Abstract

Purpose: The purpose of this study is to explore variables related to children’s anger expression and prevent improper style of anger expressing style, which provides theoretical data in developing programs to train children to express anger appropriately.

Method: The survey was conducted self-reporting among 862 students in 5th and 6th grades from 5 elementary schools in D city. These collected data using STAXI-K(State-Trait Anger Expression Inventory), PACI(Parent-Adolescent Communication Inventory), and ER (Ego-Resiliency Scale), were statistically processed and analyzed based on SPSS24.0 and AMOS24.0.

Results: The results were as follows: First, parental open communication ability and children’s ego resiliency directly affect their anger expression(anger-out) and suppression(anger-in). Second, children’s ego resiliency has an indirect influence on anger management. Also, parents’ open communication skills directly impact child ego resiliency. Finally, this study identified the variables influencing children’s anger expression. In contrast, the influence of these variables was different respectively on anger expression(anger-out), anger suppression(anger-in), and anger management.

Conclusion: The findings of this study suggest that the variables, including parental open communication ability, the environmental factor, and children’s ego resiliency, the individual factor, play a significant role in children’s anger expressing style, which they can describe, explain, predict, and control their emotion. Among these variables, open parental communication had the most decisive influence directly on anger-out, and anger suppression(anger-in), which indicates that parents need to talk with their child smoothly for their child to express their anger effectively.

Keywords: Anger Expression(Anger-Out), Anger Suppression(Anger-In), Anger Management, Open Parental Communication, Children’s Ego Resiliency

1. Introduction

The number of ‘Scary juvenile delinquents’ is gradually increasing these days. Recently, the overall volume and severity of juvenile crime have gradually increased. At the same time, these teenagers tend to have much fewer feelings of guilt and a sense of responsibility compared to before. Violence in early adolescence refers to aggressive behavior. In this age, ‘anger’ is pointed out as a primary factor of violence and should be managed beforehand.[1].

Children who are in 5th or 6th grade are in the period of transition between childhood and adolescence. They are going through many physical changes and often experience higher stress levels coming from an academic burden, family and friend relationships, appearance, or problems in the online world, which highly impact their growth and adaptation. In the past, research...
on maladaptation of late school-aged children focused mainly on aggression, hostility, and impulsivity. However, it has expanded to anxiety, depression, stress, and finally to 'anger.' This change has been made after the concept that anger might act as a mechanism on the dysfunctional expression of child prevailed. Acquiring social skills, which are the basis of human relationships, language skills, and cognitive ability, is needed in this period. Since teens spend six years of elementary school, they go through various changes. Also, puberty today begins around 12 or 13 (5th, 6th grade) on average, and more children are moving into puberty at a younger age[2].

Since the variables related to anger vary widely, these variables draw different influences depending on the variables and how each variable acts in a combined way. Therefore, human behavior cannot always be explained solely by individual characteristics; instead, one also needs to consider the environmental factor with the characteristics to predict and explain human[3].

The parent-child relationship has a quantitatively different influence on children's anger expression than all other relationships and significantly influences growth and a pattern of behavior[4][5]. With various experiences with parents, children learn how to express and feel anger and regulate their emotions under certain circumstances. In other words, parent-child relationships influence the anger experience and expression heavily. However, only a few studies investigate children's anger with several parental factors and parenting attitudes. Therefore, this relationship needs to be approached from various perspectives.

During adolescence's psychological and situational transition period, teenagers often need parents' logical and rational attitudes, with active support and secure attachment through affection[6]. However, not all children exhibit adverse emotional problems such as depression or anger under stress and difficult situations. Some people accept and handle the changes and stressful situations well[7]. Every person shows different coping mechanisms in managing and accepting the same stressful situation[8]. and ego resiliency is a significant variable explaining this difference. This variable can explain children who have adequate coping strategies under anger, stress, challenges, or dangerous situations without showing physical and mental symptoms[9]. The concept 'ego resilience' can be understood as an internal characteristic that can be easily changed under the environmental context and consistently developed.

