

ORIGINAL

The relationship between parents with a history of childhood problems and incidence of consequent child abuse

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Abstract : The purpose of this study was to determine the factors related to the need for cooperation with child guidance centers with a focus on the presence or absence of a history of childhood problems in at-risk parents receiving support from their municipality. Among the 1890 parents who received child care support from public health nurses in the municipalities, 164 parents (8.7%) had a history of childhood problems. Among these, 50 parents (30.5%) received support from child guidance centers. The parents with a history of childhood problems had a higher incidence rate for receiving support from child guidance centers than other parents. Multiple logistic regression analysis showed that “marital strife or domestic violence”, and “financial problems” were associated with consultations with child guidance centers among parents with a history of childhood problems. The results showed that family situations of parents who had a history of childhood problems may, in time, become more severe, even if they have received support from public health nurses in the municipalities. Therefore, parents with a history of childhood problems need support as early as possible. In addition, those parents with “marital strife or domestic violence” and “financial problems” also need guidance and early nursing care interventions. *J. Med. Invest.* 63 : 209-215, August, 2016

Keywords : child abuse, history of childhood problems, risk factors, child guidance centers

INTRODUCTION

The objectives of child-abuse prevention programs focus on complete prevention of fatal child abuse. The goals of these programs include prevention of psychological trauma, provision of psychological support, and severing of the intergenerational cycle of abuse. With the exception of double suicides, over 60% of deaths from child abuse are of children between the ages of 0 to 2, and most of the perpetrators are biological mothers (1). There is therefore a great need for a seamless support system to prevent child abuse beginning at the perinatal period.

Prefecture A in Japan has a prefecture-wide system for preventing child abuse that includes pregnancy and childbirth support programs : visiting all families with infants, conduct health examinations for infants, and identify parents with high risk factors that can predict and trigger difficulties in parenting (hereinafter referred to as “at-risk parents”) and provide guidance and consultative support at the earliest stage (2).

One factor that must be examined when assessing the need for support to prevent child abuse is the parent’s own history of childhood problems, most common of which is being victims of abuse themselves, or a participant in a problematic relationship with their parent(s). Being abused as a child is known to be associated with current child abuse risk (3-5), and a history of childhood problems can have a large impact on parenting behavior. However, the rate of intergenerational cycle of child abuse varies, with rates reported to be 6.7% (6), 16.7% (7), and 23% (8), that is, parents who were themselves abused when they were younger do not always abuse

their own children. Learning the factors that lead abused parents to abuse or not abuse their children would provide useful information to prevent child abuse (3).

In this study, the focus was on the presence or absence of a history of childhood problems among at-risk parents with the aim of identifying factors leading to situations of abuse, in which supportive interventions with child guidance centers were required.

METHODS

1. Procedure

This study was conducted in collaboration with the officers at the relevant departments in Prefecture A. In this study, public health nurses in prefecture A responded to the survey regarding at-risk parents receiving child care support from public health nurses in each municipality. Personal identifiers of at-risk parents and of nurses who responded to the survey were removed. Data were obtained, coded, and collected at the relevant departments in Prefecture A. This study was conducted with the approval of the Ethics Board of Tokushima University Hospital, Tokushima, Japan.

2. Survey content (Table 1)

There were 22 risk factors predicted to cause difficulty in parenting based on a list by Kato *et al.* (9). Surveys of at-risk parents receiving child care support from public health nurses in specific municipalities covered assessment questions regarding the identification of at-risk parents, the presence or absence of each of the 22 risk factors, the acceptance situation of support from public health nurses, the cooperation with the child guidance centers, and the urgency of needed support. In this study, “a history of childhood problems,” which is one of the risk factors in the survey, refers to problems the parents experienced in their own childhood. This include abuse, neglect, resentment towards parents, acceptance

