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Original contribution

Child abuse, other early experiences and depression: II. Single episode and recurrent/chronic subtypes of depression and their link to early experiences

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Summary

The participants described in Part I of this series of two papers were investigated with respect to the adult onset of DSM-III-R Major Depression and its relationship with child abuse and other early experiences. Those participants with a lifetime experience of Major Depression were classified into (a) a single episode lasting no longer than two years (single episode, S.E.) and (b) either two or more episodes or any episode lasting for two years or more (recurrent or chronic, R.C). Discriminant function analysis revealed that the *lack* of mother's overprotection, mother's child abuse, father's overprotection, lack of mother's care, and the female sex mainly predicted the onset of Major Depression of any type whereas paternal overprotection, lack of mother's child abuse, and lack of maternal overprotection predicted R.C. than S.E. subtype.

Keywords: Child abuse; parental loss; rearing; life events; depression.

Introduction

Child abuse and other early experiences may have not only immediate but also long term effects on the development of personality and adjustment and different types of psychopathology. The first part of the series of two papers described frequencies of parental loss experiences, child abuse, parental style and early life events in a non-clinical community population (Kitamura et al., 2000).

The possible association between these early experiences and later psychopathology has been studied extensively. However, most of the studies so far have been performed in Western countries, and little has been reported from Eastern countries. The effect of early experiences on the later onset of psychopathology may be influenced by cultural differences (e.g., Flynn, 1998). Also, the same experiences may be perceived differently in different cultures. For example, a father's slapping may be perceived as abusive in one culture but as educational (disciplinary) in another culture. The overprotective behaviour of a parent may be perceived as neglect of a child's autonomy in one culture but as part of caring in another culture.

The link between child abuse and adult depression has been reported recently (Carlin et al., 1994; Garnefski et al., 1989; Kessler and Magee, 1993; Langhinrichsen-Rohling et al., 1998; Straus and Kantor, 1994; Wind and Silvern, 1994). These studies are not without drawbacks. Carlin et al. (1994), Garnefski et al. (1989), Straus and Kantor (1994), Wind and Silvern (1994), and Langhinrichsen-Rohling et al. (1998) relied on a self-report questionnaire for diagnosing depression. However, a questionnaire method is less sensitive for identifying cases of depression (e.g., Kitamura et al., 1994).

In those studies, depression was regarded as a single entity. However, depression was a heterogeneous condition and should be best viewed as a syndrome (Ban, 1987). Many researchers have proposed different subclassificatory systems of depression, for example, bipolar vs. unipolar, psychotic vs. neurotic, melancholic vs. non-melancholic etc. (see Kendell, 1976 for review). Before starting the present

study, we thought that two subclassificatory systems of depression – acute vs. chronic and single episode vs. recurrent – were important because depression of a short duration and of a single occurrence might need less care, whereas depression of a lengthy duration or of repeated occurrence would have to be a focus of not only clinical but also community attention (Kitamura et al., 1998). Sufferers of recurrent or chronic depression are more likely to experience great psychic constraint, functional difficulties, interpersonal problems, and even suicidality.

The very low rate of seeking professional help among individuals with depression calls for more research and administrative attention. Moreover, the help-seeking behaviour of individuals with depression towards mental health professionals may be influenced by psychopathological (e.g., coexisting panic disorder; Bucholz and Dinwiddie, 1989) and sociological (e.g., family structure; Brown et al., 1975) factors. In order to further the preventive means for recurrent/chronic depression, a search for life history correlates, particularly those that occur during childhood, may be warranted because it may open an avenue to community or school means to reduce the vulnerability of individuals to the onset of illness.

