

Promoting Children's Resilience for Nurturing Competent Citizens for the Future

Yoichi SAKAKIHARA, M.D.

Director

Child Research Net

Professor Emeritus

Ochanomizu University

Child Development is naturally a robust process, and many children will become competent citizens without any further supports. This robustness is mostly explained by the genetic nature of human development. Current studies on genetics of development have proved that many processes of human development are programmed in DNA, and the effects of environment on child development are quite limited. For example, intelligence quotient (IQ) is highly genetically determined. The correlation quotient for the IQs of identical twins grown in separate environments is as high as 0.72. This means that children's experiences including education have explained only a third of their intelligence.

However, this small portion of experiences matters when they are disruptive in nature. In the real world, children are confronting a variety of hardships such as poverty, maltreatment, household dysfunction and other adversities.

Adverse Childhood Experiences (ACEs)

As a physician working at a large medical insurance organization, Felitti noticed a relation between adulthood obesity and childhood abuse experience.¹⁾ While conducting an epidemiological study on adulthood obesity, he noticed many obese adults experienced childhood abuse. Felitti also found that obesity itself was not a problem but rather a protective solution for many of obese adults, because obese individuals are usually large, and less likely to become the victims of abuse.

Since association between childhood abuse and adult health risk behaviors and disease was well known, Felitti and Anda in Centers for Disease Control and Prevention conducted a large retrospective cohort study in which they investigated the relation between seven categories of childhood adversity experiences –i.e. three in personal abuse (recurrent physical abuse, recurrent emotional abuse, and sexual abuse) and four in dysfunctional household (living with alcoholic persons or drug users, house members who were in prison, house members who were depressed, mentally ill or suicidal, parents were separated or divorced, or mother was treated violently).²⁾

The prevalence rates of childhood exposure to these abuse and household

dysfunction were found to be quite high. For example, prevalence rates of psychological, physical and sexual abuse were 11.1%, 10.8% and 22.0% respectively. The prevalence rates of childhood exposure to household dysfunction were also high. Twenty five percent of the subjects were exposed to drug abusers at home, and 12.5% of the subject witnessed violence against their mothers.

The most important finding of Felitti's study was that there were significant association between the number of experienced categories of adversity and later outcome of physical and mental disorders in adulthood. Persons who had experienced four or more categories of childhood exposure to adversities had 4- to 12-fold increased health risks for alcoholism, drug abuse, depression and suicide attempt, and 2- to 4-fold increase in smoking, poor health and sexually transmitted diseases. Although the study was a retrospective one, a graded relationship to the presence of adult diseases such as ischemic heart diseases, cancer, chronic lung disease etc. indicated a causal relationship.

Felitti depicted his finding as the explanatory cartoon shown below (Fig 1).

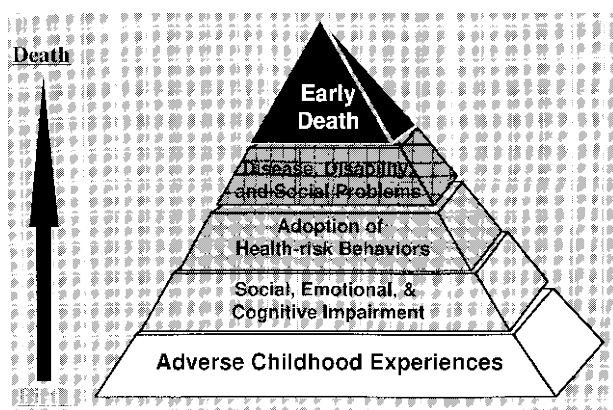


Figure 1. ACE pyramid (Felitti, VJ et al. Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults. *Am J Prev Med*, 14, 245-258, 1998.)

Results of Felitti's study have been reproduced by many later researchers. For example, Oh et al. reported that ACEs were associated with delay in cognitive development, increased incidence of asthma, infections and sleep disturbance.³⁾ Children with high ACEs scores were associated with higher blood cortisol levels, higher incidence of immunological disorders, and even shortened telomere (a part of chromosomes) length.

Gummitt has shown that almost 15% of US mortality was associated with ACEs.⁴⁾ Thus, the fact that ACEs is one of the most serious threats to human life has been proved.

Resilience

Exposure to adversities does not always lead to later unhealthy behaviors and diseases. Even in Felitti's study, majority of the individuals who had exposed to many categories of adversities did not develop unhealthy behaviors and resultant diseases.