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Table 1
Survey form

Contents	Response
The identification of at-risk parents	Maternity hospitals or Maternal and child health activities by municipalities
Risk factors	Presence or Absence
Multiple pregnancy or Low birth weight infant	
History of mother-child separation	
Child illness or Disability	
Developmental delay of child	
Cuts or bruises	
Not undergoing medical examination of infants	
Negative feelings toward one's own child	
Lack of parenting ability or affection	
Parenting stress, Anxiety	
Unwanted pregnancy or Not undergoing prenatal examination	
Young pregnant women	
History of childhood problems	
Parent illness	
Personality characteristics	
Difficulty resolving stress	
Drug addiction	
Single mother or Common law family	
Marital strife or Domestic violence	
Financial problems	
Isolation from family	
House overflowing with garbage, etc	
Lack of parenting support	
The acceptance situation of support from public health nurses	Good or Not good
The cooperation with the child guidance centers	Necessary or Unnecessary
The urgency of support need	Urgency or Usually

of physical punishment from parents, or repeated fighting among parents.

3. Data Analysis

Data were analyzed using the Mann-Whitney test comparing the number of risk factors of at-risk parents those with and without a history of childhood problems, and chi-square test or Fisher's exact test to determine the association between a history of childhood problems and other risk factors, and supportive interventions and counselling received within the child guidance centers. Multiple logistic regression analysis was performed to determine the factors modifying at-risk or not at-risk parents with a history of childhood problems who required interventions and consultations with the child guidance centers. The step-up method (likelihood ratio method) was used to select variables. The data were analyzed using the SPSS 22.0 for Windows with a level of significance of less than $P < 0.05$.

RESULTS

In Prefecture A, a total of 1,890 parents requiring child care support were newly identified in the five-year period from fiscal year 2009 to 2013. Supposing that these parents were identified when their children were under a year old, this number corresponds to about 6% of all births in Prefecture A in that five-year period. Of these number, 164 parents (8.7%) had a history of childhood problems, with the number tending to increase over the five-year period (Fig. 1). Of the 1,890 parents, interventions and consultations in

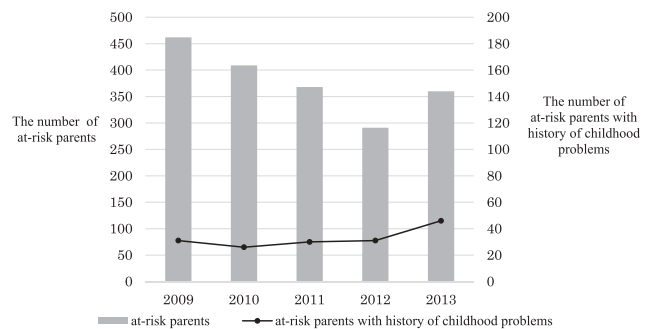


Fig. 1. Change of the number of at-risk parents

cooperation with child guidance centers was required for 289 parents (15.3%) (Fig. 2).

1. Comparison of number of risk factors of at-risk parents with and without a history of childhood problems

The median number of risk factors was 4.5 (interquartile range : 3.0 to 6.8) for those with a history of childhood problems and 2.0 (1.0 to 3.0) for those without a history of childhood problems. The Mann-Whitney test indicated a significant difference between at-risk parents with and without a history of childhood problems in the number of risk factors ($U = 62393.500, p < 0.001$).

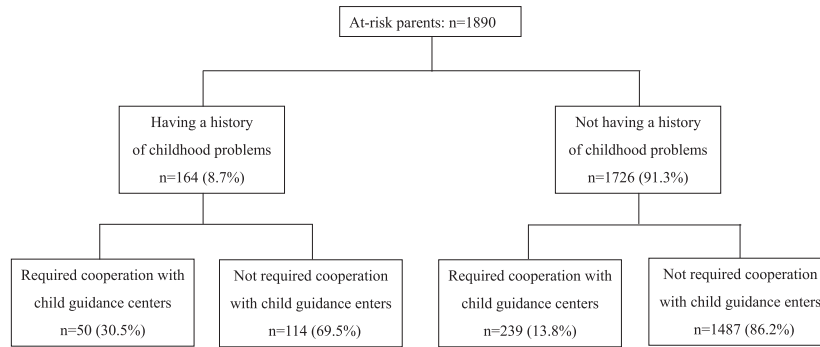


Fig. 2. Outline of at-risk parents in this study

2. Association between at-risk parents with a history of childhood problems and other risk factors

Common risk factors in at-risk parents with a history of childhood problems were, in descending order, parenting stress or anxiety (96 parents, 58.5%), lack of parenting ability or affection (88 parents, 53.7%), and financial problems (75 parents, 45.7%). Other risk factors observed in at least 30% of parents were personality characteristics, difficulty resolving stress, single mother or common law family, and parent illness.