Another shortcoming of previous studies is that in most of them only a few early life experience items were used to predict the adult onset of depression. Comparison of such studies will not give us a perspective of the relative importance of different life experiences in terms of onset of adult depression. This is because associations found in such a manner may be confounded. For example, Oakley-Brown et al. (1995) studied a New Zealand community population. They found that the association between the onset of DSM-III Major Depression in a lifetime and any loss experience of a parent before the subject was aged 16 years became statistically non-significant when the effect of low care by the mother was controlled for. This may require a study examining a wide array of early life experiences simultaneously in a given population in terms of their main effects and interaction with the occurrence of depression later.

We devised our methodology in order to overcome methodological problems. We employed a structured diagnostic interview eliciting both DSM-III-R diagnosis and some of early experiences. Secondly, we covered much wider categories of early experiences as well as child abuse in a more thorough fashion. This enabled us to shed light on the relative importance of child abuse on adult depression in comparison to other early experiences, such as poor parenting, bullying, and other negative events. This suggests that the oft-reported link of poor parenting with the adult onset of depression (e.g., Parker et al., 1987) may be confounded by the link of the child abuse with depression.

Method

The subjects and method of the present study have been described elsewhere (Kitamura et al., 1995a; Kitamura et al., 1995b; Kitamura et al., 1999). Of the 508 inhabitants aged 18 or more in a district of the City of Kofu, the capital of Yamanashi Prefecture, 220 (43%) were successfully interviewed and distributed a set of questionnaires. The subjects consisted of 96 men and 124 women aged between 18 and 91, the mean age being 53.9 (*SD* 16.6) years. The interviewed and uninterviewed people did not differ in mean age and sex ratio.

Psychiatric diagnosis

A part of the interview was designed to tap the present and past episodes of Diagnostic and Statistical Manual of Mental Disorders 3rd Edition Revised (DSM-III-R; American Psychiatric Association, 1987) mood and anxiety disorders. The wordings of the probe questions were taken and revised from a Japanese draft of the Composite International Diagnostic Interview (CIDI; World Health Organization, 1990), the Schedule for Affective Disorders and Schizophrenia (SADS; Endicott and Spitzer, 1978), and other structured interviews, together with *ad hoc* items. The psychiatric disorders identified are Generalised Anxiety Disorder, Panic Disorder, Major Depressive Episode, Dysthymic Disorder, Manic Episode, Phobic Disorder, and Obsessive-Compulsive Disorder. As explained in Introduction, Major Depressive Episode was divided into (a) a single episode lasting no longer than two years (single episode; S.E.), and (b) either two or more episodes or any episode lasting for two years or more (recurrent or chronic; R.C.). The normal controls consisted of those who had never met criteria of any of the above seven major psychiatric disorders.

Early loss of parents

Early parental loss was defined as either death of or a separation from a parent before the age of 16 (Brown et al., 1977). This information was elicited in the interview.

Perceived parenting

The Parenting Bonding Instrument (PBI; Parker et al., 1979) was included in the questionnaire. The PBI consists of 25 items with a 4-point scale (very unlikely – 0 to very likely – 3). It has two subscales – care and overprotection – tapping perceived affectionate behaviour and overprotection of each parent towards the subject. The PBI is based on retrospective recall, but its validity is reported for the original English (Parker, 1983) and Japanese (Kitamura and Suzuki, 1993) versions.

Child abuse by parents

In the interview, the subject was enquired whether he/she had experienced any of (a) scolding; (b) slapping; (c) punching with a fist; (d) hitting with an object (e.g. a club), and (e) burning (e.g. with a cigarette), from each parent separately. Each behaviour was rated for its frequency with a 5-point scale; never – 0 to almost every day – 4. Abusive behaviours were added a coefficient following the clinical significance – 2 for slapping, 3 for punching, 4 for hitting, and 5 for burning. The child abuse score was calculated for both parents separately by adding the scores of the five disciplinary categories. As in the part I, the child abuse scores were log-transformed because they were positively skewed.

Early life events

As in the Part I, the four subscales – school-related negative events, health-related negative events, family-related negative events, and positive events – were rated by calculating the total numbers of events belonging to each category that the participants reported having experienced before the age of 16. The scores were log-transformed because they were positively skewed.