In this study, open parental communication was set as an environmental variable, and for the individual variable, the ego resiliency of the child was selected. Most of the studies about the relationship between the style of anger expression with the potentially correlated variables have only analyzed the subfactors of the anger expression style, could not subdivide anger-out, anger-in, anger management precisely. Therefore, this study tried to consider both the individual and environmental variables in an integrated perspective.

2. Experimental Method

2.1. Subjects

The participants of this study were a total of 862 students in the 5th and 6th grades of five elementary schools located in D city. In order to accurately measure an index fit and parameters of the Structural Regression Model, the minimum study subject condition, the ratio of parameters to the number of test subjects, 1:15-20 was applied[3][10]. Among 925 subjects, several students who 1) disagreed, 2) did not have parent's consent, or 3) did not answer faithfully, were excluded and a total of 862 student's data were collected. There were 428 (49.7%) male students and 434 (50.3%) female students, with 445 (51.6%) students in the fifth grade and 417 (48.4%) in the sixth grade.
2.2. Instruments

2.2.1. STAXI-K (state-trait anger expression inventory-Korea)

In order to measure children’s anger expression, STAXI-K (State-Trait Anger Expression Inventory-Korea) was used. STAXI-K is a measure modified by Jeon Gyeomgu, Kim Dong-yeon, and Lee Joonseok[11] to fit the sentiments and culture of Korea. The original scale, which Spielberger has invented, was designed to assess anger experience (trait anger, state anger) and anger expression (anger-out, anger-in, and anger management). However, the anger experience scale was excluded in this study. The questions are a total of 8 each (anger-out, anger-in, and anger management), which are a single-dimensional scale consisting of a single factor. Using ‘Radical algorithm,’ the package variables of these three components were set as the indicator variable of anger expression.

The questions were measured on a 5-point Likert scale (24 questions) in a self-reporting way, with choosing one from ‘Strongly disagree’ (1 point), ‘Disagree’ (2 points), ‘Neutral’ (3 points), ‘Agree’ (4 points), and ‘Strongly Agree’ (5 points). The total score ranges from 8 to 40, and the higher score indicates that the child expresses anger well.

To verify the reliability of the extracted factors (anger expression), Cronbach’s alpha coefficient was used. In addition, confirmatory factor analysis (CFA), which Raykov[12] suggested, was used to verify the latent variables (anger-out, anger-in, and anger management).

2.2.2. PACI (parent-adolescent communication inventories)

In order to measure parental open communication ability, a revised version of PACI (Parent-Adolescent Communication Inventories) was initially developed by Barnes and Olson (1982) and revised by Min Hyeyoung[13] and Baek Seung-mi[14] to make it appropriate for the elementary school students. This study focused more on figuring out how children perceive the conversation with their parents than observing the parent-child communication style objectively. Therefore, only the questionnaire for children was used to find out parent-child communication style from the child’s point of view.

To verify the reliability of the extracted factors (parental open communication ability), Cronbach’s alpha coefficient was used. Construct reliability based on the confirmatory factor analysis (CFA), which Raykov[12] suggested was used to verify the latent variables of parental open communication ability.

2.2.3. Ego resilience scale of children

The Ego Resilience Scale: ER 89 of Block and Kremen (1996) used in this study is a restructured version of the guidelines by Yoo Seongkyung and Shim Hyewon[15] to suit the purpose of the study. Therefore, in this study, 14 questions on the self-elasticity of children (unidimensional scale) were aggregated into two parcels, ‘ego resilience 1,’ and ‘ego resilience 2,’ using a radial algorithm. These two variables were set as indicator variables of emotional clarity. This scale has a total of 14 questions, with a total score ranging from 14 to 60, and the higher the score, the higher the child’s self-elasticity.

To verify the reliability of the indicator variables (‘ego resilience 1,’ and ‘ego resilience 2’), Cronbach’s alpha coefficient was used. In addition, construct reliability based on the confirmatory factor analysis (CFA), which Raykov[12] suggested, was used to verify the latent variables of ego resilience.