Every child is known to be equipped with a special psychological ability to recover from physical, psychological and social adversities. This special ability is called resilience. Resilience is not an innate ability but acquired through experience. Resilience was originally a technical term of physics indicating the ability of materials that enable it to retain its original form after deformation like elasticity. It was then used as a psychological term indicating the process or capacity to endure or tolerate hardship that threaten people. According to Ungar, resilience was defined as follows: "In the context of exposure to significant adversity, resilience is both the capacity of individuals to navigate their way to the psychological, social, cultural, and physical resources that sustain their well-being, and their capacity individually and collectively to negotiate for these resources to be provided in culturally meaningful ways."

5)

This definition implies that resilience is a concept encompassing both the individuals and the environments that encircle the individuals. It is a natural corollary to consider resilience as useful counter measures to cope with ACEs. The survey on resilience was an imminent issue since the pandemic of COVID-19 made children exposed to more adversities than ordinary time.

Thus, we decided to conduct a collaborative survey on the condition of resilience in eight Asian countries, so that we would be able to find effective measures to protect them from hardship accompanying the pandemic.

Collaborative survey on the situation of resilience among children

The survey was conducted as a collaborative study among eight Asian countries (China, Indonesia, Japan, Malaysia, the Philippines, Singapore, Taiwan, and Thailand). The main theme of the research was "Nurturing 'Happy and Resilient' Children from three perspectives of the environment surrounding children (families/childcare facilities, schools/government, society)".

We set 2 research questions as follows:

- 1) What are the factors that determine children's happiness and resilience in the time of COVID-19? We will clarify this through the three environmental perspectives of families, childcare facilities/schools, and governments/society.
- 2) Is a child's resilience related to his/her happiness (well-being)?

The dependent (outcome) variables of the survey were children's resilience and

happiness (QOL). The independent variables representing children's three environmental strata namely family, childcare centers/kindergartens/school, and community/country. These include mother's parenting attitude, mother's perception of childcare, mother's anxiety, spousal supports, children's use of digital media, parental involvement and concerns in children's digital media use, children's everyday life and play, support from childcare center/kindergarten/school. Demographic data such as annual household income and parents' educational levels, and the situation of COVID-19 pandemic are also included.

In order to envisage the association of these variables with the dependent variables, we proposed analytical perspectives as shown below.

- 1) Association with the availability and amount of support for childrearing from family members and domestic workers, etc. and from childcare facilities and schools, and children's resilience and happiness.
- 2) Association with mothers' attitudes and perceptions, awareness (of childrearing/work) and children's resilience and happiness.

Subjects were mothers with children aged 5 attending childcare centers/kindergarten, or aged 7 attending elementary school.

Number of subjects were 1,973 mothers of 5-year-olds (8 countries) /1,372 mothers of 7-year-olds (6 countries except for China and Singapore) .

Survey was conducted by a questionnaire survey (Online/Paper).

Survey period was from August to November in 2021.

Results of descriptive analysis were as follows:

The responders of the present survey were mothers of either 5-year-old children or 7-year-old children. Most of the children (more than 70%) were either the first-born or the second born children. There were significant differences among countries as to the status of attendance to childcare centers or schools. Among 5-year-old children, almost all (97.8~100%) children in Japan, China, Taiwan and Singapore were attending childcare centers/kindergartens/schools, while in the Philippines and Malaysia children were almost equally divided into "Attends the childcare facility/school" and "Hybrid style of attending childcare facility/school and online classes". In Indonesia and Thailand, children were divided into "Does not attend childcare facility/school" and "physically or on-line attending". Among 7-year-old children, children were regularly attending school in Japan and Taiwan, while in Malaysia and Indonesia, half of the children were regularly attending schools and the rest were either attending regularly or attending with occasional on-line lectures. In the Philippines, almost all (93.1%) were attending with supplementary on-line classes. In Thailand, half of the children were not attending while the rest were attending with supplementary on-line lectures.

With respect to the status of mothers' occupation, mothers of 5-year-old children in Japan, China, the Philippines, Singapore and Thailand were mostly (76.0~95.9%) fully employed, while in Malaysia, Taiwan, Indonesia, the proportions of fully employed mothers were between 31.5% to 49.6%. Among mothers of 7-year-old children, more than half (53.2~75.0%) were fully employed in Japan, the Philippines, Malaysia, Taiwan, and in Thailand, while most (71%) mothers in Indonesia were not employed. Most of the fathers/partners were employed.

