Research Article

Developmentally appropriate practices on knowledge skills for contributing child’s intelligences of receptive language skills in appropriate and inappropriate early childhoods

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Abstract

To investigate the variables correlation analysis research method for assessing the caregivers' perceptions in two groups including dependent and independent variables to correlate the measuring of early childhoods. Typically, in correlated data, for jointly normally distributed data with relevant outliers that can use a correlation as a measure of a monotonic association. Designing the 65-paired samples for the Thai Model of early detection and intervention of children as the health care system guidelines from 26-CUPs have compared. Using the DSPM divided into 65-appropriate and 65-inappropriate development early childhoods for every 13 CUPS that depends on talented children. Selecting the Receptive Language (RL) skills identified in contributing growth relative factors with four research instruments: the EPRLS, PRLF, CNRLF, and CMRLF are valid and reliable significantly. Comparisons of the appropriate and inappropriate early childhoods are differences ($p < .05$), the intercorrelation circumfl ex nature analysis ($p < .05$), positively. The R2 values show that 26% and 55% of the variance in training caregivers' factor skills on the PRLF, CNRLF, and CMRLF to the EPRLS in inappropriate and appropriate early childhoods, respectively. Developmentally Appropriate Practice is a perspective in a child's development: social, emotional, physical, and cognitive-based on the child's cultural background: community, family history, and family structure.

Introduction

Early childhood, defined as the period from birth to eight years old, is a time of remarkable growth with brain development at its peak. During this stage, children are highly influenced by the environment and the people that surround them [1]. In psychology the term early childhood is usually defined as the time period from birth until the age of eight years. Therefore, covering infancy, kindergarten and first grade, there are three simultaneous development stages [2]. The brain increases from 70%, it is optimal that an environment is provided that encourages physical development and allows the children to explore and try out new things [3]. The large muscles develop before the small muscles. These are known as gross motor skills. Small muscles are used for fine motor skills such as picking up objects, writing, and drawing, throwing and catching [4].

Gross motor skills: between ages 2 and 3 years, young children stop using the awkward, wide-legged robot-like stance that is the hallmark of new walkers [5]. Children of this age can participate in throwing and catching games with larger balls. They can also push themselves around with their feet while sitting on a riding toy [6,7]. Fine motor skills: the development of holding the pencil starts with a supplicated grip and finishes with a “dynamic tripod” grip which involves three fingers stabilizing the utensil near the tip. They should also be able to cut out such shapes as the children’s fine motor skills [8]. Education: Infants and toddlers experience life more holistically than any other age group: social, emotional,
cognitive, language, and physical lessons are not learned separately by very young children [9].

Early childhood care and education (ECCE) is more than preparation for primary school. It aims at the holistic development of a child’s social, emotional, cognitive and physical needs in order to build a solid and broad foundation for lifelong learning and wellbeing. ECCE has the possibility to nurture caring, capable and responsible future citizens. In this way ECCE is one of the best investments a country can make to promote human resource development, gender equality and social cohesion, and to reduce the costs for later remedial programs. For disadvantaged children, ECCE plays an important role in compensating for the disadvantages in the family and combating educational inequalities. UNESCO’s approach is reinforced in the Education 2030 agenda and in particular in target 4.2 of Sustainable Development Goal 4 which aims to ‘By 2030, ensure that all girls and boys have access to quality early childhood development, care and pre-primary education so that they are ready for primary education’ [1].

“Early childhood care and education (ECCE) is more than preparation for primary school. It aims at the holistic development of a child’s social, emotional, cognitive and physical needs in order to build a solid and broad foundation for lifelong learning and wellbeing [10]. The Early Childhood Curriculum is designed for developing young children from birth to age six. This is based on an approach of taking care of and enhancing the child’s learning process, which is responsive to each individual’s nature, development, and potential [11]. Most early childhood education programs can be completed in as little as 2 years. Over the course of your program, you’ll take a number of interesting classes and get hands-on teaching experience that will prepare you for a number of future careers [12].

Developmentally Appropriate Practice (also known as DAP) is a teaching perspective in early childhood education where a teacher nurtures a child’s development (social, emotional, physical, and cognitive) based on the following: theories of child development; what is individually important uncovered through assessment; the child’s cultural background (community, family history, and family structure) [13]. Grounded both in the research on child development and learning and in the knowledge base regarding educational effectiveness, the framework outlines practice that promotes young children’s optimal learning and development. Since its first adoption in 1986, this framework has been known as developmentally appropriate practice [14].

