

Factors Influencing the Quality of Life and Nutritional Status of 0-2 Years Old Children

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ABSTRACT

Objective: To investigate the effects of children factors, family factors, and access to healthcare services on children's quality of life as perceived by caregivers and nutritional status of 0 to 2 years old children.

Materials and Methods: This study employed predictive design. The sample group consisted of 106 caregivers with children aged 0 to 2 years old from five subdistricts in one province in Central region in Thailand. The research instruments included the Demographic Data of Parents and Children Questionnaire; the Access to Healthcare Services Questionnaire; the Child-Rearing Practices Questionnaire; the Quality of Life of 0-2-year-old Children Questionnaire. The data were analyzed by using the Chi-square, Fisher's exact test, and multivariate logistic regression.

Results: Logistic regression model accounted for 34 % of variance in children's quality of life (Nagelkerke $R^2 = 0.34$) and 35.3% of variance in their nutritional status (Nagelkerke $R^2 = .35$). Factors predicting the QoL of children were the maternal age (OR=4.75; 95%CI = 1.16, 19.45, $p < .05$), and the child-rearing practices (OR=5.68; 95%CI = 1.97, 16.40, $p < .05$). Factors predicting nutritional status were maternal age (OR=0.088; 95%CI = 0.01, 0.79; OR=0.225; 95%CI=0.02, 2.34, $p < .05$), and child-rearing practices (OR=7.84; 95%CI = 1.93, 31.84, $p < .05$). Finally, access to healthcare services had a significant association with QoL of children ($\chi^2 = 9.632$, $p < .05$).

Conclusion: Healthcare personnel should improve children's quality of life and nutritional status by organizing programs to promote child-rearing practices and facilitating parents for accessibility to healthcare services.

Keywords: Children aged 0-2; quality of life; nutritional status; child-rearing practice; access to healthcare (Siriraj Med J 2022; 74: 142-151)

INTRODUCTION

The first 0 to 2 years of a child's life are critical for future health and development. One of the primary causes is a rapid change in one's physical, mental, and emotional development, which is fundamental for growth and development. According to a national survey conducted in 2014, 9.8 percent of Thai children aged 1 to 2 years had severely short stature (height for age < -3 SD.). The data regarding children in the central region of Thailand

demonstrated the highest prevalence of short stature and obesity (9.2% and 7.3%, respectively).¹ According to a 2019 UNICEF survey, 4.3 percent of Thai children under the age of five had severely short stature. The highest prevalence of short stature was found in Bangkok and Central region (6% and 4.8%, respectively).² These data demonstrate that Thai children in Central region are malnourished. Malnutrition leads to child morbidity, which is the underlying cause of about 45 percent of

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child fatalities worldwide.³ Young children are more vulnerable to malnutrition because they require more protein and energy to grow and are more susceptible to infections than adults.³⁻⁴

Quality of life has become an essential component of pediatric outcome evaluation. It is a multi-dimensional concept with physical, psychological, social, and environmental dimensions.⁵ The concerns about the QoL require capturing children's subjective sense of well-being.⁶ Additionally, children are a vulnerable group because they are not empowered, or are unable to identify and address their own needs. When it comes to children, QoL involves their health status, capacity to participate in daily activities such as play, and other kinds of interactions and being reared in a healthy environment.⁷ However, there are a variety of QoL dimensions in children, such as, physical, emotion, behavior, somatic, pain, discomfort, and basic needs of infants.⁸⁻⁹ Those definitions are inconsistent with the definition by the WHO. The PedsQL™ Infant Scales for 1 to 12 months old⁶ and TAPQOL for infants¹⁰ (0-1-year-old) are two tools for assessing young children's QoL (0-1-year-old). In the meantime, Thailand utilizes the WHOQOL-BREF-THAI¹¹ scale to assess Thai QoL. This tool, on the other hand, was developed for adults and inappropriately for children. As a result, the researchers developed a quality-of-life assessment tool for children aged 0 to 2, based on the WHO's conceptual framework. A child's nutritional status and QoL are both essential indicators of a child's quality. Determining the relationship between individual variables and health-related factors in the child population is necessary to identify the priorities of the quality of children in the central region in Thailand. However, nutritional status refers to the health outcomes derived by measuring children's height and weight, whereas the QoL refers to caregivers' perceptions of physical, emotional, psychological, and social dimensions. As a result, these two aspects represent the quality of children from two perspectives.