2.3. Data analysis

2.3.1. Preliminary study
The preliminary study was carried out on October 4, 2017, with 5th and 6th elementary school graders of D city to find out whether the measurement tools of anger expression, open parental communication, ego resilience, and cognitive emotion regulation strategies were appropriate. With 90 copies, excluding nine unreliable responses, 81 copies were analyzed using SPSS 24.0. To estimate the inter-item consistency of the indicator variables, Cronbach’s alpha coefficient was used, and construct reliability: CR was verified by confirmatory factor analysis (CFA), which Raykov [12] suggested. It was found that both the Cronbach coefficient of all indicator variables and construct reliability were .70 above.

2.3.2. Main study

The institutional review board (IRB) of Daegu catholic university deliberated on the ethical and scientific validity of research purpose, protocols, and questionnaire in November 2016. After the preliminary study, the study was carried out from October 11 to October 20, 2017.

This study was measured in the child’s self-report method. Since there is a risk of showing social desirability bias and positive orientation, it was specified in the directive that there are no correct or incorrect answers. Also, to prevent the positive orientation, positive and negative questions were randomly arranged, and the number of questions was reduced to set the questions. Before proceeding with the study, the purpose and method of the study were delivered to the homeroom teachers, vice-principal and principal orally in advance and were summarized in writing and informed again to the homeroom teachers. Using the class break time, 5th, 6th graders participated in the survey under the homeroom teacher’s supervision, and certain school supplies were provided to the participants. The parental consent form was sent to each household with the research paper. Parents who agreed to the study signed the paper, and the form was delivered to the researcher.

2.4. Data analysis

As for the data processing, a statistical model was set as the following procedure below and analyzed using AMOS 24.0. First, a statistical model was set as shown in Figure 1 to analyze the direct effects of parental open communication and self-elasticity perceived by children, which was the cause variables of anger expression. Then, to measure latent variables including anger-in, anger-out, and anger management, these three variables were subdivided into two (anger-in 1,2/ anger-out 1,2/ anger management 1,2) and set as the indicator variables, respectively. Finally, paternal, maternal communication was set as the indicator variables of parental open communication skills. The same goes with ego-resiliency shown below.

Figure 1. Statistical model.
Following the two steps, the measurement model confirmation, and the structural regression model verification (Moon Soobaek, 2009; Kline, 2011), with the measurement variable conformity assessment, convergent validity and discriminant validity of measurement model were verified through confirmatory factor analysis of AMOS 24.0 and estimated the measurement model fit(conformity) and parameter. The goodness of fit between the measurement model and the structural regression model was evaluated by Chi-square ($\chi^2$), Normed Chi-square (NC), the 90% confidence interval for the Steiger-Lind (1980) RMSEA index, Tuker index (TLI: Tuker-Lewis Index), Comparative fit index (CFI), and the standardized root mean squared residual (SRMR). Also, the statistical significance of the parameter was verified at the significance level of .05. In addition, the phantom variable was used to figure out the indirect effect. After setting up the indirect effect estimated model, bootstrapping procedure of the AMOS 24.0 program was used and verified the statistical significance at the significance level of .05 as well.

3. Results

3.1. Cross-correlation matrix & descriptive statistics between the measurement variables

<Table 1> shows the results of the cross-correlation matrix between the measurement variables sampled from 862 children, the estimated average, standard deviation, skewness, and kurtosis.

Table 1. Cross-correlation matrix and descriptive statistics between the measurement variables.