In Thailand, many children lack appropriate care and stimulation. A large number of parents, especially fathers, do not engage in learning activities with their young children. Access to children’s books – which is crucial for the child’s learning and imagination – is limited, especially in poor households. Although participation in early childhood education makes a huge difference in a child’s development, around 15% of children aged 3-5 years are not attending an early childhood education program. For those who do receive early learning experiences, that would allow them to reach their full potential [15]. A National Scheme of Education requires cooperation among all sectors; each sector must acknowledge and understand the importance of education as well as take part in the planning in order for it to be effective. The 21st century trends effecting skill requirements among the early childhoods must all be examined as they challenge Thailand and the world economically and socially to be preparing for Thailand 4.0 [16].

UNICEF Thailand engaged with the Office of Education Council in the development of the 20-year national education plan with 100% targets for enrolment and completion, skills development and improving learning outcomes [17]. Significant factors identified here raise strong concerns that should be addressed clinically when counseling families and planning treatment. Further study using a longer longitudinal design and more detailed information is recommended to better determine predictive factors for early language delay or specific language impairment (SLI) [18]. This research study was to analyze the enhancement knowledge skills to promote the development of receptive language comprehension in appropriate and inappropriate early childhoods. The predisposing, contributing, and complementary knowledge factors were to predict the variables correlation analysis of the Efficacy Perceptions in Receptive Language Skills for enhancing Receptive Language Motor Skills were investigated.

**Methodology**

**Research objective**

To analyze the predictive variables’ correlations factors for enhancing language knowledge development of the receptive language comprehension’s motor skills in appropriate and inappropriate early childhoods to their comparisons of the predisposing, contributing, and complementary factors contributions to the efficacy perceptions in receptive language skills for caregivers: particularly parents had a lack of understanding about how to stimulate child development, decreasingly.

**Research procedures**

**Step I: Selected the sample size:** This sample size consisted of 130 caregivers, or parents, or grandparents, who looked for the early childhoods at the 26-Contracting Unit for Primary Car (CUP) whereas using the Developmental Surveillance and Promotion Manual (DSPM) for taking care of and looking for the 65-appropriate early childhoods in 13 CUPS and 65-inappropriate early childhoods in 13 CUPS too, under the Department of Mental Health, Ministry of Public Health, Thailand in 2020. The caregivers, or parents, or grandparents are according to the principle of matched case-control group with 65 paired samples for Thai Model of early
Step II: Made sense the research instruments: The guidelines for health care system that followed as the Developmental Surveillance and Promotion Manual (DSPM) details that the development of the country depends on the development of people to be good people. A birth child is developing the brain to think well, making good and speak well. The brain is exploding. At birth, the brain grows only 25%, but grows up to 92% by the age of 5. The major factors that cause brain changes are Gene, Experience, and Relationships. Five main factors identified in contributing to growth and developments are associated factors in appropriate and inappropriate early childhoods including Gross Motor (GM), Fine Muscle Use and Intelligence Motor (FM), Receptive Language (RL), and Expressive Language (EL), and Personal and Social (PS). The main factor of this research study focused on Receptive Language (RL) motor skills.

The Efficacy Perceptions in Receptive Language Skills (EPRLS)
The Predisposing Receptive Language Factors (PRLF)
The Contributing Receptive Language Factors (CNRLF)
The Complementary Receptive Language Factors (CMRLF)

Step III: Variables of the four research instruments: Most of research instrument obtained with the 10 items that assessed the child caregivers in two groups, the first group was the 65-child caregivers who looked for the appropriate and inappropriate early childhoods and the 65-child caregivers for the inappropriate early childhoods for the ability of the caregivers to their the Receptive Language Comprehension Skills (RLCS). The average means of 10-item Efficacy Perceptions in Receptive Language Skills (EPRLS) was the dependent variable.

The 10-item Predisposing Receptive Language Factors (PRLF), the 10-Contributing Receptive Language Factors (CNRLF), and the 10-Complementary Receptive Language Factors (CMRLF) to the RLCS are the independent variables with means average score.

Step IV: Comparisons between the paired child caregivers' perceptions: Comparisons between the paired child caregivers’ perceptions of their EPRLS, PRLF, and CNRLF to their RLCS to their appropriate and inappropriate early childhoods with means, standard deviation, and t-test analysis were analyzed.

Step V: Validities of the research instruments: The EPRLS, EPRLS, PRLF, and CNRLF research instruments were assessed of their validity and reliability with the Internal Consistency Cronbach (Alpha) Reliability Efficient, using the means and standard deviation were interpreted with Best, [19] and Best & Kahn, [20] in three options; Highest, Middle, and Lowest Levels were determined. The scale means, Scale Standard deviation, variance, and F-test analysis were tested and predicted.

