

Research Article

Influencing Factor on School-Age Children's Holistic Health Care Who Using Online Media by Working-Age Parents in Northeast Thailand

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Background. Thailand tends to have more access to online media. In 2020, the northeastern region had the highest usage rate. Especially school-age children have the highest usage rate. If misused for a long time, the consequences can adversely affect health in many aspects. Their parents should closely supervise and monitor them for this health problem. However, parents have limitations in caring because they have to work a lot. The aim was to study factors that influence working-age parents in holistic health care (HHC) of school-age children using online media in northeast Thailand. **Materials and Methods.** This research was a descriptive study, with a sample of parent amount 222. The questionnaire performed an item-objective congruence (IOC) = 0.60–1.00, the content validity index (CVI) = 0.90, and the Cronbach's alpha coefficient was 0.93. The data collected then include the characteristics, use of online media, health problems, and health care. Finally, data were analyzed using descriptive statistics, frequency, percentage, standard deviation, and multiple regressions. **Result.** The results of the study are factors that influenced HHC with statistical significance ($p \leq .001$) including the child's gender, the child's age, the child's class, the type of internet, activities, the device, and the device owner. In addition, it was holistic health problems of school-age children such as physical, emotional, social, and intellectual. Importantly, these could explain the variation for HHC of 21.2% (adjusted $R^2 = 0.212$), and the standard error in the model estimation was 25.06 (SEE = 25.06). **Conclusion.** Factors that influence school-age children's health care are beneficial to preventing and solving health problems by using online media. Parents or health care professionals can use it as a guide to develop more effective health care strategies and policies. Ultimately, it will help to promote better health for children in an ever-changing digital world.

1. Introduction

Accessing online media for school-aged children around the world has become easier and more convenient, which has an average of 59.5%. While Thailand uses online media more than the world average at 79.3% [1]. As of 2020, people use the Internet on average 11 hr and 25 min per day. Also, the under-20 age group (Generation Z) was the most active, averaging about 12 hr and 8 min per day. Specifically, the northeast region had the highest average usage of 11 hr and 29 min per day [2]. In

addition, school-age children use the Internet for a long time, in part because they use it for their favorite activities, such as playing online games, watching movies, listening to music, and enjoying the most [3]. However, some devices can access online media more easily and conveniently today, such as smartphones, which will allow children to use them continuously for a longer time [1]. In summary, these conditions resulted in school-age children who had the characteristics of learning new and challenging things to access online media easily and quickly.

School-age children are between the ages of 6 and 12, which is a growing age with considerable physical, mental, emotional, social, and intellectual dimensions [4]. Furthermore, studies have shown that girls are more anxious about learning than boys [5]. In addition, children will have better health care behaviors and will be interested in learning new challenges at the higher primary school levels [6]. Also, there are results of a study evaluating the health of school-age children between the ages of 7 and 15 in Sweden. This means dividing the health evaluation group into three subgroups: the 7–9-year-old group, the 10–12-year-old group, and the 13–15-year-old group. The study results revealed that there were no differences in health assessment between the 7–15 year old group [7]. Another is the physical health study on visually impaired school children aged 6–12 years in Iran. Girls with an average age of 9.1 years were found to be more at risk for visual impairment [8]. In Thailand, a study of behavior that affects the health of young adolescents who are addicted to games has been conducted. It was found that the age group between 10 and 14 years had a feeling of curiosity, liked learning new things, liked challenges, and could use online media for a long time [9]. Therefore, this group of children is still highly vulnerable. They should be closely monitored and prevented from health problems due to the convenience and ease of using online media. Because it may make them more likely to access inappropriate online media content.

Characteristics of school-age children who like to use online media continuously for a long period, if they access online media with inappropriate content, it may lead to many holistic health problems (HHP) [10]. The first is effects on physical health such as dry eyes, eye inflammation or degeneration, red or dark face, and tight muscles in the back, shoulders, arms, and wrists. Moreover, obesity may occur easily from fat accumulation due to not being physically active. The second is, the effect on emotional health, for example, there is a chance of getting Facebook depression syndrome due to the habit of talking with people in online society until it becomes habitual. The sleep-texting disease is caused by the behavior of using online media to a great extent making one more sensitive, lacking self-confidence, and having symptoms similar to those of a sleepwalker. Monophobia will show symptoms of irritability, restlessness, stress, trembling, sweating, or nausea. The third is, the effect on social health, such as being more easily separated from the group, behavior of being alone, lack of communication skills, and lack of confidence in talking. The last problem is the effect on intelligence health, such as being a child with low patience, not being able to stand waiting, having behavior irresponsible, lack of concentration in learning, and feeling bored easily [11]. Therefore, if the effect on one problem has a greater level of severity, it will affect other problems. As a result, the problem of care is more complicated, and solving health problems should be implemented holistically [12].