<table>
<thead>
<tr>
<th>Measurement variable</th>
<th>Paternal communication</th>
<th>Maternal communication</th>
<th>Ego resiliency1</th>
<th>Ego resiliency2</th>
<th>Anger-out1</th>
<th>Anger-out2</th>
<th>Anger-in1</th>
<th>Anger-in2</th>
<th>Anger management1</th>
<th>Anger management2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paternal communication</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maternal communication</td>
<td>.69</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ego resiliency1</td>
<td>.44</td>
<td>.43</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ego resiliency2</td>
<td>.38</td>
<td>.34</td>
<td>.68</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anger-out1</td>
<td>-23</td>
<td>-24</td>
<td>-20</td>
<td>-15</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anger-out2</td>
<td>-26</td>
<td>-29</td>
<td>-24</td>
<td>-21</td>
<td>.60</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anger-in1</td>
<td>-39</td>
<td>-43</td>
<td>-38</td>
<td>-28</td>
<td>.35</td>
<td>.40</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anger-in2</td>
<td>-35</td>
<td>-36</td>
<td>-34</td>
<td>-28</td>
<td>.41</td>
<td>.44</td>
<td>.69</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anger management1</td>
<td>.17</td>
<td>.19</td>
<td>.31</td>
<td>.35</td>
<td>-.33</td>
<td>-.38</td>
<td>-.16</td>
<td>-.19</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>Anger management2</td>
<td>.13</td>
<td>.13</td>
<td>.31</td>
<td>.36</td>
<td>-.14</td>
<td>-.25</td>
<td>-.08</td>
<td>-.14</td>
<td>.55</td>
<td>1.00</td>
</tr>
<tr>
<td>Average</td>
<td>74.42</td>
<td>73.59</td>
<td>26.34</td>
<td>25.49</td>
<td>10.10</td>
<td>10.02</td>
<td>9.58</td>
<td>9.81</td>
<td>13.77</td>
<td>13.47</td>
</tr>
<tr>
<td>Standard deviation</td>
<td>14.02</td>
<td>13.52</td>
<td>4.26</td>
<td>4.21</td>
<td>2.81</td>
<td>2.92</td>
<td>2.99</td>
<td>2.80</td>
<td>2.49</td>
<td>2.20</td>
</tr>
<tr>
<td>The number of cases</td>
<td>862</td>
<td>862</td>
<td>862</td>
<td>862</td>
<td>862</td>
<td>862</td>
<td>862</td>
<td>862</td>
<td>862</td>
<td>862</td>
</tr>
<tr>
<td>Skewness</td>
<td>-.35</td>
<td>-.21</td>
<td>1.17</td>
<td>-.18</td>
<td>.31</td>
<td>-.02</td>
<td>.20</td>
<td>.08</td>
<td>-.28</td>
<td>-.17</td>
</tr>
<tr>
<td>Kurtosis</td>
<td>-.18</td>
<td>-.59</td>
<td>12.03</td>
<td>-.30</td>
<td>-.17</td>
<td>-.58</td>
<td>-.41</td>
<td>-.30</td>
<td>.39</td>
<td>.43</td>
</tr>
</tbody>
</table>
3.2. Fit(conformity) and parameter estimates on the measurement model

To evaluate the estimation and conformity of the structural regression model, it was converted into a measurement model following the two-step estimation of models (Moon Soobaek, 2009).

3.2.1. The result of conformity assessment on the measurement model

For the conformity assessment on measurement model, Chi-square ($\chi^2$), Normed Chi-square (NC), the 90% confidence interval for the Steiger-Lind (1980) RMSEA index, Tucker index (TLI: Tucker-Lewis Index), Comparative fit index (CFI), and the standardized root mean squared residual (SRMR) were used. As Table 5 shows, all conformity indices, including RMSEA, met the evaluation standard well.

Table 2. The conformity index of the measurement model.

<table>
<thead>
<tr>
<th>Model</th>
<th>NPAR</th>
<th>DF</th>
<th>CMIN</th>
<th>NC</th>
<th>TLI</th>
<th>CFI</th>
<th>SRMR</th>
<th>RMSEA(.07)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measurement</td>
<td>45</td>
<td>75</td>
<td>265.84</td>
<td>3.54</td>
<td>.95</td>
<td>.96</td>
<td>.04</td>
<td>.05</td>
</tr>
<tr>
<td>model</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3.2.2. Estimated parameters regarding the measurement model

As all the goodness-of-fit indices of the measurement model were found to be good, the results of estimated parameters of the measurement model through confirmatory factor analysis are shown in Figure 2.