Step VI: Intercorrelation Circumplex Nature Item analysis: Variables more proximate on the circle are highly related, whereas those more distal are less related. Circumplex models have been applied widely in many psychological domains, including the areas of interpersonal behavior, personality traits, emotions, vocational interests, color perception, and psychopathology [21].

Step VII: Associations between two variables: Correlation analysis explores the association between two or more variables and makes inferences about the strength of the relationship [22]. An association is any relationship between two variables that makes them dependent, i.e. knowing the value of one variable gives us some information about the possible values of the second variable. The alternative is to convert it to something called a factor. A factor is a special type of vector used by Simple and Multiple of Pearson (r, and R) to encode categorical variables [23]. The Pearson’s correlation coefficient is calculated as the covariance of the two variables divided by the product of the standard deviation of each data sample. It is the normalization of the covariance between the two variables to give an interpretable score (Brownlee, 2020).

Results/findings
Research on variable correlation analysis with the enhancement knowledge skills to promote the development of receptive language comprehension in inappropriate and appropriate early childhoods were analyzed. The general data of the sample size as reports in Table 1.

Table 1, most of children are female, main caregiver relationships are taken and they were drunk type of milk by maternal, and the child care given parenting has the DSPM book manual.

| Trial                          | Frequency | Percent | Standard Deviation | Variance |
|--------------------------------|-----------|---------|-------------------|----------|
| Children sex                   |           |         |                   |          |
| Male                           | 39        | 30.0    | 0.460             | 0.212    |
| Female                        | 91        | 70.0    |                   |          |
| Main caregiver relationships   |           |         |                   |          |
| Paternal                      | 2         | 1.5     | 0.560             | 0.314    |
| Maternal                      | 64        | 49.2    |                   |          |
| Grandparents                  | 22        | 46.7    |                   |          |
| Child relatives               | 2         | 1.5     |                   |          |
| Parenting a child with type of milk |           |         |                   |          |
| Breast milk only              | 63        | 48.5    | 0.925             | 0.857    |
| Mixed milk only               | 18        | 13.8    |                   |          |
| Breast milk and mixed milk    | 49        | 37.7    |                   |          |
| Having a DSPM handbook in parenting |     |         |                   |          |
| Having a DSPM                | 100       | 76.9    | 0.423             | 0.179    |
| None having a DSPM            | 30        | 23.1    |                   |          |
| N -130                        |           |         |                   |          |
Comparisons between appropriate and inappropriate early childhoods of their enhancement knowledge skills to promote the development of receptive language comprehension that supported by the three development factors.

Using the means, S.D., t-test to analyze and compare the means of two groups differs from one another for the Efficacy Perceptions in Receptive Language Skills (EPRLS) of their receptive language comprehension skills (RLCS) of the appropriate and inappropriate early childhoods in terms of their development to the receptive language comprehension skills (Table 2) that are supported by the Predisposing Receptive Language Factors (PRLF) (Table 3), the Contributing Receptive Language Factors (CNRLF) (Table 4), and the Complementary Receptive Language Factors (CMRLF) to their RLCS (Table 5) are compared.

Analysis of the enhancing knowledge skills to promote the development of appropriate and inappropriate early childhoods in the RLCS with the EPRLS, PRLF, CNRLF, and CMRLF factors’ knowledge to their receptive language skills.

Using the 10-item EPRLS (Table 6), 10-item PRLF (Table 7), 10-item CNRLF (Table 8), and 10-tetm CMRLF (Table 9) factors’ knowledge are enhanced and supported the RLCS of the appropriate and inappropriate early childhoods for assessing the 130-children caregiver parenting are

**Table 2:** Accounting number, means, S.D., t-test were analyzed on appropriate and inappropriate early childhoods for the EPRLS

| Trial                  | Accounting No. | Mean       | Standard deviation | t-test | Sig. (2-tailed) |
|------------------------|----------------|------------|--------------------|--------|-----------------|
| Appropriate early children | 65             | 1.000      | 0.000              | 5.722*** | <.000           |
| Inappropriate early children | 65             | 0.661      | 0.477              |        |                 |

N = 130, *p < .05, **p < .01, ***p < .001

**Table 3:** Accounting number, means, S.D., t-test were analyzed on appropriate and inappropriate early childhoods for the PRLF

| Trial                  | Accounting No. | Mean       | Standard deviation | t-test | Sig. (2-tailed) |
|------------------------|----------------|------------|--------------------|--------|-----------------|
| Appropriate early children | 65             | 4.092      | 0.655              | 1.613* | .047            |
| Inappropriate early children | 65             | 3.831      | 0.858              |        |                 |