Common risk factors among at-risk parents without a history of childhood problems were, in descending order, parenting stress or anxiety (796 parents, 46.1%), lack of parenting ability or affection (463 parents, 26.8%), and parent illness (341 parents, 19.8%).

Examination of the association between at-risk parents with a history of childhood problems and other risk factors was conducted

using either a chi-square test or Fisher’s exact test. As Table 2 shows, a total of 15 risk factors including lack of parenting ability or affection ($\chi^2=52.212$, $p<0.001$), difficulty resolving stress ($\chi^2=69.570$, $p<0.001$), and financial problems ($\chi^2=98.988$, $p<0.001$) were significantly associated with having or not having a history of childhood problems, with a higher proportion of at-risk parents having a history of childhood problems in each case.

3. Association between a history of childhood problems and cooperation with child guidance centers

The number of at-risk parents requiring interventions and consultations in cooperation with child guidance centers was 50 parents (30.5%) among those with a history of childhood problems, and 239 parents (13.8%) among those without a history of childhood problems. The chi-square test revealed a significant association between having or not having a history of childhood problems and

Table 2 Association between a history of childhood problems and other risk factors

	Having a history of childhood problems n=164	Not having a history of childhood problems n=1726	p-value
Multiple pregnancy or Low birth weight infant	15 (9.1%)	166 (9.6%)	0.845
History of mother-child separation	11 (6.7%)	67 (3.9%)	0.082
Child illness or Disability	8 (4.9%)	154 (8.9%)	0.077
Developmental delay of child	32 (19.5%)	285 (16.5%)	0.326
Cuts or bruises	6 (3.7%)	20 (1.2%)	0.021
Not undergoing medical examination of infants	13 (7.9%)	84 (4.9%)	0.090
Negative feelings toward one’s own child	31 (18.9%)	101 (5.9%)	<0.001
Lack of parenting ability or affection	88 (53.7%)	463 (26.8%)	<0.001
Parenting stress or Anxiety	96 (58.5%)	796 (46.1%)	0.002
Unwanted pregnancy or Not undergoing prenatal examination	17 (10.4%)	109 (6.3%)	0.047
Young pregnant women	44 (26.8%)	199 (11.5%)	<0.001
Parent illness	55 (33.5%)	341 (19.8%)	<0.001
Personality characteristics	64 (39.0%)	237 (13.7%)	<0.001
Difficulty resolving stress	57 (34.8%)	198 (11.5%)	<0.001
Drug addiction	2 (1.2%)	6 (0.3%)	0.148
Single mother or Common law family	57 (34.8%)	280 (16.2%)	<0.001
Marital strife or Domestic violence	32 (19.5%)	164 (9.5%)	<0.001
Financial problems	75 (45.7%)	256 (14.8%)	<0.001
Isolation from family	43 (26.2%)	105 (6.1%)	<0.001
House overflowing with garbage, etc	22 (13.4%)	56 (3.2%)	<0.001
Lack of parenting support	36 (22.0%)	185 (10.7%)	<0.001

presence or absence of cooperation with child guidance centers ($\chi^2=32.019$, $p<0.001$), and with a higher proportion of cooperation among at-risk parents with a history of childhood problems.