To confirm the relationship of factors related to nutritional status and QoL in children aged 0 to 2 years in the central region of Thailand. The scoping literature review presented in this article addresses based on ecological framework which includes five levels of individual, interpersonal, organizational, community, and policy levels. However, three levels were selected based on the scope of problems. Factors influencing nutritional status and children's QoL were individual, interpersonal, and organizational levels. The individual level includes breastfeeding period and severity of illness; interpersonal level includes maternal age, maternal education and family

income, child-rearing practices, and organizational level includes access to healthcare services. The rationale for selecting these factors was as follows 1) the incidence rate of breastfeeding in Thailand is decreasing² while breast milk can promote child's growth and significantly lower odds of wasting.^{12,13,14} 2) A healthy child can encounter an illness such as diarrhea, cold, or pneumonia. The illness may have an impact on children's nutritional status or QoL.^{12,14} However, the majority of the research discuss only the relationship between child with chronic illness and nutritional status or QoL.^{15,16} 3-4) According to the 2019 MICS survey², underweight Thai children were detected in mothers aged 35 to 49 years old and mothers with less than a primary school education. Lower maternal education was associated with less healthy food choices, which could be detrimental to child health.¹⁷ 5) Low-income families were associated with underweight children compared to families with adequate income owing to a lack of money to purchase adequate meals.^{18,19} 6) Inappropriate child-rearing practices, such as nutritional support, child development stimulation, and hygiene care, impacted children's growth.^{14,18,19} 7) Healthcare system in Thailand has been transformed since the adoption of universal healthcare coverage in 2002.²⁰ Improving access to healthcare services may have an impact on children health. However, some child health issues, such as child development, have persisted, and there is no literature on the impact of healthcare access on healthy young children.

The preceding research investigated the relationships of the studied variables on nutritional status and QoL of children as perceived by caregivers. However, there were few literatures that were specific to children aged 0 to 2 years, and even fewer that were investigated in terms of predictive study. As a result, the aim of this study is to investigate the effects of children factors (breastfeeding period and severity of illness), family factors (maternal age, maternal education, family income, and child-rearing practices), and access to healthcare services on children's quality of life as perceived by caregivers and nutritional status of children aged 0 to 2 years. The findings of this research will provide vital information to improve childcare practices and the system of care for children aged 0 to 2 years in Thailand.

MATERIALS AND METHODS

Ethical considerations

This research was approved by the Institutional Review Board, Faculty of Nursing, Mahidol University (COA No. IRB-NS2017/15-0506). The participants were informed about the purpose of the study, data collection

strategies, rights of research participants, including the right to withdraw at any time without repercussions, anonymity, and confidentiality issues. Those who consented to participate were asked to complete an informed consent form.

Methodology

This study is predictive design research. The sample group consisted of caregivers of children aged 0 to 2 years from five sub-districts: Ratchakram, Changyai, Potang, Chaingraknoi, and Bangsai in Bangsai district, Pranakorn Sri Ayutthaya, who participated in the project entitled “The academic advocacy for the well-being of children through community-based programs in the Central and Western regions.” The inclusion criteria were that parents or caregivers be close relatives with children, ages between 18 and 59 years old, be able to communicate in Thai, live in the same house with children, and have cared for the children for at least three months. The sample size was calculated using G*Power, with the effect size computed from the proportion of nutritional status in low income ($p1 = 0.234$) and high income ($p2 = 0.0322$)¹⁵, .9 power of test, and .05 errors. A total of 98 caregivers was included in the estimated sample group. For unanticipated missing questionnaires, the number of participants increased by 20% (118 samples). A total of 106 questionnaires were completed. The attrition rate was 10.17%.

Instruments

Data were collected using questionnaires and a child health handbook. The questionnaires consisted of five parts as follows:

1) The Parental Demographic Questionnaire was composed of seven items: parents’ age, parents’ academic level, family type, marital status, family income, and income sufficiency.

