:

2.1 Frequencies of media channels uses in one week. Four options of time use per day included (1) never use (2) less than 1 hour (3) between 1-2 hours and (4) more than 2 hours.

2.2 Average time of social media use per day. Respondents had 7 options which included (1) less than an hour (2) 1-2 hours (3) 3-4 hours (4) 5-6 hours (5) 7-8 hours (6) 9-10 hours and (7) more than 10 hours.

3. eHealth literacy: The eHealth literacy in this study comprised of 3 measurements; (1) information about health or medical topics searched of the respondents (2) types of health-related internet use, and (3) level of eHealth literacy.

3.1 Searching for health information from different resources was measured by asking the question: The most recent time you looked for information about health or medical topics, where did you go first?

3.2 Health-related Internet use was to measure the content of health information searched from the internet by asking the respondent to response to the question: Have you ever searched for information on the following contents? Respondent has 4 options to answer: regularly, occasionally, rarely and never. The level of content searched was categorized into 3 groups: low (1.00-1.33), moderate (1.34-2.66), and high (2.67-4.00), with Cronbach's alpha reliability at.868.

3.3 Level of eHealth literacy in this study was measured using the eHealth Literacy Scale (eHEALS) developed by Norman & Skinner (2006). The eHEALS determines students' combined knowledge, confidence, and perceived skills finding, evaluating, and applying electronic health information to health problems. The measure consists of 8-items scored on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The English version of an instrument was translated and back translated and the Thai version with Cronbach's alpha reliability at .810 was used to collect the data. Higher average score on the eHEALS indicates higher level of eHealth literacy (average score range 1.00-5.00).

Data analysis

Questionnaire Frequency, percentage, mean, and standard deviation were used to describe the data. Cross tabulation, t-test, One-way Anova, and Post Hoc Test were used to determine differences in levels of eHealth literacy among the students with different gender and level of education.

Results

Section 1: Respondent Profile

Participants were 235 male students (58.75%) and 231 female students (48.75%), 202 (43.44%) of senior elementary students (4^{th} to 6^{th} graders), 122 (26.24%) of junior high school students (7^{th} to 9^{th} graders) 122 participants, and 141 (30.32%) of senior high school students (10^{th} to 12^{th} grader), majority of the students had GPA 2.50 and above and among of them, 152 students (33.3%) had GPA 3.50 and above, Parent of 137 of students (29.7%) had income less than 30,000 THB; and majority of the students, 226 (48.4%) aged 12 or less.

Section 2: Online and social media use behavior

2.1 Online and social media uses per week by media channels.

Among different online and social media channels, it was found that the top four online and social media application used every day by majority of the respondents were Facebook (252 or 54.3%), Line (231 or 49.7%), watch video/listen to music online (221 or 47.7%) and searching information and download files (147 or 31.7%) respectively. The least used application was email (59 or 12.9%).

As level of use, it was found that the respondents had high level of use of applications as follows; watch video/listen to music online ($\overline{X}$ = 2.85, SD = 1.286), Facebook ($\overline{X}$ = 2.82, SD = 1.452) and Line ($\overline{X}$ = 2.70, SD = 1.445), respectively. Email had lowest mean score of use ($\overline{X}$ = 1.03, SD = 1.402)

Comparison of level of use by gender, it was found that male students had highest mean score on using Facebook ($\overline{X}$ = 2.87, SD=1.400) followed by watching video/listening to music online ($\overline{X}$ = 2.75, SD=1.306) and using Blogs was the lowest ($\overline{X}$ = 0.96, SD=1.354), respectively. Different of use among female students to that of male counterpart was found. Female students had the highest mean score on watching video/listening to music online ($\overline{X}$ = 2.94, SD=1.261), followed by using Facebook ($\overline{X}$ = 2.78, SD=1.504) of which were at the high level of use. Mean score of using Email was the lowest ($\overline{X}$ = 0.95, SD=1.391).