Figure 2. Estimated parameter of the measurement model.

<Figure 2> shows that the correlation coefficient between latent variables (parent open communication, ego-resilience, anger-out, anger-in, and anger expression) was between .24 and .74. Since the factors set in the model are the subscales to measure the construct, the correlation coefficient of latent variables should be .85 or less for discriminant validity[3][10]. If the correlation coefficient of latent variables is .85 or above, it means two latent variables are measuring the same factor. This study showed the correlation coefficients between the latent variable scale under .85, which means it satisfied the discriminant validity. The observed variables used to measure the latent variable are the indicated variables[3]. The average factor loading between latent and indicated variables should be at least .50 to fit the convergent validity. First, the factor loading of the latent variable for the parent’s open communication ability relationship was .83 for the paternal communication and .82 for the maternal communication. Second, the
factor loading of the latent variable for ego-resiliency was .84 for ego-resiliency1 and .81 for ego-resiliency2. Lastly, the factor loadings of the latent variables for anger-out, anger-in, and anger management were as follows; anger-out1 .72, anger-out2 .83, anger-in1 .83, anger-in2 .83, anger management1 .68, and management2 .80. The factor loadings of indicated variables for latent variables should be at least .50 on average. Thus, the convergent validity of each latent variable above satisfies the standard.

3.2.3. Decomposition of a total effect into direct and indirect effects

By measuring the structural regression model of the final research model, the effects of the relationship between the presented variables were verified. These effects were decomposed into direct and indirect effects, and the result is shown in <Table 3> below.

Table 3. Decomposition of a final research model into direct and indirect effect: results.

<table>
<thead>
<tr>
<th>Variable</th>
<th>standardized coefficient (β)</th>
<th>Unstandardized Coefficient (B)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total effect</td>
<td>Direct effect</td>
</tr>
<tr>
<td>Parental open communication → Ego resiliency</td>
<td>.58 *</td>
<td>.58 *</td>
</tr>
<tr>
<td>Ego resiliency → Anger-out</td>
<td>-.17 *</td>
<td>-.17 *</td>
</tr>
<tr>
<td>Ego resiliency → Anger-in</td>
<td>-.20 *</td>
<td>-.20 *</td>
</tr>
<tr>
<td>Ego resiliency → Anger management</td>
<td>.53 *</td>
<td>.43 *</td>
</tr>
<tr>
<td>Parental open communication → Anger-out</td>
<td>-.44 *</td>
<td>-.34 *</td>
</tr>
<tr>
<td>Parental open communication → Anger-in</td>
<td>-.58 *</td>
<td>-.47 *</td>
</tr>
<tr>
<td>Parental open communication → Anger management</td>
<td>.34 *</td>
<td>.34 *</td>
</tr>
</tbody>
</table>

Note: Figures are rounded to two decimal places, *p < .05.

As shown in <Table 3>, the parameter of the total, direct, and indirect effects of the structural regression model, the final research model, was verified following the statistical procedures. At the significance level of .05, the significance is verified by statistical methods. The results are as follows:

a) The total effect of the related variables affecting the 'Anger management' variable was ego resilience (B=.28, p<.05) and open parental communication (B=.06, p<.05) in order. b) The total effect of the related variables affecting the 'Anger-in' variable was open parental communication (B=.13, p<.05) and ego resilience (B=.15, p<.05) in order. c) The total effect of the related variables affecting the 'Anger-out' variable was open parental communication (B=.08, p<.05) and ego resilience (B=.10, p<.05) in order. d) The related variable affecting 'Ego resiliency' was open parental communication (B=.18, p<.05).