2) The Children’s Demographics and Medical History Questionnaire was composed of gender, age, breastfeeding period, number of siblings, and medical history. The medical-history was classified into two categories, ranging from (0) no illness or mild symptoms (1) moderate or severe symptoms. The total possible score ranged from 0 to 1.

3) The Access to Healthcare Services Questionnaire was developed from literature review.²¹⁻²² It consisted of 12 questions divided into two parts. There were six questions about access to healthcare services, including patients’ waiting time, expenses, convenience, and availability of care. There were six questions on receiving healthcare services, including receiving information, the rights to

inquiries, and parental participation in childcare. The scale was a three-level rating scale ranging from (1) sometimes to (3) regularly. The total possible scores ranged from 12 to 36. The scores were cut by comparing the mean score to the midpoint score. Scores lower than the median (< 29 scores) indicated less access to healthcare services. Good access to healthcare service was defined as scores equal to or higher than the median (≥ 29 scores).

4) The Child-Rearing Practices Questionnaire, which included 30 items, was developed based on the child-rearing practice standard²³ and literature review.²⁴ There were five questions on nutritional status, eight on hygiene and fundamental care, and seventeen on growth and development. The scale was a four-level rating scale, ranging from (0) none to (3) regularly. The possible scores ranged from 0 to 90. The scores were cut by comparing the mean score to the median (the midpoint score). The scores less than the median (< 70 scores) denoted poor child-rearing practices, whereas scores equal to or more than the median (≥ 70 scores) indicated good child-rearing practices.

5) The Quality of Life of 0-2-Year-Old Children Questionnaire consisted of 20 items adapted by the researchers from the World Health Organization’s short-form quality-of-life questionnaire in the Thai version (WHOQOL-BREF-THAI).¹¹ There were 20 questions: 17 positive and three negative related to four dimensions of health: physical, mental, social, and environmental dimensions. One item was asked on general quality of life. The scale was a five-level rating scale, ranging from (1) extremely dissatisfied to (5) extremely satisfied. The scores 20-73 indicated a poor quality of life, while the scores higher than 73 indicated a good quality of life.

6) The Children’s Health Record includes the child’s gestational age, birth weight, history of illness, and latest weight and height. Data were collected from child health handbook. According to the Thai standard growth chart for children 0 to 5 years old, children’s growth was divided into three categories: (1) normal, which implies having an average weight and height, (2) overweight and obese, and (3), thin and relatively thin.

Instrument quality testing

The questionnaires were all developed by the researchers. Three specialists evaluated the validity. The CVI of the questionnaires are as follows: CVI = 1 for The Access to Healthcare Services Questionnaire; CVI = 0.92 for The Child-Rearing Practices Questionnaire, and CVI = 1 for The Quality of Life of Children aged 0-2 Years Old Questionnaire. The questionnaires’ reliability was evaluated with 30 subjects who were all comparable to the

research participants. The Cronbach's alpha coefficients of the instruments were 0.821, 0.90, and 0.760, respectively.

Data collection methods

Data were collected from November 2017 to February 2018. The researchers requested permission to collect data from the 5 provincial administrators, as well as cooperation from administrators of the health promotion hospitals to introduce the projects to the village volunteers and survey the names of parents and children aged 0 to 2 years old who met inclusion criteria. The researchers trained data collection strategies to project staff and village volunteers who served as research assistants. Village volunteers visited participants' homes and requested permission to present the initiative introduce the project. The research assistants introduced themselves, explained the research objectives, data collection processes, rights protection, and requested permission to utilize data from child health book. The questionnaire could be completed by the participants individually or through a 30-minute interview.

Statistical analysis

Data were analyzed using the SPSS version 18. Statistical significance was configured at the level of 0.05. Descriptive statistics were used to examine demographic data and variables. The Chi-square and Fisher's Exact tests were used to analyze the relationships between parents and children's factors, child-rearing practices, and access to healthcare services, as well as their effects on QoL and nutritional status. The fundamental assumptions for binary logistic regression were satisfied. A multiple logistic regression analysis was performed to examine the predicting power of maternal age, child-rearing practices, and access to healthcare services on children's nutritional status and overall QoL.