Examination of the association between presence or absence of cooperation with child guidance centers and other risk factors separately for those with and without a history of childhood problems was conducted using either a chi-square test or Fisher's exact test. As Table 3 shows, for at-risk parents with a history of childhood problems, significant associations were seen with four factors: difficulty resolving stress ($\chi^2=5.564$, $p=0.018$), marital strife or domestic violence ($\chi^2=9.613$, $p=0.002$), financial problems ($\chi^2=14.372$, $p<0.001$), and house overflowing with garbage ($\chi^2=6.939$, $p=0.008$). For at-risk parents without a history of childhood problems, associations were observed with a total of 13 factors in addition to the above-mentioned four factors: difficulty resolving stress ($\chi^2=10.170$, $p=0.001$), marital strife or domestic violence ($\chi^2=51.822$, $p<0.001$), financial problems ($\chi^2=90.628$, $p<0.001$), house overflowing with garbage ($\chi^2=35.958$, $p<0.001$), developmental delay of child ($\chi^2=35.036$, $p<0.001$), cuts or bruises ($p<0.001$), negative feelings toward one's own child ($\chi^2=31.872$, $p<0.001$), lack of parenting ability or affection ($\chi^2=26.761$, $p<0.001$), unwanted pregnancy or not undergoing prenatal examination ($\chi^2=6.512$, $p=0.011$), personality characteristics ($\chi^2=6.085$, $p=0.014$), single mother or common law family ($\chi^2=37.116$, $p<0.001$), isolation from family ($\chi^2=13.198$, $p<0.001$), and lack of parenting support ($\chi^2=4.468$, $p=0.035$).

4. Relevant factors for parents requiring interventions and consultations in cooperation with child guidance centers

In the multiple logistical regression analysis of at-risk parents with a history of childhood problems considering with seven independent variables (*difficulty resolving stress, marital strife or domestic violence, financial problems, house overflowing with garbage, etc., history of mother-child separation, single mother or common law family, and isolation from family*), the relevant factors for parents requiring interventions and consultations in cooperation with child guidance centers involvement included *having financial problems* (odds ratio: OR=3.778, $p<0.001$), *marital strife or domestic violence* (OR=3.623, $p=0.004$), and *history of mother-child separation* (OR=0.098, $p=0.042$) (Table 4).

In the analysis of at-risk parents without a history of childhood problems, analysis with 16 independent variables (*developmental delay of child, cuts or bruises, negative feelings toward one's own child, lack of parenting ability or affection, unwanted pregnancy or not undergoing prenatal examination, personality characteristics, difficulty resolving stress, single mother or common law family, marital strife or domestic violence, financial problems, isolation from family, house overflowing with garbage, etc., lack of parenting support, history of mother-child separation, not undergoing medical examination of infants, and parent illness*), showed that there were nine relevant factors for parents requiring interventions and consultations in cooperation with child guidance centers: *presence of cuts or bruises* (OR=20.430, $p<0.001$), *marital strife or domestic violence* (OR=3.032, $p<0.001$), *negative feelings toward one's own child* (OR=2.789, $p<0.001$), *house overflowing with garbage, etc* (OR=2.669,

Table 3

Association between cooperation with child guidance center and other risk factors separately for those with and without a history of childhood problems

	Having a history of childhood problems N=164			Not having a history of childhood problems N=1726		
	Cooperation with child guidance center		p-value	Cooperation with child guidance center		p-value
	With n=50	Without n=114		With n=239	Without n=1487	
Multiple pregnancy or Low birth weight infant	6 (12.0%)	9 (7.9%)	0.393	18 (7.5%)	148 (10.0%)	0.239
History of mother-child separation	1 (2.0%)	10 (8.8%)	0.175	13 (5.4%)	54 (3.6%)	0.179
Child illness or Disability	2 (4.0%)	6 (5.3%)	1.000	21 (8.8%)	133 (8.9%)	0.937
Developmental delay of child	7 (14.0%)	25 (21.9%)	0.238	71 (29.7%)	214 (14.4%)	< 0.001
Cuts or bruises	2 (4.0%)	4 (3.5%)	1.000	15 (6.3%)	5 (0.3%)	< 0.001
Not undergoing medical examination of infants	3 (6.0%)	10 (8.8%)	0.756	16(6.7%)	68 (4.6%)	0.157
Negative feelings toward one's own child	10 (20.0%)	21 (18.4%)	0.812	33 (13.8%)	68 (4.6%)	< 0.001
Lack of parenting ability or affection	30 (60.0%)	58 (50.9%)	0.281	97(40.6%)	366(24.6%)	< 0.001
Parenting stress or Anxiety	30 (60.0%)	66 (57.9%)	0.801	109 (45.6%)	687 (46.2%)	0.864
Unwanted pregnancy or Not undergoing prenatal examination	5 (10.0%)	12 (10.5%)	0.919	24 (10.0%)	85 (5.7%)	0.011
Young pregnant women	16 (32.0%)	28 (24.6%)	0.322	26 (10.9%)	173 (11.6%)	0.734
Parent illness	20 (40.0%)	35 (30.7%)	0.246	57 (23.8%)	284 (19.1%)	0.087
Personality characteristics	19 (38.0%)	45 (39.5%)	0.859	45 (18.8%)	192 (12.9%)	0.014
Difficulty resolving stress	24 (48.0%)	33 (28.9%)	0.018	42 (17.6%)	156 (10.5%)	0.001
Drug addiction	0 (0.0%)	2 (1.8%)	1.000	0 (0.0%)	6 (0.4%)	1.000
Single mother or Common law family	22 (44.0%)	35 (30.7%)	0.100	71 (29.7%)	209(14.1%)	< 0.001
Marital strife or Domestic violence	17 (34.0%)	15 (13.2%)	0.002	53 (22.2%)	111 (7.5%)	< 0.001
Financial problems	34 (68.0%)	41 (36.0%)	< 0.001	84 (35.1%)	172 (11.6%)	< 0.001
Isolation from family	17 (34.0%)	26(22.8%)	0.134	27 (11.3%)	78 (5.2%)	< 0.001
House overflowing with garbage, etc	12 (24.0%)	10 (8.8%)	0.008	23 (9.6%)	33 (2.2%)	< 0.001
Lack of parenting support	12 (24.0%)	24 (21.1%)	0.675	35 (14.6%)	150 (10.1%)	0.035