Comparison among students with different level of education revealed different use behaviors. Among senior elementary school students, they had highest mean score on watching video/listening to music online ($\overline{X}$ = 2.98, SD=1.282) followed by using Facebook ($\overline{X}$ = 2.37, SD=1.621) which were at high level, and the lowest mean score on using Twitter ($\overline{X}$ = 0.51, SD=1.050) which was at low level of use. Among the junior high school, it was found that Facebook was used at high level with highest mean score of 3.00 (SD=1.1900) followed by using Line ($\overline{X}$ = 2.90, SD=1.313) and the

lowest level of use on Twitter ($\overline{X}$ = 0.74, SD=1.255), respectively. As for the senior high school students, it was found that they have the highest mean score of using Line ($\overline{X}$ = 3.46, SD=1.089) followed by using Facebook ($\overline{X}$ = 3.34, SD=1.176) and the lowest mean score on using Email ($\overline{X}$ = 0.79, SD=1.338), respectively. Details are in Table 1.

2.2 Level of online and social media uses per day.

Overall, it was found that majority of the respondents (132 or 28.95%) spent time using online and social media between 3-4 hours a day, followed by 1-2 hours a day (123 or 26.97%) and only 11 (2.41%) of respondents reported that they used more than 10 hours a day.

Comparison between male and female respondent revealed similar pattern of uses which was consistent with overall use behavior. It was found that majority of the respondents used online and social media between 3-4 hours a day (73 or 32.02% of male respondents and 56 or 24.56% of female respondents) followed by using between 1-2 hours a day (67 or 29.39% of male respondents and 56 or 24.56% of female respondents), respectively.

Among the respondents with different level of education, similar pattern of time spent per day was found in the senior elementary and junior high school students and this pattern was consistent with overall use behavior. Majority of respondents used online and social media between 1-2 hours a day (62 0r 31.16% of senior elementary school students and 47 or 39.50% of junior high school students) followed by using between 3-4 hours a day (51 or 25.63% of senior elementary school students and 46 or 38.66% of junior high school students), respectively. It should be noted that senior high school students spent more hours with online and social media. It was that majority 44 or 31.88% of senior high school students spent 7-8 hours a day and 35 or 25.36% spent time between 3-4 hours a day using online and social media. The results are shown in Table 2.

Table1

Mean and standard deviation of using online and social media per week according to gender and level of education of the respondent

Media type	Male			Female			Senior elementary school students			Junior high school students			Senior high school students			Total		
	Mean	SD	Level	Mean	SD	level	Mean	SD	level	Mean	SD	level	Mean	SD	level	Mean	SD	Level
Email	1.10	1.412	L	0.95	1.391	L	0.70	1.148	L	1.83	1.552	M	0.79	1.338	L	1.02	1.402	L
Line	2.70	1.461	H	2.70	1.432	H	2.07	1.457	M	2.90	1.313	H	3.46	1.089	H	2.70	1.445	H
Instagram	1.45	1.539	M	1.79	1.691	M	0.98	1.366	L	1.25	1.355	L	2.87	1.473	H	1.62	1.623	M
SocialCam	1.47	1.540	M	1.55	1.678	M	0.85	1.248	L	1.07	1.330	L	2.86	1.480	H	1.51	1.609	L
Twitter	1.17	1.590	L	1.37	1.689	M	0.51	1.050	L	0.74	1.255	L	2.83	1.573	H	1.27	1.641	L
Facebook	2.87	1.400	H	2.78	1.504	H	2.37	1.621	M	3.00	1.190	H	3.34	1.176	H	2.82	1.452	H
Blogs	0.96	1.354	L	1.20	1.512	L	0.76	1.100	L	1.81	1.633	M	0.92	1.485	L	1.08	1.438	L
Read Webboard (e.g. Pantip, Dekdee, Sanook,etc.)	1.53	1.372	M	1.76	1.504	M	0.80	1.022	L	2.42	1.401	M	2.20	1.358	M	1.65	1.442	M
Searching information and download file	2.38	1.315	M	2.47	1.327	M	2.00	1.253	M	2.48	1.279	M	2.99	1.241	H	2.42	1.321	M
Watch Video/ listen to music online	2.75	1.306	H	2.94	1.261	H	2.98	1.282	H	2.33	1.287	M	3.10	1.169	H	2.85	1.286	H
Play Online Game	2.06	1.455	M	1.69	1.552	L	1.98	1.508	M	1.71	1.452	M	1.88	1.567	M	1.88	1.513	M