RESULTS

Descriptive statistics

The majority of mothers with children aged 0 to 2 years were between the ages of 26 and 35 years old (48 percent), had completed high school (55.9 percent); had an extended family (53.8 percent), and were married (82.7 percent). The majority of caregivers who raised the children were parents, followed by grandparents (43.4 and 31.3 percent, respectively). They had a monthly salary of 10,000-30,000 baht (56.6 percent) and adequate income (74.2 percent). The majority had only one child (87.7 percent), with a breastfeeding period of 3 to 11 months (53.0 percent). The prevalence of low birth weight and/or preterm delivery was 11.3 and 15.1, respectively. Severity

of illness, such as fever and diarrhea, from birth to 2 years old, was 19.8 percent, while those with a normal weight and height was accounted for 77.4 percent; those with obesity was accounted for 15.1 percent; and those with thin weight was accounted for 7.5 percent. Access to HCS, child-rearing practices, and QoL all received high scores (Table 1).

Correlational analysis

The maternal age, access to HCS, and child-rearing practices were associated with the children's quality of life. ($p < 0.05$) (Table 2). The maternal age and child-rearing practices were also related to children's nutritional status. ($p < 0.05$) (Table 3).

Logistic regression analysis

A multivariate logistic regression analysis was employed to assess the predictive power of variables on the QoL as perceived by parents and the nutritional status of their children. According to the findings, this model accounts for 34 percent of the variance in these children's QoL (Nagelkerke $R^2 = .34$) and 35.3 percent of the variance in the nutritional status of their children (Nagelkerke $R^2 = .35$). The maternal age could predict the children's QoL (OR=4.75; 95%CI = 1.16, 19.45, $p < 0.05$). Maternal age of more than 36 years old and less than 25 years old increased the probability of children having a high QoL by 4.747 times that of a maternal age of less than 25 years old. Child-rearing practices could also predict children's QoL (OR=5.68; 95%CI = 1.97, 16.40, $p < 0.05$), indicating that each unit increment in child-rearing practices will increase a child QoL by 5.677 times.

In addition, the maternal age could predict the children's nutritional status (OR=0.088; 95%CI = .01, 0.79, $p < 0.05$). Maternal age of 26-35 years old reduced the probability of having a healthy nutritional status by 0.088 times that of maternal age of less than 25 years old. Child-rearing practices could predict the child nutritional status (OR=7.84; 95%CI = 1.93, 31.84, $p < 0.05$), indicating that each unit increment in child-rearing practice increases their nutritional status by 7.84 times. (Table 4)

DISCUSSION

Regarding nutritional status, 14.7 percent of the children in this study were obese, which was higher than the national average (10 percent).²⁵ This finding, however, was consistent with a 2016 survey of children's nutritional status at a child development center in the central region, which revealed that 13.9 percent of children

TABLE 1. The range, mean, standard deviation, and interpretation of each studied variables.

Variables	N (%)	Possible score	Range	Mean (S.D)	Median (IQR)	Interpretation by mean
Accessing and receiving HCS	101	12-36	16-36	28.93 (3.94)	29 (4.0)	High
Receiving HCS		6-18	8-18	16.06 (2.32)	17 (3.0)	
Accessing HCS		6-18	4-18	13.03 (2.47)	12 (2.0)	
Child-rearing practices	106	0-90	15-90	67.04 (15.73)	70.5 (19.0)	High
Nutrition,		0-15	0-15	10.38 (3.10)	11 (3.0)	
Hygiene and basic care		0-24	9-24	20.55 (3.82)	22 (6.0)	
Growth and development		0-51	0-51	37.92 (9.12)	40 (11.0)	
Quality of life	106	20-100	31-93	72.51 (9.09)	73 (10.0)	High
Physical health		1-25	11-22	19.73 (2.17)		
Mental health		1-25	12-25	18.24 (2.48)		
Social health		1-25	10-25	18.01 (3.23)		
Environmental health		1-25	10-25	19.00 (2.90)		
Overall quality of life		1-5	1-5	3.52		
Low QoL	54	20-100	31-73	66.04 (7.60)	68 (7.0)	
High QoL	52	20-100	74-93	79.23 (4.40)	78 (6.0)	
Nutritional status	106					
Appropriate	82 (77.4)					
Obese/	16 (15.1)					
Thin	8 (7.5)					

were obese.²⁶ Since 2000, the prevalence of overweight children under the age of five has grown by approximately 24 percent globally, with the highest incidence in low- and middle-income countries such as Thailand.²⁷ This situation may be owing to a more convenient lifestyle and easy availability of high-energy food. Because the data gathering locations were suburban, there are numerous factories and marketplaces where families could get a variety of meals for their children. In addition, parents and relatives believed that overweight children were healthy and that youngsters would lose weight as they grew older.²⁶