Table 4
Relevant factors for parents with cooperation with child guidance centers (having a history of childhood problems)

	Odds ratio	95% CI	p-value
Having financial problems	3.778	1.805-7.91	<0.001
Having marital strife or domestic violence	3.623	1.503-8.733	0.004
Having history of mother-child separation	0.098	0.01-0.918	0.042

Note. CI : Confidence interval.

p=0.003), *financial problems* (OR=2.523, p< 0.001), *developmental delay of child* (OR=2.100, p< 0.001), *single mother or common law family* (OR=1.870, p=0.001), *parent illness* (OR=1.614, p=0.008), and *lack of parenting ability or affection* (OR=1.496, p=0.014) (Table 5).

DISCUSSION

Main factors leading to child abuse can be divided into risk factors of the parents, risk factors of the child, risk factors of the parenting environment, and others (10). Child abuse seems to result from the cumulative effect of these factors. In the present study, 30.5% of at-risk parents with a history of childhood problems required interventions and consultations in child guidance centers, which is more than twice the rate among at-risk parents without a history of childhood problems. History of child abuse has been identified as one factor leading to or furthering child abuse (11, 12). Furthermore, there may be a higher risk of problems arising in parenting in at-risk parents with a history of childhood problems even if they are receiving support. One reason proposed is the increased number of risk factors influencing parental behavior with such parents.

In this survey, the number of risk factors revealed that at-risk parents with a history of childhood problems had a greater risk than that of at-risk parents without a history of childhood problems. In a previous study (6), an association was seen between presence or absence of history of abuse and risk factors, with a higher number of risk factors among parents with a history of abuse. These findings suggest that an experience of child abuse influences the process of acquiring a large number of risk factors in at-risk parents with a history of childhood problems.

Experiencing abuse in childhood has been associated with increased risk of depression (13, 14), post-traumatic stress disorder (15), anxiety, anger, physical symptoms, and medical diagnoses (14). In later life, children subjected to abuse tend to have fewer years of education, a lower employment rate and income, and fewer assets than those not subjected to abuse (16). In other words, abuse

may not only affect the psychological and physical health ; it may also strongly affect the length of education and financial conditions later in life. There is a strong possibility that these circumstances arising from abuse may lead to increased risk factors in the parent or parenting environment that are related to the perpetuation of child abuse when the child reaches adulthood.

While at-risk parents with a history of childhood problems have a higher probability of requiring interventions and consultations in cooperation with child guidance centers, this is not always the case. Logistics regression analysis to determine the characteristics of parents who do require these interventions in cooperation with a child guidance center, has shown that there were only two factors identified ; *marital strife or domestic violence and financial problems*, which were associated with a higher risk of involvement in at-risk parents with a history of childhood problems. Nevertheless, there were nine other factors including the above two in at-risk parents without a history of childhood problems ; factors related to the child, the parent, and the parenting environment.