Holistic health care (HHC) for school-aged children is to take care of their physical, emotional, social, and intellectual health. Care according to the concepts mentioned above is to prevent and promote development holistically. First of all, physical care means regularly examining and checking your body, being confident of observing abnormal symptoms of

the body, doing activities, and exercising regularly. This is for the strength of the muscles and growth in proportion to age [13]. Second, emotional care is about encouraging self-control and self-regulation appropriately based on perceived information. This helps to reduce psychological harassment and improve the self-emotional response, reducing stress, anxiety, and fear [14]. Third, social care is about encouraging school-age children to focus on self-love, and self-esteem, to help them become more confident and assertive in public [15]. Intellectual care is about promoting learning, encouraging, and suggesting the pros and cons of using online media. In addition, caregivers must focus on communicating in the same direction without conflict, preventing confusion, and building good relationships with each other. Moreover, it should be flexible, so that learning is appropriate without strain or sagging [16]. However, good HHC should be coordinated by everyone involved. Parents are considered not only the most important person their school-age children trust, but they are also the person most likely to give advice and prevent health problems by using online media.

The truth is that parents whose children are school-age children. Most of them are people of working age who need to work a lot or spend more time working outside of the home in this competitive economic environment and innovations in the 4.0 era of Thailand. This is so that they can earn enough money to meet their ever-increasing expenses. At the same time, if working-age parents are the main caregivers for school-aged children, their stress or anxiety can affect many aspects of a child's development, including emotional, social, and intellectual [17]. In addition, they may have time but lack preparation for caregiving. Either the child may already be cared for by someone else instead of their parents or at some time may not be taken care of by anyone. The consequences will have a more negative effect on the child [18]. Moreover, school-aged children can choose to rely more on online media instead. Because of the reason to believe that social media can provide learning consultation services and counseling on health problems [19]. While some parents understand that they have already taken care of the HHP of school-age children who have access to social media. But in reality, the health problems of school-age children still increase due to parents' misunderstandings [20]. The debate on HHC for school-age children of working-age parents in the northeastern region of Thailand is still unclear. Because of the health problems of school-aged children, as understood by their parents, continue to trend upward [21]. Therefore, this study aims to study the influencing factor on school-age children's HHC who use online media by working-age parents in the northeast, Thailand.

2. Materials and Methods

2.1. Participants and Sample Size. The population is a parent or guardian with school-aged children between 6 and 12 years old who are attending grades 1–6. Importantly, they also had an average online media usage of 3 or more days a week in the past 6 months. Sample size can be calculated using the G*Power software package. Next, the sample

size was then calculated based on 20 predictors (number of predictors = 20), with a statistical significance level of 0.05 ($\alpha = 0.05$), a test power of 95% (power = 0.95), and an effect size value f^2 equals 0.15 (medium size) [22]. The result of calculating the sample size was 222 people. The sampling design is performed by multistage sampling to obtain the best representative sample [23]. The steps are as follows: starting from dividing the region into the upper and lower northeast areas. After that, the provinces were randomized, Khon Kaen represented the upper, and Ubon Ratchathani represented the lower. The next step is to randomly select three schools that represent each province to get three schools per province. The final step was to select a representative sample, an average of 35–40 students per school.

2.2. Instruments. The research tool of this research was a questionnaire consisting of three parts as follows:

The first part is information about the characteristics of parents and school-aged children. It is a questionnaire used to collect general information from representatives to describe the characteristics of the samples for two groups: the first group is the general characteristics of parents or guardians, including gender, age, education, occupation, relationship, residential area, and family members. The second group is the general characteristics of school-age children such as gender, age, grade level, etc. [5, 6].

The second part is information for accessing online media for school-aged children. Importantly, it is a measure of online media consumption, including the type of internet, period, activities, devices, and device ownership [24].