3.2.4. A test of significance of the research model indirect effects

The research problem in this study is whether it directly affects each variable. However, the significance and possibility of indirect effects can also be studied through a new hypothesis that indirect effects may exist beyond the scope of direct effects between variables[3]. In this study, an indirect effect model was set up using the Phantom variable to determine the incidental, indirect effect. Next, the indirect effect was projected through the bootstrapping procedure of the AMOS24.0 program. <Table 4> below shows the results of the statistical test of significance.
Table 4. Estimation of a final research model’s indirect effect & the results of a statistical significance test.

<table>
<thead>
<tr>
<th>Variables</th>
<th>The coefficient of indirect effect</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
</tr>
<tr>
<td>Parental open communication</td>
<td></td>
</tr>
<tr>
<td>→ Ego resiliency</td>
<td></td>
</tr>
<tr>
<td>→ Anger-out</td>
<td>-.02*</td>
</tr>
<tr>
<td>Parental open communication</td>
<td></td>
</tr>
<tr>
<td>→ Ego resiliency</td>
<td></td>
</tr>
<tr>
<td>→ Anger-in</td>
<td>-.03*</td>
</tr>
<tr>
<td>Parental open communication</td>
<td></td>
</tr>
<tr>
<td>→ Ego resiliency</td>
<td></td>
</tr>
<tr>
<td>→ Anger management</td>
<td>.04*</td>
</tr>
</tbody>
</table>

Note: Figures are rounded to two decimal places, *p < .05.

The results are as follows:

a) 'Parental open communication ability' indirectly affects 'anger-out' (B=-.02, p<.05) through ego-resiliency.
b) 'Parental open communication ability' indirectly affects 'anger-in' (B=-.03, p<.05) through ego resiliency.
c) 'Parental open communication ability' indirectly affects anger management (b=.4, p<.05) through ego resiliency.
d) Therefore, 'Parental open communication ability' does indirectly affect 'anger-in,' 'anger-out,' 'anger management' through ego resiliency.

4. Discussion

This study sought to examine a direct effect between each variable. However, the significance and possibility of indirect effects can also be discussed and studied through a new hypothesis that indirect effects may exist beyond the scope of direct effects between variables. For example, based on the fact that there was little direct correlation between parents' open communication skills and anger control, statistical tests were conducted through the Phantom variable to find out a more comprehensive range of indirect effects.

4.1. The influence of parental open communication ability on child anger expression

It was turned out that parental open communication ability directly influences child anger expression, especially on anger-out and anger-in. The more parents communicate openly and effectively with their children, the more they express or repress their anger less. When parents and children feel stable and continue a smooth conversation, relationships between parents and children will significantly improve. As a result, the degree of anger-in and out of the child will decrease. Conversely, communication between parents and children that is ineffective or negative can lead children to express their rage or suppress anger.

When children begin to feel that they are having open communication with their parents, they start to express anger appropriately to others. This study result is in line with studies showing that open parental communication has a significant correlation between anger-in and out[16][17][18][19][20]. and that parent-child communication affects children's negative emotional[21].

On the contrary, the study showed that parents’ open communication ability did not directly affect anger management. It is partially consistent with the results of one study suggesting that there is little correlation between anger management and paternal communication style[17]. Considering that the correlation between the two variables is not established because not only the direct effect between the variables but also indirect effect through other variables or third variables have an effect[3], open parental communication can have an indirect influence on child anger management through other variables.

Therefore, it is important to make parents aware of their pivotal role of open communication,
prevent children's maladaptive expression of anger, and provide information to form the proper expression of anger.

4.2. The influence of child ego resiliency on child anger expression

It was turned out that child ego resiliency directly affects child anger expression, which means children with higher ego resiliency can control their anger more adequately. The results of this study are similar to those of the previous studies on the correlation between child ego resiliency and anger expression\[22\] and on switching distorted thoughts about an angering event in mind can prevent negative way of interpreting anger\[23\].