While at-risk parents with a history of childhood problems had a greater number of risk factors, the factors that appear to influence the requirements for interventions and consultations in cooperation with child guidance centers, were not varied in comparison to the cases of at-risk parents without a history of childhood problems. The factors were instead limited to the presence of marital strife or domestic violence and financial problems which had a large impact. When there is marital strife or domestic violence, witnessing the violence results in psychological abuse to the child. Therefore, the cases with this risk factor may have an urgent need for support and come to require interventions and consultations in cooperation with child guidance centers. Furthermore, Barrios *et al.* (17) reported women with a history of child abuse have an increased risk of suffering intimate partner violence. As children exposed to domestic violence are influenced by values such as rationalization of violence and fixed idea about sexual role (18), women with a history of childhood problems may have difficulty seeing the problem when in a situation with marital strife or domestic violence, leading to escalation of the situation. It may therefore be

Table 5
Relevant factors for parents with cooperation with child guidance centers (not having a history of childhood problems)

	Odds ratio	95% CI	p-value
Having cuts or bruises	20.430	6.585-63.378	<0.001
Having marital strife or domestic violence	3.032	2.023-4.546	<0.001
Having negative feelings toward one's own child	2.789	1.69-4.602	<0.001
Having house overflowing with garbage, etc	2.669	1.407-5.063	0.003
Having financial problems	2.523	1.75-3.637	<0.001
Having developmental delay of child	2.100	1.48-2.98	<0.001
Having single mother or common law family	1.870	1.295-2.701	0.001
Having parent illness	1.614	1.131-2.303	0.008
Having lack of parenting ability or affection	1.496	1.085-2.062	0.014

Note. CI : Confidence interval.

important to pay special attention to whether or not there is marital strife or domestic violence in the home when assessing women with the risk factor of a history of childhood problems.

Child abuse was associated with poverty of families (12, 19), that is, financial problem is one important risk factor of abuse. Having the risk factor of financial problems may be considered the result of a combination of factors causing problems in financial circumstances. Therefore, parents with a history of childhood problems and with financial problems may thus be predicted to have multiple and/or severe risk factors, and are highly likely to require interventions and consultations in cooperation with a child guidance center.

Examination of relevant factors for interventions and consultations in cooperation with child guidance centers in at-risk parents with a history of childhood problems determined a history of mother-child separation to be related to a lower risk of cooperation. Long-term separation between the mother and child soon after birth may lead to hindrance in the formation of emotional attachment. Therefore, further studies are needed to determine the underlying reason for this finding.

CONCLUSION

The study focused on factors related to the need for interventions and consultations in cooperation with child guidance centers with a focus on the presence or absence of a history of childhood problems in at-risk parents receiving support from their municipality. Two relevant factors were found: *presence of marital strife or domestic violence and presence of financial problems*. Even when receiving support on parenting, parents with a history of childhood problems are highly likely to have serious parenting problems themselves. In particular, parents with the risk factors of marital strife or domestic violence and financial problems may need more in-depth support.

STUDY LIMITATIONS AND FUTURE CHALLENGES

The study focused on the presence or absence of a history of childhood problems and interventions and consultations in cooperation with child guidance centers in at-risk parents receiving support. Consequently, the sample did not include parents with a history of childhood problems who were not receiving support as at-risk parents. This is a limitation of the present study. These group of individuals should be included in future studies to examine factors related to the intergenerational cycle of abuse in more detail.

CONFLICT OF INTEREST

None of authors has any conflict of interest to declare.