Mothers of 5-year-old children had mostly (54.6%~93.6%) completed higher education except in Malaysia where 60% of mothers completed middle level education. Among mothers of 7-year-old children, most of the mothers (55.9%~83.3%) completed higher education except in Malaysia and Indonesia, where the proportions of mothers who completed middle level education were most prevalent (60%). Similar tendency was observed among the fathers/partners.

Substantial differences were found in the household incomes. The middle range income was most prevalent (96.3%) in the Philippines, while the lower range income was most common (76.0%) in Malaysia. A far greater proportion (43.3%) of the mothers in Indonesia answered "Do not know" or declined answering the question. In other countries, the household income levels were rather evenly distributed. Similar results were seen among families of 7-year-old children.

Since the survey was conducted during the pandemic period of COVID-19, we incorporated into the questionnaire several relevant questions.

Income change due to the pandemic was not present in 63% of the families in Japan, while 60 % of the mothers reported a decline of income in Indonesia and Thailand. In other countries, responses were equally divided into "Has decreased" and "Has not changed". With respect to the rates of vaccination coverage, more than 70% of the mothers got vaccinated in most of the countries except for Taiwan where only a half of the mothers got vaccinated.

A schematic presentation of the correlational analysis of the variables were shown in Fig. 2.

As seen in the figure, resilience was associated with many variables. Notably responsive parenting style and quality and quantity of ECEC services had good correlations with resilience ($r=.277, .328$).

The association between resilience and QOL was proved to be very high ($r=.590$). Children with high QOL scores had higher resilience scores, and vice versa. Although this association did not infer their causal relations, since resilience could be acquired through protective experiences, this finding gave us practical tips to elevate children's QOL.

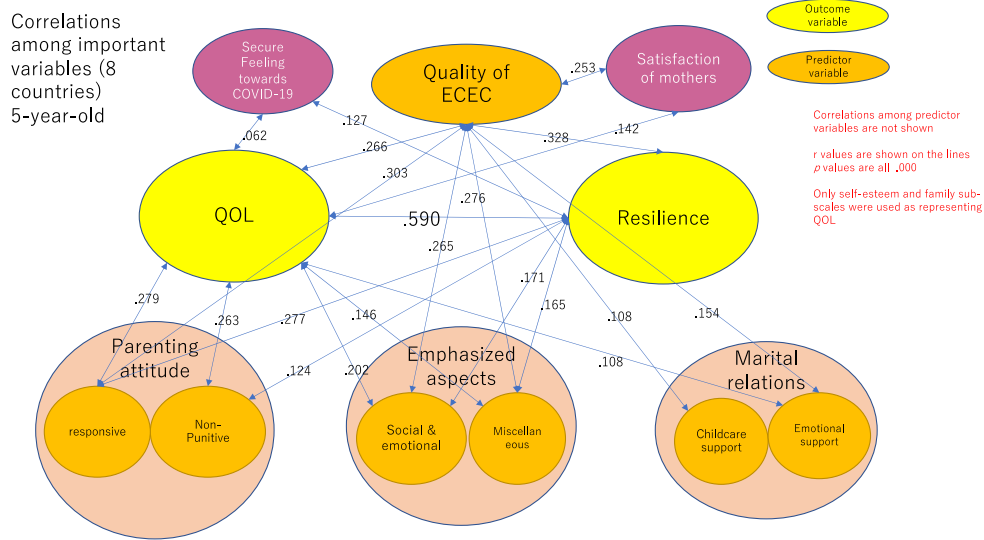


Figure 2. Correlation among the variables (only the results in 5-year-olds is shown.)

The presence of correlational relations between the factors and resilience and QOL is a proof that our first hypothesis was pertinent. The presence of such correlations also indicated that associations between these factors were rather ubiquitous features of childcare that are not influenced by culture and history. This means that this correlation analysis can prove a common nature of child-parent relationship in all participating countries.

We then underwent a regression analysis among these variables and resilience. As shown in Fig 3, the quality of ECEC and parenting styles predicted the resilience of children, indicating the important role of ECEC and parenting style for sustaining resilience.