Maternal age and child-rearing practices were potent predictors of children's nutritional status. Mothers under the age of 25 had more children with an adequate nutritional status than mothers in other age groups. The majority of mothers under the age of 25 worked in factories and had a high school diploma. This group of mothers had easy Internet access to search for childcare information. Not surprisingly, according to the findings of a survey

conducted in Thailand, persons aged 19-38 years old were the most likely to utilize the Internet.²⁸ Income sufficiency was not shown to be associated with children's nutritional status. The explanation may be the majority of the participants in this study were middle-income individuals who could afford the infant food. This finding contradicts a childhood obesity study, which reported a positive association between high socioeconomic status (SES) of families and 2-19 years old childhood obesity in developing countries. Since high-SES households have more access to high-energy meals.²⁹ At the same time, a study in China reported that high-SES had a positive effect on the height of 10-15 years old city youngsters. Because a high-SES family was associated with higher education, the family had more knowledge to choose appropriate meals for their children.³⁰ The discrepancy may be because the children in this study were between the ages of 0 to 2. They consumed breast milk, milk, and supplementary diet, and children relied on caregivers for their meals.

TABLE 2. Factors associated with quality of life of 0–2-year-old children as perceived by caregivers.

Variables	N (%)	Quality of life of children		χ ² Test	P Value
		High	Low		
Age of mother					
Younger than 25 years	31 (31.0)	15 (48.4)	16 (51.6)	6.740	0.034 *
26-35 years	48 (48.0)	18 (37.5)	30 (62.5)		
Older than 36	21 (21.0)	15 (71.4)	6 (28.6)		
Education of mothers					
Primary school	10 (9.8)	6 (60.0)	4 (40.0)	2.537	0.469
High school	57 (55.9)	29 (50.9)	28 (49.1)		
Vocational	12 (11.8)	5 (41.7)	7 (58.3)		
Bachelor's degree	23 (22.5)	8 (34.8)	15 (52.9)		
Income sufficiency					
Sufficient income	61 (62.9)	29 (47.5)	32 (52.5)	0.588	0.745
Sufficient income with saving	11 (11.3)	6 (54.5)	5 (45.5)		
Insufficient income	25 (25.8)	14 (56.0)	11 (44.0)		
Breastfeeding period					
Less than 2 months	29 (34.9)	17 (58.6)	12 (41.4)	1.214	0.545
3-11 months	44 (53.0)	20 (45.5)	24 (54.5)		
More than 12 months	10 (12.0)	5 (50.0)	5 (50.0)		
Severity of illness					
No	85 (80.2)	44 (51.8)	41 (48.2)	1.259	0.262
Yes	21 (19.8)	8 (38.1)	13 (61.9)		
Access to HCS					
Low	55 (51.9)	19 (34.5)	36 (65.5)	9.632	0.002*
High	51 (48.1)	33 (64.7)	18 (35.3)		
Child-rearing practices					
Low	51 (48.1)	15 (29.4)	36 (70.6)	15.178	< 0.001*
High	55 (51.9)	37 (67.3)	28 (32.7)		

† Fisher's Exact Test, * P Value < .05

Child-rearing practices also predicted children's nutritional status. The scores on child-rearing practices were high in all dimensions, including nutrition, hygiene care, and growth and development. When considering the item score, the parents provided the proper quantity of meals for their children had a high item score. On the other hand, the item score of being a parental role model for dietary behaviors was medium. These findings are consistent with Australian and New Zealand research

of parental feeding practices at 20 months of age. The highest score was dietary restriction for health. Limiting unhealthy food consumption in children up to 20 months old predicted a lower risk of becoming overweight when they were five years old.³¹ For the growth and development dimension of child-rearing practices, parents demonstrated high scores on providing child play and activities as well as routinely taking children for health check-ups and vaccinations. These practices were considered adequate

TABLE 3. Factors associate with nutritional status of 0–2-year-old children.