The third part is the HHP information. It is a questionnaire to measure parental attitudes about the perceived health impacts of school-age children's access to online media. It consists of four health problems: physical, emotional, social, and intellectual health [25]. The details of the questionnaire were answered as a measure with five levels arranged from a score of 1–5 points. The score level refers to health problems in order of least, least, moderate, and most severe, respectively. Next, the interpretation is divided into five levels as well. In addition, the health problem questionnaire consisted of physical, emotional, social, and intellectual aspects of 12, 12, 8, and 13, respectively, for a total of 45 items.

The fourth part is the HHC information. It is a comprehension questionnaire for HHC, which consists of four areas: physical, emotional, social, and intellectual [26]. The details of the questionnaire were answered as a measure with five levels arranged from a score of 1–5 points. The score level refers to health problems in order of least, least, moderate, and most severe, respectively. Next, the interpretation is divided into five levels as well. In addition, the HHC questionnaires consisted of physical, psychological, and social aspects of 17, 16, and 16, respectively, for a total of 49 items.

Finally, the research tool is examined for accuracy in its implementation by testing its validity and reliability [27]. First, it offers five specialists to inspect the tools. After that, make adjustments according to the recommendations of experts. Next, calculating the index of item-objective congruence

(IOC) between 0.60 and 1.00, the content validity index (CVI) was calculated to be 0.90. Finally, the instrument was tested to determine the reliability of the tool by experimenting with a sample of 30 people. Cronbach's alpha coefficient was calculated to have a reliability value of 0.93.

2.3. Data Collection. Initially, the researcher explained the details and research objectives to the sample group before collecting data. The scope of work is as follows: First, the researcher went to the area to collect data taking into account the safety and welfare of the sample group during the COVID-19 outbreak, maintaining social distancing and wearing a mask. Second, data were collected from June to September 2021 in the upper region, namely Khon Kaen Province, and the lower region, namely Ubon Ratchathani Province. The third, questionnaire is a tool to collect characteristic data, using online media, health problems of school-age children, and the taking care of the health of working-age parents. Lastly, if any participant is uncomfortable or changes their mind, they can withdraw at any time without any consequences.

2.4. Data Analysis. Analysis of the data using statistics performed in each part is as follows. First, the data on the characteristics of the samples and access to online media of school-aged children were analyzed using descriptive statistics, including frequency, and percentage. Second, HHP and HHC data were analyzed by descriptive statistics to find the minimum, maximum, mean score, and standard deviation. Third, factors influencing school-age children's overall health care of working-age parents were analyzed using the SPSS program.

2.5. Ethical Consideration. This research has passed human research ethics approval number HE632159 dated 18 September 2020 from Khon Kaen University, Thailand. The researcher conducted work with the sample group according to strict ethical conditions. The research objectives and benefits were informed to the sample before data collection. Also, the details and period for answering the questionnaire were told to the sample. This is to allow the sample to decide whether to cooperate or not. Moreover, if any sample changes their mind and cancels cooperation, they can do so immediately without any strings attached.

3. Results

3.1. Demographic Characteristics. The sample characteristics data showed that working-age parents were Generation Y the most 44.3%, and live outside the municipality 51.2%. Status with equal relations with school-aged children: mother, father, and other relatives, on average 33.3%. Next, most of them had a 41.2% high school education. Also, the number of their family members is 4–5, up to 53.8%. In addition, 61.7% of their school-age children were male, 44.3% were under 7 years old, and 41.7% were attending primary school levels 1–2 (Table 1).

3.2. Online Media Access Variables. The data on accessing online media among school-age children is as follows. The most use of the broadband internet was 40.3%. The most

TABLE 1: Amount and percentage characteristics of the sample ($N=222$).

Characteristics	Amount	Percentage
Parent generation		
Z (Lower than 25 years)	36	16.4
Y (25–40 years)	98	44.3
X (More than 40 years)	88	39.3
Lived area		
Inside	108	48.8
Outside	114	51.2
Relationship		
Mom	74	33.3
Dad	74	33.3
Other	74	33.3
Education		
Primary school	55	24.6
Secondary education	91	41.2
Diploma	40	18.0
Bachelor's degree or above	36	16.2
Member		
Lower than 4	44	19.9
4–5	119	53.8
More than 5	59	26.3
Child gender		
Female	85	38.3
Male	137	61.7
Child age (years)		
Lower than 8	98	44.3
8–10	78	35.0
More than 10	46	20.7
Primary school level		
1–2	93	41.7
3–4	76	34.3
5–6	53	24.0

average 1–3 hr of online media access per day was 54.8%. Next, the activities accessible for watching movies, listening to music, playing games, and entertainment were 68.3% the most, while only 28.0% were accessing for educational research. Also, the most common devices used to access online media are smartphones about 79.4%, and up to 60.0% own one (Table 2).