N = 130, *p < .05, **p < .01, ***p < .001

**Table 4:** Accounting number, means, S.D., t-test were analyzed on appropriate and inappropriate early childhoods for the CNRLF

| Trial                  | Accounting No. | Mean       | Standard deviation | t-test | Sig. (2-tailed) |
|------------------------|----------------|------------|--------------------|--------|-----------------|
| Appropriate early children | 65             | 2.338      | 0.973              | -2.630** | .009           |
| Inappropriate early children | 65             | 2.754      | 1.1031             |        |                 |

N = 130, *p < .05, **p < .01, ***p < .001

**Table 5:** Accounting number, means, S.D., t-test were analyzed on appropriate and inappropriate early childhoods for the CMRLF

| Trial                  | Accounting No. | Mean       | Standard deviation | t-test | Sig. (2-tailed) |
|------------------------|----------------|------------|--------------------|--------|-----------------|
| Appropriate early children | 65             | 2.015      | 0.673              | 1.375* | .049            |
| Inappropriate early children | 65             | 1.969      | 0.661              |        |                 |

N = 130, *p < .05, **p < .01, ***p < .001

**Table 6:** Means, S.D., Interpretation, α-reliability, Scale means, Scale S.D., Variance, and F-test for the EPRLS

| Trial                  | Mean       | Standard deviation | t-test | Sig. (2-tailed) |
|------------------------|------------|--------------------|--------|-----------------|
| EPRLS                  | 3.92       | 0.912              |        |                 |
| EPRLS                  | 3.75       | 0.829              |        |                 |
| EPRLS                  | 4.00       | 0.835              |        |                 |
| EPRLS                  | 3.76       | 0.955              |        |                 |
| EPRLS                  | 3.73       | 0.979              |        |                 |
| EPRLS                  | 4.09       | 0.910              |        |                 |
| EPRLS                  | 4.00       | 0.816              |        |                 |
| EPRLS                  | 4.09       | 0.802              |        |                 |
| EPRLS                  | 4.05       | 0.843              |        |                 |
| EPRLS                  | 3.72       | 0.865              |        |                 |
| Total                  | 3.91       | 1.784              |        |                 |

N = 130, *p < .05, **p < .01, ***p < .001

**Table 7:** Means, S.D., Interpretation, α-reliability, Scale means, Scale S.D., Variance, and F-test for the PRLF

| Trial                  | Mean       | Standard deviation | t-test | Sig. (2-tailed) |
|------------------------|------------|--------------------|--------|-----------------|
| PRLF                   | 2.79       | 1.218              |        |                 |
| PRLF                   | 2.67       | 1.116              |        |                 |
| PRLF                   | 2.45       | 1.214              |        |                 |
| PRLF                   | 2.27       | 1.140              |        |                 |
| PRLF                   | 2.22       | 1.100              |        |                 |
| PRLF                   | 2.47       | 1.189              |        |                 |
| PRLF                   | 2.85       | 1.248              |        |                 |
| PRLF                   | 2.84       | 1.231              |        |                 |
| PRLF                   | 2.42       | 1.193              |        |                 |
| PRLF                   | 2.00       | 1.128              |        |                 |
| Total                  | 2.497      | 1.570              |        |                 |

N = 130, *p < .05, **p < .01, ***p < .001

**Table 8:** Means, S.D., Interpretation, α-reliability, Scale means, Scale S.D., Variance, and F-test for the CNRLF

| Trial                  | Mean       | Standard deviation | t-test | Sig. (2-tailed) |
|------------------------|------------|--------------------|--------|-----------------|
| CNRLF                  | 1.48       | 0.729              |        |                 |
| CNRLF                  | 1.63       | 0.890              |        |                 |
| CNRLF                  | 1.67       | 0.960              |        |                 |
| CNRLF                  | 1.11       | 0.883              |        |                 |
| CNRLF                  | 1.74       | 1.031              |        |                 |
| CNRLF                  | 2.07       | 0.903              |        |                 |
| CNRLF                  | 2.44       | 0.737              |        |                 |
| CNRLF                  | 2.35       | 0.723              |        |                 |
| CNRLF                  | 2.29       | 0.802              |        |                 |
| CNRLF                  | 2.25       | 0.727              |        |                 |
| Total                  | 1.902      | 0.992              |        |                 |