	N (%)	Nutritional status		χ^2 Test	P Value
		Normal (%)	Obese/ thin (%)		
Age of mother					
Younger than 25	28 (27.5)	27 (96.4)	1 (3.6)	8.798	0.012 *
25-36	52 (51.0)	35 (67.3)	17 (32.7)		
Older than 36	22 (21.5)	16 (72.7)	6 (27.3)		
Education of mothers					
Primary school	9 (8.7)	8 (88.9)	1 (11.1)	-	0.781 ^F
High school	55 (52.9)	43 (78.2)	12 (21.8)		
Vocational	15 (14.4)	11 (73.3)	4 (26.7)		
Bachelor's degree	25 (24.0)	18 (72.0)	7 (28.0)		
Income sufficiency					
Sufficient income	59 (61.5)	42 (71.2)	17 (28.8)	4.430	0.109
Sufficient income with saving	10 (10.4)	10 (100.0)	0 (0.0)		
Insufficient income	27 (28.1)	22 (81.5)	5 (18.5)		
Breastfeeding period					
Less than 3 months	31 (35.6)	20 (64.5)	11 (35.5)	4.477	0.107
3-12 months	47 (54.0)	40 (85.1)	7 (14.9)		
More than 12 months	9 (10.4)	7 (77.8)	2 (22.2)		
Severity of illness					
No	85 (80.2)	69 (65.2)	21 (19.8)	-	0.777
Yes	21 (19.8)	16 (75.0)	5 (25.0)		
Access to HCS					
Low	53 (52.0)	40 (78.5)	13 (24.5)	0.571	0.450
High	49 (48.0)	40 (81.6)	9 (18.4)		
Child-rearing practices					
Low	52 (50.0)	32 (61.5)	20 (38.5)	13.867	< 0.001 *
High	52 (50.0)	48 (92.3)	4 (7.7)		

^f Fisher's Exact Test, * P Value < .05

childcare under the 2003 Act's minimal requirements for child-raising. Children's play and activities will help them metabolize carbohydrates and energy as well as reduce fat deposits. Another explanation is that child-rearing practices are associated with healthcare accessibility. Caregivers who had a high score for their child-rearing practices pursued more information about childcare from healthcare personals, resulting in an appropriate nutritional status for their children.

The children in this study had a good QoL, with the highest score for environmental health, followed by physical health, and the lowest score for social relationships. This might be because the environmental and physical health elements included health promotion for children, such as safety, child health, and developmental care. Additionally, healthcare personnel encouraged caregivers to provide health promotion activities upon their visits to well-baby clinics. These findings are consistent with

TABLE 4. Factors predicting the quality of life and nutritional status of children 0-2 years old.

	QOL			Nutritional status		
	OR	95% CI	P Value	OR	95% CI	P Value
Constant	0.205	-	0.004	37.00	-	0.007
Age of mother						
Younger than 25	Ref.	Ref.	-	Ref.	Ref.	-
26-35	0.698	0.24, 2.03	0.509	0.088	0.01, 0.79	0.030 *
Older than 36	4.747	1.16, 19.45	0.030 *	0.225	0.02, 2.43	0.219
Access to HCS						
Low	Ref.	Ref.	-	-	-	-
High	2.017	0.74, 5.53	0.172	-	-	-
Child-rearing practices						
Low	Ref.	Ref.	-	Ref.	Ref.	-
High	5.677	1.97, 16.40	0.001 *	7.840	1.93, 31.84	0.004 *
Nagelkerke R ²		0.340			0.353	
Hosmer and Lemeshow Test		0.720			0.968	

those of the QoL of healthy children aged 0 to 1 year measured by PedsQLTM in the United States⁶, and the QoL of healthy children aged 0 to 1 year measured by TAPQOL in the Netherlands¹⁰, which caregivers reported that their children had high scores in both physical and psychosocial health. Similarly, parents in Europe place a high value on providing a safe physical environment for their children.³² In comparison, parents in the United States place a high value on social functioning, while Thai parents had a lower score in this dimension. The discrepancy of QoL domains scores may be attributed to differences in caregiving and parenting styles. Thai caregivers become accustomed to responding to children's fundamental needs rather than allowing the children to do it independently. More study is needed to investigate the factors that differentiate QoL between Western and Eastern perceptions.