3.3. HHP and HHC Variables. HHP of school-age children accessing online media found that HHP had a low mean score (mean = 100.73, SD = 39.06). Separated by health problems, it was found that the physical aspect had a low mean score (mean = 22.45, SD = 11.01). The emotional aspect was then at a moderate level (mean = 29.06, SD = 10.77). In addition, the social aspect had an average score at a low level (mean = 18.30, SD = 7.95). And finally, the average intelligence score was at a moderate level (mean = 30.92, SD = 12.35). Other data show that HHC had the highest average score (mean = 172.62, SD = 28.23). Separated by health care, it was found that the physical aspect had a high average score (mean = 59.45, SD = 10.79). The psychological aspect then

TABLE 2: Amount and percentage of online media access of school-age children ($N=222$).

Online media access	Amount	Percentage
Internet type		
Prepaid	45	20.2
Postpaid	88	39.5
Broadband internet	89	40.3
Time use per day (hour)		
Less than 1	27	12.0
1–3	121	54.8
More than 3	74	33.2
Activity		
Research and learning	62	28.0
Communication	8	3.7
Movies, music, games, and entertainment	152	68.3
Devices		
Computer	20	9.0
iPad, tablet	26	11.6
Smartphone	176	79.4
Device owner		
Yes	133	60.0
No	89	40.0

TABLE 3: Minimum, maximum, mean, SD, and the level of HHP and HHC ($N=222$).

Subjects	Min	Max	Mean	SD	Level
<i>Health problems</i>					
HHP	45	205	100.73	39.06	Low
Physical	12	54	22.45	11.01	Low
Emotional	12	56	29.06	10.77	Moderate
Social	8	40	18.30	7.95	Low
Intellectual	13	60	30.92	12.35	Moderate
<i>Health care</i>					
HHC	81	233	172.62	28.23	Highest
Physical	23	81	59.45	10.79	High
Psychological	20	80	56.16	10.22	Highest
Social	31	80	57.00	9.92	Highest

had the highest average score (mean = 56.16, SD = 10.22). Furthermore, the social aspect had the highest average score (mean = 57.00, SD = 9.92) (Table 3).

3.4. Factors Influencing HHC. Factors influencing HHC statistically significant ($p \leq .01$) consisted of three groups as follows. First of all, the characteristic groups are child gender, child age, and primary school level. The next group is online media access such as Internet type, activity, devices, and device owner. The last group, HHP factors such as HHP, and dimension health problems: physical, emotional, social, and Intellectual. It is also found that all factors in the model of the research hypothesis can explain the variation of HHC equal 22.6% (adjust $R^2 = 0.226$) and have standard error

TABLE 4: Factors influencing HHC (dependent variable).

Independent variable	B	SE	β	t	p
Child's gender	-10.52	3.25	-0.18	-3.24	.001**
Child's age	-4.68	2.10	-0.13	-2.23	.027*
Primary school level	10.31	3.21	0.18	3.22	.001**
Type of internet	-5.96	2.28	-0.16	-2.62	.009**
Activity	-6.24	1.51	-0.27	-4.13	.000***
Devices	11.64	3.02	0.26	3.86	.000***
Device owner	-9.68	3.29	-0.17	-2.95	.003**
HHP	1.41	0.33	1.95	4.25	.000***
Physical	-2.33	0.46	-0.91	-5.03	.000***
Emotional	0.47	0.15	0.18	3.11	.002**
Social	-2.18	0.76	-0.61	-2.87	.004**
Intellectual	0.44	0.13	0.19	3.40	.001**

* $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$, $R = .505$, $R^2 = .255$, Adjust $R^2 = .226$, $SEE = 24.83$.

measurement in estimating the model at 24.83 ($SEE = 24.83$) (Table 4).