N = 130, *p < .05, **p < .01, ***p < .001

**Table 9:** Means, S.D., Interpretation, α-reliability, Scale means, Scale S.D., Variance, and F-test for the CMRLF

| Trial                  | Mean       | Standard deviation | t-test | Sig. (2-tailed) |
|------------------------|------------|--------------------|--------|-----------------|
| CMRLF                  | 1.66       | 0.959              |        |                 |
| CMRLF                  | 1.10       | 0.882              |        |                 |
| CMRLF                  | 1.73       | 1.031              |        |                 |
| CMRLF                  | 2.06       | 0.908              |        |                 |
| CMRLF                  | 1.11       | 1.008              |        |                 |
| CMRLF                  | 1.14       | 1.064              |        |                 |
| CMRLF                  | 2.43       | 0.736              |        |                 |
| CMRLF                  | 2.34       | 0.722              |        |                 |
| CMRLF                  | 2.29       | 0.801              |        |                 |
| CMRLF                  | 2.24       | 0.726              |        |                 |
| Total                  | 1.817      | 0.956              |        |                 |

N = 130, *p < .05, **p < .01, ***p < .001
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analyzed. Validity of the EPRLS, PRLF, CNRLF, and CMRLF research instruments are valid and reliable with the Cronbach alpha reliability (0.972, 0.931, 0.865, and 0.800; and indicated that at a Highest levels, a Highest levels, a Middle levels, and a Middle levels for the EPRLS, PRLF, CNRLF, and CMRLF, respectively. Statistically significant F-test analysis for predicting the variables’ correlation analysis indicated that of .001 (p < .001) level that reports in Tables 6, 7, 8, and 9.

Intercorrelation circumplex nature analysis

To investigate the Intercorrelation Circumplex Nature Analysis of the EPRLS, correlations between the items were calculated. The results are presented in Table 10 (for the EPRLS), Table 11 (for the PRLF), Table 12 (for the CNRLF), and Table 13 (For the CMRLF). The interpersonal circumplex is a two-dimensional circular model of the interpersonal domain of personality and each instrument for study and assess individual differences in appropriate and inappropriate early childhoods of their development of receptive language comprehension was analyzed.

As reported in Tables 10, 11, 12, and 13 as expected, the results show that a item and the next it generally is a high correlations. In general, the circumplex nature of the EPRLS, PRLF, CNRLF, and CMRLF has been confirmed, respectively.

Associations between the child caregivers’ perceptions of their Efficacy Perceptions in Receptive Language Skills in appropriate and inappropriate early childhoods to their predisposing, contributing, and complementary factors.

These involved: simple correlational analyses of relationships between the child caregiver parenting perceptions of both appropriate and inappropriate early childhoods with their efficacy perceptions in receptive language skills. Multiple regression analyses of relationships between the set of predisposing, contributing, and complementary factors as a whole and the efficacy perceptions in receptive language skill scales. The summary of the results of these analyzes is reported in Tables 14 and 15.

Discussion/analysis

In the last 20 years, Thailand has made impressive gains in Early Childhood Development (ECD). Approximately 85% of children aged 3-5 years now attend ECD centers or pre-primary education. Thailand has also rightly recognized that effective services for young children will only happen through cohesive and multi-sectoral policy investments [24]. Today’s babies and young children will become an economic “powerhouse”, delivering economic growth at similar levels to the past twenty years for the country [25]. This is possible. Evidence shows that quality early interventions give children

| Table 10: Item intercorrelations for the EPRLS using the Circumplex Nature Analysis |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Trial                  | EPRLS₁        | EPRLS₂        | EPRLS₃        | EPRLS₄        | EPRLS₅        | EPRLS₆        | EPRLS₇        | EPRLS₈        | EPRLS₉        | EPRLS₁₀       |
| EPRLS₁                  |              |              |              |              |              |              |              |              |              |              |
| EPRLS₁                  | 0.641***     |              |              |              |              |              |              |              |              |              |
| EPRLS₂                  | 0.692***     | 0.672***     |              |              |              |              |              |              |              |              |
| EPRLS₃                  | 0.629***     | 0.628***     | 0.700***     |              |              |              |              |              |              |              |
| EPRLS₄                  | 0.611***     | 0.479***     | 0.493***     | 0.677***     |              |              |              |              |              |              |
| EPRLS₅                  | 0.672***     | 0.514***     | 0.462***     | 0.659***     | 0.628***     |              |              |              |              |              |
| EPRLS₆                  | 0.521***     | 0.458***     | 0.534***     | 0.656***     | 0.543***     | 0.636***     |              |              |              |              |
| EPRLS₇                  | 0.476***     | 0.444***     | 0.509***     | 0.515***     | 0.626***     | 0.573***     | 0.699***     |              |              |              |
| EPRLS₈                  | 0.489***     | 0.416***     | 0.407***     | 0.495***     | 0.552***     | 0.560***     | 0.619***     | 0.647***     |              |              |
| EPRLS₉                  | 0.473***     | 0.432***     | 0.354***     | 0.518***     | 0.550***     | 0.516***     | 0.626***     | 0.589***     | 0.582***     |              |