*Low level use (L) = 0.00-1.33, Moderate level use (M) = 1.34-2.66, High level use (H) = 2.67-4.00

Table 2

Average amount of time using online and social media per day according to gender and level of education of the respondents

Duration of time used per day	Male		Female		Senior elementary school students		Junior high school students		Senior high school students		Total	
	n	**%**	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**	n	%
1. less than 1 hour	9	3.95%	42	18.42%	46	23.12%	1	0.84%	4	2.90%	51	11.18%
2. 1-2 hours	67	29.39%	56	24.56%	62	31.16%	47	39.50%	14	10.14%	123	26.97%
3. 3-4 hours	73	32.02%	59	25.88%	51	25.63%	46	38.66%	35	25.36%	132	28.95%
4. 5-6 hours	30	13.16%	26	11.40%	15	7.54%	14	11.76%	27	19.57%	56	12.28%
5. 7-8 hours	32	14.04%	32	14.04%	13	6.53%	7	5.88%	44	31.88%	64	14.04%
6 .9-10 hours	11	4.82%	8	3.51%	5	2.51%	4	3.36%	10	7.25%	19	4.17%
7.more than 10 hours	6	2.63%	5	2.19%	7	3.52%	0	0.00%	4	2.90%	11	2.41%
Total	**228**	**100.00%**	**228**	**100.00%**	**199**	**100.00%**	**119**	**100.00%**	**138**	**100.00%**	**456**	**100.00%**

Section 3: Level of eHealth literacy relating to genders and level of education.

3.1 Informal sources used for health

Results revealed that majority of respondents (187 or 40.39%) consulted doctor or health care provider followed by using the internet (120 or 25.32%) and the lowest number of respondent (3 or 0.65%) used newspaper and telephone information number, respectively.

Comparison of health information sources used between male and female students revealed similar findings. Firstly, they consulted doctors or health care provider (110 or 47.01% of male respondents and 77 or 33.62% of female respondents) followed by using the internet (57 or 24.36% of male respondents and 63 or 27.51% of female respondents). Only 1 or 0.43% of male respondents used telephone information number whereas that of 1 or 0.44% of female counterpart used brochures, pamphlets, etc.

Among respondent with different level of education, it was found that equal number of senior elementary school student (60 or 29.70%) visit doctor or health care provider and used internet for their health information. As for senior high school students group, 99 or 70.21% visited doctor or health care provider. It should be noted that no female and high school students used newspapers. Results were shown in Table 3.

3.2 Health-related internet use

As far as health information from the internet is concerned, results reveal that the highest mean score of the type of information searched was on healthy lifestyle ($\overline{X}$ = 1.75, SD=0.959) followed by information on medication ($\overline{X}$ = 1.58, SD=0.899) which were at moderate level. It should be noted that peer-support forums had the lowest mean score of use in overall and respondents with different gender and level of education which was at low level of use.

Comparison of type of health information searched between male students and female students revealed their different type of health information use. The highest level of use among male students was information on healthy lifestyles ($\overline{X}$ = 1.66, SD=1.009) followed by information on medication ($\overline{X}$ = 1.51, SD=0.946) whereas their female counterparts searched for information on healthy lifestyles ($\overline{X}$ = 1.85, SD=0.896) followed by information about care providers ($\overline{X}$ = 1.68, SD=0.954), respectively.

Among respondents from different level of education, different types of information use were found. Healthy lifestyles had highest mean score of use among senior elementary school students ($\overline{X}$ = 1.70, SD=0.982), and junior high school students ($\overline{X}$ = 1.72, SD=0.887), respectively, which wasat moderate level. Next, Information about medication was used at moderate level among the senior elementary school students ($\overline{X}$ = 1.57, SD=0.867) and information about care providers was used at moderate level among junior high school students ($\overline{X}$ = 1.57, SD=0.929), respectively.