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REFERENCES

1. Ministry of Health, Labour and Welfare : Results of verification of child abuse cases which resulted in death, etc. (the 10th

- report) 2014 <http://www.mhlw.go.jp/file/06-Seisakujouhou-11900000-Koyoukintoujidoukateikyoku/0000058559.pdf> (Retrieved 2015.3.25). (in Japanese)
2. Hashimoto H, Tani H, Ninomiya T : Current status and issues in nationwide efforts for child abuse prevention from the perinatal stage : analysis of risk factors identified by maternity hospitals and maternal and child welfare programs. *Japanese Journal of Child Abuse and Neglect* 16(2) : 151-158, 2014 (in Japanese)
3. Caliso JA, Milner JS : Childhood history of abuse and child abuse screening. *Child Abuse Negl* 16(5) : 647-659, 1992
4. Milner JS, Thomsen CJ, Crouch JL, Rabenhorst MM, Martens PM, Dyslin CW, Guimond JM, Stander VA, Merrill LL : Do trauma symptoms mediate the relationship between childhood physical abuse and adult child abuse risk?. *Child Abuse Negl* 34(5) : 332-344, 2010
5. Lamela D, Figueiredo B : Parents' physical victimization in childhood and current risk of child maltreatment : the mediator role of psychosomatic symptoms. *Journal Psychosom Res* 75(2) : 178-183, 2013
6. Dixon L, Browne K, Hamilton-Giachritsis C : Risk factors of parents abused as children : a mediational analysis of the intergenerational continuity of child maltreatment (Part I). *J Child Psychol Psychiatry* 46(1) : 47-57, 2005
7. Berlin LJ, Appleyard K, Dodge KA : Intergenerational generational continuity in child maltreatment : mediating mechanisms and implications for prevention. *Child Dev* 82(1) : 162-176, 2011
8. Pears KC, Capaldi DM : Intergenerational transmission of abuse : a two-generational prospective study of an at-risk sample. *Child Abuse Negl* 25 : 1439-1461, 2001
9. Kato Y, Satoh T, Yoshikawa K, Tsuzaki T : Risk assessment to identify severity and risk levels. *Japanese Journal of Child Abuse and Neglect* 2(1) : 79-86, 2000 (in Japanese)
10. Ministry of Health, Labour and Welfare : Revised Guide to the Handling of Child Abuse. 2013 http://www.mhlw.go.jp/seisakunitsuite/bunya/kodomo/kodomo_kosodate/dv/dl/120502_11.pdf (Retrieved 2015.3.25) (in Japanese)
11. Shimoizumi H : Survey of child abuse in Tochigi prefecture. *Japanese Journal of Child Abuse and Neglect* 5(1) : 130-140, 2003 (in Japanese)
12. Kimura Y, Kosugi M, Miyaguchi C, Eguchi S, Kabata H, Yoshikawa K, Waranabe H, Hasegawa F, Nishimoto M, Tanaka Y, Shiroyama M, Yagi A, Ishimaru M, Waki K, Katsura H, Kaku R, Maeda S, Okamoto M : Parents abusing children. Evaluation of the family function and preventive support and its effect on abuse (Research report I, II, III). *Japanese Journal of Child Abuse and Neglect* 7(1) : 39-49, 2005 (in Japanese)
13. Wise LA, Zierler S, Krieger N, Harlow BL : Adult onset of major depressive disorder in relation to early life violent victimisation : a case-control study. *Lancet* 358 : 881-887, 2001
14. Springer KW, Sheridan J, Kuo D, Carnes M : Long-term physical and mental health consequences of childhood physical abuse : Results from a large population-based sample of men and women. *Child Abuse Negl* 31 : 517-530, 2007
15. Widom CS : Posttraumatic stress disorder in abused and neglected children grown up. *Am J Psychiatry* 156 : 1223-1229, 1999
16. Currie J, Widom CS : Long-term consequences of child abuse and neglect on adult economic well-being. *Child Maltreat* 15(2) : 111-120, 2010
17. Barrios YV, Gelaye B, Zhong Q, Nicolaidis C, Rondon MB, Garcia PJ, Sanchez PA, Sanchez SE, Williams MA : Association of childhood physical and sexual abuse with intimate partner violence, poor general health and depressive symptoms among pregnant women. *PLoS One* 10(1) : e0116609, 2015

18. Bancroft L, Silverman JG : The Batterer as Parent : Addressing the Impact of Domestic Violence on Family Dynamics (Ikushima S, Trans.). Kongo-Shuppan, Tokyo, 53-57, 2004 (in Japanese)
19. Drake B, Pandey S : Understanding the relationship between neighborhood poverty and specific types of child maltreatment. *Child Abuse Negl* 20(11) : 1003-1018, 1996