In addition, studies show that children's ego resilience and anger management have a significant correlation\[24\] and that children with high ego resilience adapt and manage a stressful situation more efficiently and show high anger managing ability are in line with the result of this study\[25\][26][27]. It means that the higher the child's ego resiliency, the higher the child's anger managing ability, which children can easily control their anger in their way. Furthermore, ego resiliency is an internal characteristic of an individual which can be changed and developed. Therefore, improving child ego resiliency is needed to protect their rights in any situation.

4.3. The influence of parental open communication ability on child ego resiliency

It was turned out that parental open communication ability directly influences child ego resiliency. These findings were consistent with previous literature showing that affectionate parenting and open communication positively affect child ego resiliency and self-conception\[28\] [29][30][31]. It is also in line with a study that shows child ego resiliency declines as parents show more dysfunctional communication, including evaluation, criticism, and appeasement\[32\]. Furthermore, a study that revealed maternal meta emotion philosophy and child's ego resiliency has a significant correlation\[33\].

Hence, parents must consider ways to build an environment where children can express themselves openly and freely. In addition, it will help children build ego resiliency and emotion managing ability to cope with stressful situations adaptively.

4.4. Integrated anger expression in the research model

Based on the study's findings, both direct and indirect effects of child anger expression were verified through the structural model. In addition, the structural relationship between child anger expression and potentially related variables and indirect effects were also found.

The findings of this study suggest that the variables, including parental open communication ability, the environmental factor, and children's ego resilience, the individual factor, play a significant role in children's anger expressing style. Open parental communication did not influence child anger management, indirectly affecting child ego resiliency.

In other words, children's ego resiliency is a mediator variable that mediates parents' open communication with child anger management. Since parents' open communication positively affects developing child ego resiliency, it eventually helps control the anger. So, unfortunately, no previous studies are examining the mediating effect of child ego resiliency that comparing the results of the previous studies with those of this study would be difficult. However, the result of some precedent studies shows similar context: children whom their parents have taught about conversation considering the perspectives of others had higher ego resiliency, which affects positively on emotional intelligence\[34\] and maternal affectionate, caring increases child emotion regulation through child self-esteem\[35\][36]. Thus, to increase the level of anger control in children, parents need to communicate openly and soundly with their children. However, the study also suggests that improving children's ego resiliency is pivotal.
The results were as follows: First, parental open communication ability and children’s ego resiliency directly affect their anger expression (anger-out) and suppression (anger-in). Second, children’s ego resiliency has an indirect influence on anger management. Also, parents’ open communication skills directly impact child ego resiliency. Finally, this study identified the variables influencing children’s anger expression. In contrast, the influence of these variables was different respectively on anger expression (anger-out), anger suppression (anger-in), and anger management.

The findings of this study suggest that the causing variables, including parental open communication ability, the environmental factor, and children’s ego resiliency, the individual factor, play a significant role in children’s anger expressing style. Furthermore, open parental communication had the most substantial influence directly on anger-out and anger suppression (anger-in), which indicates that parents need to talk with their child smoothly to interpret and express their anger effectively. Therefore, practical measures such as parent education programs teaching parenting methods or parent counseling programs are needed. Also, for children, early childhood education aims to control anger, which can cause conflicts with peers. It can help children build positive emotions throughout adolescence and adulthood and help social adaptation [37].

5. References

5.1. Journal articles


5.2. Thesis degree


5.3. Books

6. Appendix

6.1. Authors contribution

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<td>Lead Author</td>
<td>EP&lt;br&gt;- Set of concepts ✔&lt;br&gt;- Design ✔&lt;br&gt;- Getting results ✔&lt;br&gt;- Analysis ✔&lt;br&gt;- Make a significant contribution to collection ✔&lt;br&gt;- Final approval of the paper ✔&lt;br&gt;- Corresponding ✔&lt;br&gt;- Play a decisive role in modification ✔&lt;br&gt;- Significant contributions to concepts, designs, practices, analysis and interpretation of data ✔&lt;br&gt;- Participants in Drafting and Revising Papers ✔&lt;br&gt;- Someone who can explain all aspects of the paper ✔</td>
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<td>Corresponding Author*</td>
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