N = 130, *p < .05, **p < .01, ***p < .001

| Table 11: Item intercorrelations for the PRLF using the Circumplex Nature Analysis |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Trial                  | PRLF₁        | PRLF₂        | PRLF₃        | PRLF₄        | PRLF₅        | PRLF₆        | PRLF₇        | PRLF₈        | PRLF₉        | PRLF₁₀       |
| PRLF₁                  |              |              |              |              |              |              |              |              |              |              |
| PRLF₁                  | 0.690***     |              |              |              |              |              |              |              |              |              |
| PRLF₂                  | 0.468***     | 0.580***     |              |              |              |              |              |              |              |              |
| PRLF₃                  | 0.543***     | 0.616***     | 0.617***     |              |              |              |              |              |              |              |
| PRLF₄                  | 0.578***     | 0.621***     | 0.669***     | 0.863***     |              |              |              |              |              |              |
| PRLF₅                  | 0.480***     | 0.550***     | 0.592***     | 0.741***     | 0.766***     |              |              |              |              |              |
| PRLF₆                  | 0.387***     | 0.425***     | 0.614***     | 0.465***     | 0.521***     | 0.592***     |              |              |              |              |
| PRLF₇                  | 0.391***     | 0.348***     | 0.620***     | 0.401***     | 0.478***     | 0.423***     | 0.765***     |              |              |              |
| PRLF₈                  | 0.570***     | 0.593***     | 0.656***     | 0.641***     | 0.652***     | 0.577***     | 0.491***     | 0.495***     |              |              |
| PRLF₉                  | 0.570***     | 0.517***     | 0.645***     | 0.664***     | 0.782***     | 0.761***     | 0.501***     | 0.408***     | 0.686***     |              |

N = 130, *p < .05, **p < .01, ***p < .001

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This challenge is especially most pertinent for children aged between 3 months old (when the mother has to go back to work following maternity leave) and 3 years old, given a lack of affordable child care services for children under 3 years old [27]. To address this gap, the Government’s role is firstly to ensure that there is a standardized curriculum in place which addresses the holistic development needs of children under the age of 3 [28]. Thailand is well positioned to take the next steps in the development of ECD services and to capitalize on the already impressive progress made for young children [29]. Affordable, accessible childcare for children under 3 years would allow many parents to make choices about when to go back to work, and how best to support the development of their children [30].

Table 12: Item intercorrelations for the CNRLF using the Circumplex Nature Analysis.

| Trial | CNRLF_1 | CNRLF_2 | CNRLF_3 | CNRLF_4 | CNRLF_5 | CNRLF_6 | CNRLF_7 | CNRLF_8 | CNRLF_9 | CNRLF_10 |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|-----------|
| CNRLF_1 | 0.433*** |         |         |         |         |         |         |         |         |           |
| CNRLF_2 | 0.209*  | 0.518***|         |         |         |         |         |         |         |           |
| CNRLF_3 | 0.280** | 0.436***| 0.592***|         |         |         |         |         |         |           |
| CNRLF_4 | 0.277** | 0.274** | 0.429***| 0.440***|         |         |         |         |         |           |
| CNRLF_5 | 0.198** | 0.300** | 0.596***| 0.455***| 0.409***|         |         |         |         |           |
| CNRLF_6 | 0.359***| 0.190*  | 0.353***| 0.273** | 0.499***| 0.429***|         |         |         |           |
| CNRLF_7 | 0.247** | 0.345***| 0.435***| 0.391***| 0.289*  | 0.459***| 0.829***|         |         |           |
| CNRLF_8 | 0.163*  | 0.500***| 0.439***| 0.361***| 0.384***| 0.494***| 0.528***| 0.560***|         |           |
| CNRLF_9 | 0.593***| 0.333***| 0.316***| 0.297***| 0.304***| 0.420** | 0.477***| 0.619***| 0.634***|           |

N = 130, *p < .05, **p < .01, ***p < .001

Table 13: Item intercorrelations for the CMRLF using the Circumplex Nature Analysis.