It should be noted that senior high school students had different type of health information used. They searched for information about diseases ($\overline{X}$ = 1.99, SD=1.049) followed by information on healthy lifestyles ($\overline{X}$ = 1.86, SD=0.983). Results are shown in Table 4.

3.3 Level of eHealth literacy

Overall, results reveal that the respondents had high level of eHealth literacy ($\overline{X}$ = 3.52, SD=0.847). It was found that female students had higher mean score of eHealth literacy than male counterpart ($\overline{X}$ = 3.62, SD=0.821 against $\overline{X}$ = 3.43, SD=0.863). t-test of eHealth literacy means score between male and female indicated that there are statistical difference at significant level of .05 (t = -2.480, df=462, Sig.(2-tailed) = .013).

Among respondents with different level of education, it was found that the senior high school

students had highest mean score of eHealth literacy ($\overline{X}$ = 3.72, SD=0.627) followed by senior elementary school students ($\overline{X}$ = 3.45, SD=0.793) and that of junior high school students ($\overline{X}$ = 3.43, SD=1.089), respectively. Results are shown in Table 5.

Comparison of eHealth literacy mean score of respondents with different level of education using Welch test indicated statistical difference of means at significant level .001 (Welch statisic[a] =7.609, df^1=2, df^2=265.018) and result of Dunnett T3 test revealed mean difference is significant at the 0.05 level as shown in Table 6.

Table 3

Informationsources about health or medical topics searched according to gender and level of education of the respondents

Information sources about health or medical topics	Male		Female		Senior elementary school students		Junior high school students		Senior high school students		Total	
	n	%	n	%	n	%	n	%	n	%	n	%
1.Books	10	4.27%	19	8.30%	25	12.38%	3	2.50%	1	0.71%	29	6.26%
2.Brochures, pamphlets, etc.	5	2.14%	1	0.44%	1	0.50%	1	0.83%	4	2.84%	6	1.30%
3. Family	20	8.55%	30	13.10%	27	13.37%	12	10.00%	11	7.80%	50	10.80%
4. Friend/Co-worker	9	3.85%	6	2.62%	2	0.99%	7	5.83%	6	4.26%	15	3.24%
5. Doctor or health care provider	110	47.01%	77	33.62%	60	29.70%	28	23.33%	99	70.21%	187	40.39%
6. Internet	57	24.36%	63	27.51%	60	29.70%	57	47.50%	3	2.13%	120	25.92%
7. Library	3	1.28%	3	1.31%	4	1.98%	0	0.00%	2	1.42%	6	1.30%
8. Magazines	10	4.27%	21	9.17%	16	7.92%	10	8.33%	5	3.55%	31	6.70%
9. Newspapers	3	1.28%	0	0.00%	3	1.49%	0	0.00%	0	0.00%	3	0.65%
10. Telephone information number	1	0.43%	2	0.87%	3	1.49%	0	0.00%	0	0.00%	3	0.65%
11 Complementary, alternative, or unconventional practitioner	6	2.56%	7	3.06%	1	0.50%	2	1.67%	10	7.09%	13	2.81%
Total	**234**	**100.00%**	**229**	**100.00%**	**202**	**100.00%**	**120**	**100.00%**	**141**	**100.00%**	**463**	**100.00%**

Table 4

Health-related Internet use according to gender of the respondents: Have you ever searched for information on the following contents? (n=466)