Maternal age and child-rearing practices were factors that predicted the QoL of 0–2-year-old children. Maternal age of more than 36 years old generally resulted in better parenting since such parents tend to have a higher SES and can afford better childcare. These findings are congruent with a study on Brazilian parenting practices, which discovered that mothers with higher education and economic status organized more activities to promote

their children's motor development, such as playing, toy, lap time, and free movement space.³³

Child-rearing practice predicted the QoL of children aged 0 to 2 years. According to the study, parents over the age of 36 offered adequate nutrition, hygiene, and developmental care than younger parents. Parents arranged play activities, a safe home environment, disease prevention, health check-ups, and vaccines for their children. These health-promoting behaviors can help children avoid illness and improve their QoL. In Malaysia, parents from various SES backgrounds provide various types of child-rearing to stimulate cognition and emotions, as well as to interact with children, leading to diverse cognitive and social functioning.³⁴

Access to healthcare services was associated with QoL of children, but it did not predict the QoL and nutritional status in children aged 0 to 2 years. Parents reported that their children's access to and receiving healthcare services was excellent. The explanation might be universal healthcare coverage for children, under which children have rights to access care. Moreover, data were collected in five sub-districts of a single district. Two secondary hospitals and one tertiary level hospital are located near the sub-urban regions. Scores for accessing healthcare services, such as cost, convenience, time and

availability, were in moderate level. Whereas scores for receiving healthcare services, such as information on child growth and development screening, childcare suggestion, and listening and responding to concerns were high. The good relationship between caregivers and healthcare personnel might be attributed to parents' ability to obtain health services and childcare information, resulting in improving their child-rearing practices as well as the children's QoL. The findings of this study are consistent with those of a previous study conducted in the United States²¹, which discovered that continued access to essential care was associated with improved health and QoL scores.²¹ Another study in Brazil and Columbia reported that inequities in access to care between lower SES and higher SES groups resulting in disparities in accessing to primary care, outpatient secondary care, and having health issues in preventable and controlled diseases, such as caries, and glycemic control.³⁵ Access to health services was not associated with nutritional status of children. It is possible that these children had good health and development and did not require intensive healthcare. Similarly in Thailand, a study revealed no statistically significant relationship between access to care and nutritional status of preterm migrant children. As a result of Thailand's low-cost healthcare insurance for migrant workers and their families to have access to healthcare services.¹³ Therefore, no variation in access to healthcare scores, resulting in non-significant relationship between healthcare access and nutritional status.

Regarding children's factors, breastfeeding period and severity of illness were not associated with children's QoL as perceived by caregivers or nutritional status. These children were healthy and their caregivers provided quality care for them. In contrast, a study in Thailand reported that exclusive breastfeeding from birth to six months of age, as well as a history of cold in infants predicted growth in preterm migrant children. The explanation may be that preterm infants are more susceptible to infections, resulting in a poorer child growth rate, and unemployed migrant mothers employed exclusive breastfeeding for their child.¹³

Recommendations and implications

1. Healthcare personnel should assess caregivers' child-rearing practices, recognize variations in those practices depending on maternal age, and design interventions accordingly.
2. The child-rearing practice program should focus on social functioning activities to help youngsters develop social skills.

Limitations

The use of the instrument based on WHO definitions to assess children's QoL is a strength of this study. The limitation is that the samples were randomly recruited from five suburban sub-districts. The samples might not be representative of Thai children and families. Missing data from the survey questionnaire were discovered in both dependent and independent variables.

CONCLUSION

When children are 0 to 2 years old, parental factors significantly influence their nutritional status and quality of life. Two of these factors are maternal age and child-rearing practices. Healthcare personnel should encourage caregivers to use age-appropriate child-rearing practices, such as using social media with younger parents. Access to and utilization of healthcare services was solely associated with children's quality of life. Caregivers should be assisted in increasing their access to and receipt of healthcare in order to improve the quality of life for children aged 0 to two.

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