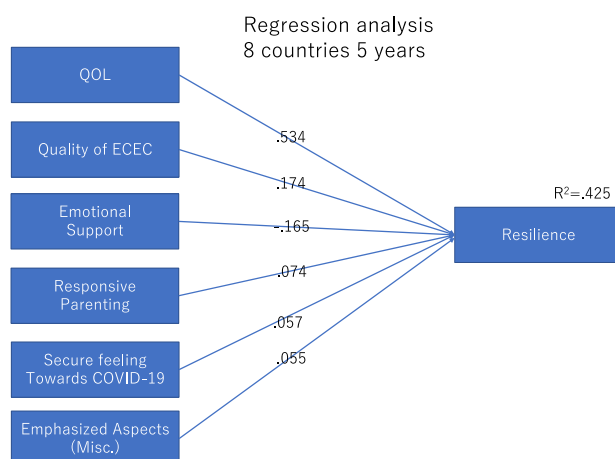


Figure 3. Regression analysis of the factors predicting resilience (results of 5-year-olds)

Household structure was shown to be associated with resilience. As seen in Fig. 4,

the number of children in the family was inversely associated with the resilience of children. There was a weak but significant positive correlation between the number of friends and resilience, indicating the importance of having friends in maintaining stable resilience (Fig. 5).

Contrary to our initial expectation, household income and mothers' education had no significant associations with children's resilience.

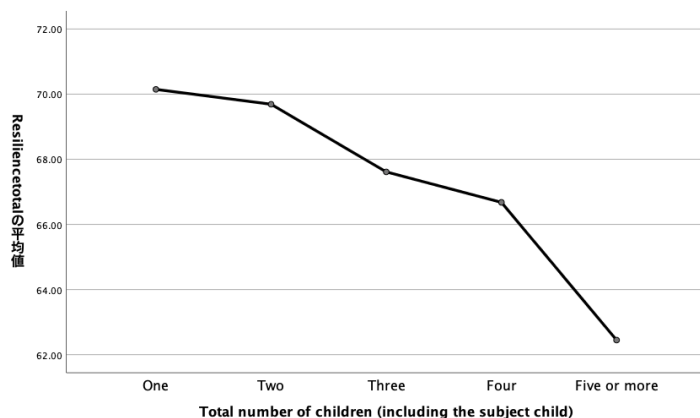


Figure. 4. Association between the number of children and resilience (results of 5-year-olds)

The more the friends, the more the resilience (8 countries)

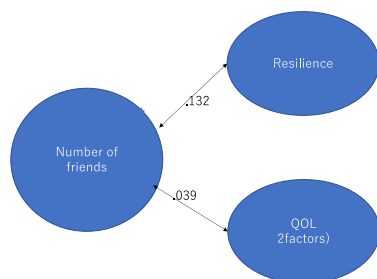


Figure. 5. Correlation between resilience and number of friends. (results of 5-year-olds)

In summary, it was found that many childcaring factors such as parenting style and the quality of ECEC were associated with resilience of children in the collaborative study conducted in eight Asian countries.

These associations were quite ubiquitous among participating countries indicating the universal nature of the relationship between childcare and resilience.

QOL and resilience were highly associated, although we could not draw any conclusion about their causal relation.

Protective and compensatory experiences (PACE)

In the collaborative study in eight Asian countries, it was implicated that several household functions were associated with resilience in children.

American researchers who had studied parenting styles and their effect on child development, were seeking the factors that protect children from ACEs. They focused on resilience as the key factor to protect children from ACEs, and found that ten specific experiences were associated with resilience.⁶⁾ These experiences were named the Protective and Compensatory Experiences (PACE) as shown in Table 1.

Table 1. Protective and Compensatory Experiences

1. Unconditioned love
2. Having a best friend
3. Volunteering in the community
4. Being part of a group
5. Having a mentor
6. Living in a home that is clean and safe, with enough food
7. Getting an education
8. Having a hobby
9. Being physically active
10. Having rules and routines

The results our collaborative study showed were compatible with the PACE. Responsible parenting style are based on “rules and routines” and “unconditioned love”. High quality of ECEC is based on “getting an education” and “being a part of a group”. Higher number of friends was relevant to “having a best friend”.

Conclusion

In this paper, I introduced the concept of ACEs, followed by our collaborative study on children’s resilience and QOL in Asian countries. Several household factors and childcare practices were found to be associated with children’s QOL and resilience. Factors associated with resilience in our collaborative study were comparable with some of the PACE proposed by Morris and colleagues.

Since resilience is a learnable psychological and social substrate, we will be able to promote children’s resilience through parenting, childcare practice and other modifiable environmental factors, to nurture competent citizens in the future world.

References

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