Types of content searched	Male			Female			Senior elementary school students			Junior high school students			Senior high school students			Total		
	Mean	SD	Level	Mean	SD	Level	Mean	SD	level	Mean	SD	level	Mean	SD	level	Mean	SD	Level
1. Diseases	1.33	1.100	M	1.45	0.951	M	1.20	0.873	M	1.02	0.957	M	1.99	1.049	M	1.39	1.030	M
2. Healthy lifestyle	1.66	1.009	M	1.85	0.896	M	1.70	0.982	M	1.72	0.887	M	1.86	0.983	M	1.75	0.959	M
3. Medication	1.51	0.946	M	1.65	0.845	M	1.57	0.867	M	1.44	0.901	M	1.71	0.930	M	1.58	0.899	M
4. Treatments	1.43	0.950	M	1.65	0.909	M	1.49	0.930	M	1.40	0.927	M	1.72	0.928	M	1.54	0.935	M
5. Care providers	1.39	1.003	M	1.68	0.954	M	1.49	0.970	M	1.57	0.929	M	1.57	1.064	M	1.53	0.988	M
6. Patient organizations	1.12	0.989	M	1.26	0.964	M	1.07	0.911	M	1.12	0.988	M	1.41	1.032	M	1.19	0.978	M
7. Law regulations related to health conditions	1.10	1.031	M	1.22	0.961	M	1.19	0.984	M	1.03	1.004	M	1.23	1.010	M	1.16	0.998	M
8. Peer-support forums	0.94	1.087	L	0.93	0.915	L	1.05	1.045	M	0.88	0.887	L	0.82	1.030	L	0.94	1.005	L

*Low level use (L) = 0.00-0.99, Moderate level use (M) = 1.00-2.00, High level use (H) = 2.01-3.00

Table 5

Levels of eHealth Literacy according to gender and level of education of the respondents (n=466)

eHealth Literacy	Male			Female			Senior elementary school students			Junior high school students			Senior high school students			Total		
	Mean	SD	Level	Mean	SD	Level	Mean	SD	level	Mean	SD	level	Mean	SD	level	Mean	SD	Level
1: I know what health resources are available on the Internet	3.71	1.264	H	3.91	1.171	H	3.48	1.270	HH	3.63	1.166	H	4.45	.922	HH	3.81	1.222	H
2: I know where to find helpful health resources on the Internet	3.78	1.163	H	3.86	1.094	H	3.73	1.176	H	3.59	1.218	H	4.14	.891	H	3.82	1.129	H
3: I know how to find helpful health resources on the Internet	3.45	1.245	H	3.59	1.154	H	3.25	1.182	M	3.48	1.268	H	3.95	1.045	H	3.52	1.201	H
4: I know how to use the Internet to answer my health questions	3.45	1.140	H	3.59	1.168	H	3.44	1.195	H	3.45	1.247	H	3.69	.994	H	3.52	1.155	H
5: I know how to use the health information I find on the Internet to help me	3.40	1.307	H	3.60	1.123	H	3.49	1.227	H	3.49	1.239	H	3.54	1.210	H	3.50	1.223	H
6: I have the skills I need to evaluate the health resources I find on the Internet	3.26	1.208	M	3.43	1.126	H	3.33	1.075	M	3.22	1.189	M	3.48	1.274	H	3.35	1.170	H
7: I can tell high-quality from low-quality health resources on the Internet	3.08	1.290	M	3.44	1.241	H	3.24	1.191	M	3.27	1.227	M	3.27	1.439	M	3.26	1.277	H
8: I feel confident in using information from the Internet to make health decisions	3.29	1.387	M	3.55	1.206	H	3.61	1.159	H	3.30	1.315	M	3.25	1.460	M	3.42	1.306	H
Total	3.43	0.863	H	3.62	0.821	H	3.45	0.793	H	3.43	1.089	H	3.72	0.627	H	3.52	0.847	H

*Lowest (LL)=1.00-1.80, Low (L)= 1.81-2.60, Moderate (M)= 2.61-3.40, High (H)=3.41-4.20, Highest (HH) = 4.20-5.00

Table 6

Dunnett T3 Post Hoc Test of eHealth literacy average means score of respondents with different level of education

Dependent Variable: eHealth literacy

	Level of education		Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Dunnett T3	1.00 senior elementary	2.00 junior high	.01659	.11332	.998	-.2562	.2894
		3.00 senior high	-.27598*	.07682	.001	-.4603	-.0917
	2.00 junior high	1.00 senior elementary	-.01659	.11332	.998	-.2894	.2562
		3.00 senior high	-.29257*	.11188	.029	-.5620	-.0231
	3.00 senior high	1.00 senior elementary	.27598*	.07682	.001	.0917	.4603
		2.00 junior high	.29257*	.11188	.029	.0231	.5620

* The mean difference is significant at the 0.05 level.