4. Discussion

The results of research findings on the characteristics of the sample group consisted of several issues. First of all, the parents were in Generation Y, aged between 25 and 40 years, which is working age. They were just starting a new family with low income but high expenses. Therefore, it is necessary to spend more time working outside the home [28]. Also, more than half of the sample (51.2%) lived outside the municipality. This may cause them to spend more time traveling. As a result, they have less time to care for school-age children. The majority of the sample's education was at the secondary level. Their family members number up to 4–5 people, while the average total family income per member is low. In terms of expenses, most families have broadband Internet and most school-age children have their smartphones. It points out that families have higher expenses than their income. As a result, parents have to work harder while school-age children have greater flexibility in accessing online media. Therefore, the chance of increasing health problems from using online media is increased. Moreover, the solution becomes more complicated [24].

The results of the study of health problems revealed that the mean score for HHP was at a low level. As for each aspect, it was found that the physical, social, and intellectual had low average levels, while the emotional aspect was average at a moderate level. These results are consistent with previous studies on health problems from online use. It was found that even a slight health problem can be considered a signal of the beginning of online addiction. Because of if school-age children do not receive appropriate and timely care, it will affect their health problems at a more severe level [29]. The results of the health care study revealed that HHC was at the highest average level. As for each aspect, it was found that the physical aspect was at a high average level. Also, the psychological and social aspects were at the highest average level. These results are consistent with previous studies on health care from online use. Even though school-age

children have no or only minor health problems from using online media, most parents are very attentive to their health [30]. The results of this study were consistent with the above points. It can be explained that the factor with the highest statistical significance ($p \leq .001$) influencing HHC is HHP, which has a standardized coefficient (β) value of 1.95

The results of the study of factors influencing the HHC of school-aged children using online media for working-age parents include: the characteristic factors such as gender of school-age children found that if they are male, parents will have to provide HHC increased by 10.52 (B) units. Also, if a school-age child moves up one primary school level, parents will have to provide HHC by 10.31 (B) units. It can be explained that the more school-age children grow up, they will become more different, and more at risk of health problems from using online media [31]. Another group is the factor of access to online media. For example, when school-age children use a smartphone 1 unit, parents will have to provide HHC increased by 11.64 (B) units. Also, if school-age children own 1 unit of the device, parents will need to provide HHC increased by 9.68 (B). These results are consistent with previous studies on health problems from online use. When children have a lot of flexibility in accessing online media, they may become addicted to games. They will have less interest in studying, a lack of responsibility, and self-deprecation. They end up paying more attention to games than studying because games satisfy their imagination. The reason is that it makes one feel accepted and a winner [32].

5. Conclusion

School-age children begin to undergo considerable physical, emotional, social, and intellectual changes. They will have curious behavior, like to learn new things, like challenges, and can use online media continuously for a long period. Moreover, the parents of school-age children are in the working age period. They are burdened with many responsibilities all at once. It may cause them to spend less time caring for school-age children than usual. This is one reason why school-age children are more likely to be at risk of health problems from accessing online media. They may be affected by one or another health problem. As a result, there is a higher chance of affecting other health problems. Especially if school-age children are not taken care of and solved promptly. It will make their health problems even more complicated. Ultimately, caring for their holistic health will be difficult as well.

Data Availability

Data are available from the corresponding author upon reasonable request to the faculty of nursing, Khon Kaen University of Thailand, for providing us with the population-based holistic health care data.

Additional Points

Limitations. This data collection was conducted during the COVID-19 pandemic. This is a time when school-age

children are increasingly encouraged to study online. Therefore, the sample of respondents may be biased due to the situation that occurred. Moreover, the results of the study may have limitations in their applicability in normal conditions. If it must be used in normal situations or with other groups, conditions should be adjusted to be more appropriate and specific.

Ethical Approval

We obtained an approval from the Khon Kaen University ethical committee, ethics number HE632159. We wrote permission from the school director. We presented an introductory letter and a study approval to all subjects.

Conflicts of Interest

The authors declare that they have no conflicts of interest.

Authors' Contributions

Atchariya Wonginchan, Juraporn Tangpukdee, Suphasak Wonginchan, Sureeporn Kearttiwongkru, and Sujitra Konggungong designed the study and collected, analyzed, and interpreted data. Atchariya Wonginchan drafted the original manuscript. Atchariya Wonginchan and Suphasak Wonginchan revised the manuscript, read, and approved the final manuscript.

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