| Trial | CMRLF_1 | CMRLF_2 | CMRLF_3 | CMRLF_4 | CMRLF_5 | CMRLF_6 | CMRLF_7 | CMRLF_8 | CMRLF_9 | CMRLF_10 |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|-----------|
| CMRLF_1 | 0.562***|         |         |         |         |         |         |         |         |           |
| CMRLF_2 | 0.440***| 0.376***|         |         |         |         |         |         |         |           |
| CMRLF_3 | 0.520** | 0.458***| 0.643***|         |         |         |         |         |         |           |
| CMRLF_4 | 0.401***| 0.429***| 0.453***| 0.603***|         |         |         |         |         |           |
| CMRLF_5 | 0.610***| 0.427***| 0.542** | 0.749** | 0.590***|         |         |         |         |           |
| CMRLF_6 | 0.403** | 0.479***| 0.527***| 0.294** | 0.418***| 0.438***|         |         |         |           |
| CMRLF_7 | 0.436** | 0.527***| 0.435***| 0.399***| 0.534** | 0.419***| 0.746***|         |         |           |
| CMRLF_8 | 0.355***| 0.408***| 0.454***| 0.526***| 0.735***| 0.545***| 0.412***| 0.535***|         |           |
| CMRLF_9 | 0.415***| 0.449** | 0.511***| 0.526***| 0.547***| 0.513***| 0.361***| 0.388***| 0.645***|           |

N = 130, *p < .05, **p < .01, ***p < .001

Table 14: Associations between PRLF, CNRLF, and CMRLF scales and the EPRLS to the inappropriate early childhoods in terms of simple and multiple correlations, standardize regression weight analysis (β), and determinant efficient predictive value (R²).

| Trial | Pearson Correlation (Simple correlation (r)) | Standardize regression weight analysis (β) |
|-------|---------------------------------------------|------------------------------------------|
| Independent variables: | | |
| Predisposing Receptive Language Factors (PRLF) | 0.271** | 0.260* |
| Contributing Receptive Language Factor (CNRLF) | 0.251** | 0.237* |
| Complementary Receptive Language Factor (CMRLF) | 0.199* | 0.191* |
| Dependent variable: Efficacy Perceptions in Receptive Language Skills (EPRLS) (Inappropriate early childhood) | | |
| Multiple correlation (R) | 0.511* | |
| Determinant efficient predictive value (R²) | 0.262* | |

N = 130, *p < .05, **p < .01, ***p < .001

Table 15: Associations between PRLF, CNRLF, and CMRLF scales and the EPRLS to the appropriate early childhoods in terms of simple and multiple correlations, standardize regression weight analysis (β), and determinant efficient predictive value (R²).

| Trial | Pearson Correlation (Simple correlation (r)) | Standardize regression weight analysis (β) |
|-------|---------------------------------------------|------------------------------------------|
| Independent variables: | | |
| Predisposing Receptive Language Factors (PRLF) | 0.392*** | 0.375** |
| Contributing Receptive Language Factor (CNRLF) | 0.363*** | 0.323** |
| Complementary Receptive Language Factors (CMRLF) | 0.257** | 0.231* |
| Dependent variable: Efficacy Perceptions in Receptive Language Skills (EPRLS) (Appropriate early childhood) | | |
| Multiple correlation (R) | 0.741** | |
| Determinant efficient predictive value (R²) | 0.549** | |

N = 130, *p < .05, **p < .01, ***p < .001
Violence against children is widespread in Thai society. Figures from the Ministry of Public Health reveal that nearly 9,000 children were treated in hospitals due to abuse in 2017, mostly having suffered from sexual abuse [31]. These figures are likely to be just a tip of the iceberg, as often only the most severe cases of abuse are reported. Thailand should be proud of the achievement it has made in the past decade in ensuring that its young children have access to early childhood development and pre-primary education services [32]. A Pearson correlation coefficient was calculated for the relationship between the standard scores, and the standard scores. A moderate positive correlation was found, indicating a significant linear relationship between the two variables. Children who score tend to also have higher scores in academic readiness as measured [33].

In accordance with associations between students' learning achievements of their post-test assessment indicated that 26% of the coefficient predictive value (R²) of the variance in students' creative thinking abilities was attributable to their perceptions for the GCTQ. Students' learning outcomes of their post-test assessment, the R²-value indicated that 35% of the variances for the PLEI, the R²-value indicated that 63% of the variances for their creative thinking abilities were attributable to their affecting the activity-based on learning for fostering their creative thinking are provided [34]. Using the grand mean scores of the four scales of the CTAQ and for each scale of the QDCS; physical, emotional, social, and intelligence cognitive development standards were correlated with positive directly correlation [35].

Comparisons in appropriate and inappropriate early childhoods were contributed for caregivers' and particularly parents' perceptions. In accordance with study compares how parents in Germany and the USA perceive the quality of ECE services their preschoolers receive in the two different cultures and ECE systems existing in the countries in terms of assisting parents to become more discriminating in their child care choices [36]. Using the Questionnaire on Teacher Interaction (QTI), two important dimensions of teacher interpersonal behaviour were investigated, several factors affect students' perceptions of their teachers [37].