Discussion and Suggestion

Data analysis yield interesting finding on online social media use and eHealth literacy among urban youths in Phuket as follows.

Online social media use: The study confirms that people in various demographic such as gender, and level of education have different preferences, skills and abilities to use the Internet. The findings indicated that students in elementary school use email, seek information and download files, read webboard less than students in high school. This could presume that students in lower level of education see that the activities about finding information are not important to them comparing to students in higher education. The results supported Neter & Brainin (2012) who found that adolescents' skills are different depending on their status, gender, age and so on. Thus, it could be important to teachers and parents to look after their children especially aged in elementary school when they browse and use social media because they might lack of literacy skills.

The finding on frequency of use online and social media was not a surprise as it was found in Bangkok Poll (Bangkok University Research Center (2013) that youths usually spend 3 - 4 hours per day with computer and internet for their activities and Wonganantnont (2014) also found that children normally spend more than 3 hours in using computer for each activity.

The research results illustrate those young adults who study in 4th - 12th grades use online and social media in their daily life. Moreover, they use many types of media to support their activities. Facebook, Line, and video and music online are used at the top three ranks of media channels. It was found thatdifferentgender used different social media channels. Male teenagers prefer using Facebook the most whereas video and music online are mostly used by female youths. Moreover, Students in elementary school most use Internet to watch video and listen to music. However, high school students use other channels of media exposure through Facebook and Line. This might because elementary school students would not have many things to communicate with others yet. Therefore, they use Internet to relax themselves. Students in each level of education have no difference in spending time for Internet. The research showed that

majority of students spent 3 - 4 hours a day browsing on the Internet to support their purposes.

eHealth Literacy: Regarding eHealth literacy, it was found that students with different gender had the same level of eHealth literacy (medium to high level). The digital divide index (DIDIX) from Israeli study showed that the relation between gender and eHealth literacy was lower that other characteristics such as age, education and income (Neter & Brainin, 2012).

As far as source of health information is concerned, the study found that doctor or health care provider was the source used by majority of the samples followed by internet source although they had moderate to high level of eHealth literacy. Neter & Brainin (2012) and Stellefson et al. (2011) found that although youths have skills and knowledge to address and solve their health problems through using online sources, they still prefer to receive health information by verbal and face-to-face communication with doctors or health care providers.

In health care, both male and female students use Internet in moderate level to find information about health care.Surfing Internet for peer-support forums was used at lowest level among all youths group. Healthy lifestyle had the highest mean score among the content searched for in all group except among the senior high school. Tit was found that the senior high school had the highest mean score of their content need was on the diseases. Result also revealed that senior high school students have the highest ability to know what health resources are available on the Internet. It may be because that they have more experiences in browsing on the Internet.

It could be concluded that teenagers in Phuket have eHealth literacy in moderate level. Youths in different genders, ages and level of education have different skills and behaviors on using internet and social media, therefore, teaching more skills of learning how to use, consider and determine and also what to believe are very vital for teenagers. If they have confidence to use and determine content from internet, internet would be popular to be used as health care information sources. Therefore, program to promote eHealth literacy should be included in the school curriculum in order to literate youths on how to evaluate and use internet source for their health care prevention, especially among product to promote healthy lifestyle, such as drug to control weight, facial and beauty products, etc.

As the Facebook and Line are the most frequent used online media platform, the use of these platforms for health information should be emphasized. Facebook fanpage is the source often used to circulate healthy products to promote lifestyle of the consumers. Youth should be taught the skill or "how to" to be able to evaluate and identify between the good and the bad, harmful or useful information about healthy products.

Line is also an important source of health information at present and a dangerous one, more than Facebook. Line is a personal channel and no one can check its message unless the owner of the account agreed while Facebook content is more or less in public sphere and allow free access. eHealth literacy on Line platform also need at the forefront row. These literacies, both social media literacy and eHealth literacy, should be promoted collaboratively by all concerned parties to maximize its potential and sustainability.

This study is limited to students in Phuket, for further investigate about eHealth literacy in Thai students; researchers could be expand scope to the country.

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