This study was prepared using a screening model from quantitative research methods. The sample of this research comprised 886 university students attending the higher education institutions mentioned. The Scale of Service Quality in Higher Education Institutions is composed a data collection tool consisting of 28 items and 6 factors. The data of this research were collected during the 2016-2017 academic year [38]. This research reports on a study that investigated the role that Thai administrators' interpersonal relationships with their teachers play in enhancing the teachers' teaching plan and students' achievement in the subject and in forming or changing the teachers' attitudes to teaching arrangement using the intercorrelation circumplex nature analysis was analyzed [39].

In terms of the appropriate and inappropriate early childhoods were contributed for caregivers: particularly parents had a lack of understanding about how to stimulate child development, decreasingly that in accordance with the paper in the book as to identify core parenting knowledge, attitudes, and practices that are associated with positive parent-child interactions and the healthy development of children ages birth to 8. The chapter also describes findings from research regarding how core parenting knowledge, attitudes, and practices may differ by specific characteristics of children and parents, as well as by context by Breiner, Ford, & Gadsden (2016) [40]. Some research has found that parents and caregivers that maintain a warm, communicative and reasoned style of parenting raise teenagers who have higher rates of socially competent behavior, take fewer drugs, and exhibit less anxiety or depression [41].

Finally, this research study was to investigate, compare, and predict with the variables correlation analysis of the predisposing, contributing, and complementary variables' correlations factors for enhancing efficacy language knowledge development of the receptive language comprehension's motor skills in appropriate and inappropriate early childhoods were contributed for caregivers: particularly parents had a lack of understanding about how to stimulate child development are decreased, significantly.

**Conclusion**

To investigate the variables correlation analysis research method for assessing the 130-caregivers' perceptions in two groups that including the dependent variable and independent variables to correlate in the broadest sense is a measure of an association between variables that were compared and predicted. In correlated data, we associate the change in the magnitude of 1 variable with a change in the magnitude of another variable, either in the same (positive correlation) direction. Most often, the term correlation was used in a linear relationship between 2 continuous variables and expressed as Pearson product-moment correlation.

A sample size comprised 130 caregivers, parents, and grandparents at the 26-Contracting Unit for Primary Car (CUP) whereas using the Developmental Surveillance and Promotion Manual (DSPM) divided to each 65-appropriate and 65-inappropriate early childhoods in 13 CUPS under the Department of Mental Health, Ministry of Public Health, Thailand in 2020 with 65 paired samples for Thai Model of early detection and intervention of children as the guidelines for health care system. These guidelines followed as the DSPM that details for development of the country depends on development to be talented children. Five main factors identified in contributing to growth and developments that are associated factors in appropriate and inappropriate early childhoods including Gross Motor (GM), Fine Muscle Use and Intelligence Motor (FM), Receptive Language (RL), Expressive...
Language (EL), and Personal and Social (PS). The major factor of this research study focused on Receptive Language (RL) motor skills were chosen.

Creative four research instrument including the 10-item Efficacy Perceptions in Receptive Language Skills (EPRLS) was the dependent variable. The independent variables that were created with the 10-item Predisposing Receptive Language Factors (PRLF), the 10-item Contributing Receptive Language Factors (CNRLF), and the 10-item Complementary Receptive Language Factors (CMRLF), these instruments interpreted with Best [19] and Best & Kahn [20] with item means in three options; Highest, Middle, and Lowest Levels. Most of four research instruments are valid and reliable with internal consistency Cronbach alpha reliability. The means of the appropriate and inappropriate early childhoods for each research instrument that was compared and the statistically significant with the t-test analysis that was also found, differently ($p < .05$), the F-test tested to predict that is significant ($p < .001$). Using it correlated significantly the intercorrelation circumflex nature items ($p < .05$), positively.

Association between the means of the EPRLS dependent variable and the PRLF, CNRLF, and CMRLF independent variables when using individual caregivers as the unit of analysis, this suggests that the scale is reliable for measuring caregivers’ factor skills in appropriate and inappropriate early childhoods that were analyzed and predicted. These involved: simple and multiple correlations, multiple regressions, and the determination predictive ($R^2$) values that were correlated significantly ($p < .05$). The $R^2$ values show that 26% and 55% of the variance in caregivers’ factor skills on the PRLF, CNRLF, and CMRLF to their EPRLS of their abilities on Receptive Language (RL) motor skills are because of training and practices of inappropriate and appropriate early childhoods, respectively.

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