Statistical analyses

The S.E. (n = 19), R.C. (n = 11), and control (n = 173) groups were compared in terms of each early life experience by chi-squared test or one-way analyses of variance (ANOVA) with Scheffe's post hoc comparison, where appropriate. The subjects who had met DSM-III-R criteria for any disorders other than Major Depressive Episode were excluded. Statistical analyses were performed on the SPSS-X programme (SPSS Inc., 1986).

We substituted missing values for the mean of each variable. After examining the sex ratio and mean ages across the three groups, the associations of the two categories of Major Depressive Episode with different early experience variables were examined using a discriminant function analysis. In a discriminant functional analysis, the category of depression (Control, S.E. and R.C.) was used as a criterion variable. Female sex and age cohort were first forced to enter. Then, the early life experience variables were entered with Wilks' lambda method. The best discriminator was entered stepwise until all variables with significant contribution were entered.

Results

As compared to the control group, both the S.E. and R.C. groups were overrepresented by women (Table 1). The lifetime prevalence of the S.E. depression was 5.6% and 12.3% for men and women, respectively whereas the lifetime prevalence of the R.C. depression was 2.2% and 7.9% for men and women, respectively. Both the S.E. and R.C. depression groups were also overrepresented by the subjects aged less than 55, but this did not reach statistical significance.

Among the early life experiences, the mother's child abuse and the father's overprotection were found to be linked to Major Depression (Table 2). The maternal child abuse score was significantly higher in the S.E. than in the control group. The father overprotection score was significantly higher in the R.C. group than the control or S.E. groups.

In order to examine the relative importance of early life experiences contributing to the onset as well as subtype of later Major Depression, we performed a discriminant function analysis (Table 3). The three groups (control, S.E. and R.C.) were

Table 1. *Subcategories of major depression and demographic variables*

	Control (n = 173)	S.E. (n = 19)	R.C. (n = 11)	χ^2 (df = 2)
Male : female	82 : 91	5 : 14	2 : 9	6.2*
18–54 : 55+	73 : 100	11 : 8	7 : 4	3.4

S.E., single episode Major Depression; R.C., recurrent or chronic Major Depression.
*$p < 0.05$.

Table 2. *Subcategories of major depression and early life experiences*

	Control (n = 173)	S.E. (n = 19)	R.C. (n = 11)	
Loss of father before 16	51 (29.5%)	5 (26.3%)	3 (27.3%)	$\chi^2 = 0.1$
Loss of mother before 16	35 (20.2%)	1 (5.3%)	2 (18.2%)	$\chi^2 = 2.5$
Paternal child abuse	2.8 (0.1)	2.8 (0.3)	2.9 (0.3)	F(2,200) = 1.8
Maternal child abuse	2.7 (0.1)	2.9 (0.4)	2.7 (0.1)	F(2,200) = 6.0** S.E. > C.
Father's care	23.9 (6.0)	24.9 (5.6)	20.2 (6.7)	F(2,200) = 2.4
Father's overprotection	11.3 (5.2)	10.1 (4.6)	15.3 (6.1)	F(2,200) = 3.8* R.C. > C, S.E.
Mother's care	27.8 (4.5)	26.1 (4.7)	26.1 (5.0)	F(2,200) = 1.8
Mother's overprotection	10.0 (5.4)	9.9 (6.5)	8.3 (2.4)	F(2,200) = 0.5
School-related negative life events	0.20 (0.37)	0.26 (0.34)	0.34 (0.71)	F(2,200) = 0.8
Health-related negative life events	0.20 (0.36)	0.29 (0.48)	0.38 (0.48)	F(2,200) = 1.6
Family-related negative life events	0.27 (0.49)	0.32 (0.50)	0.16 (0.37)	F(2,200) = 0.4
Positive life events	0.62 (0.80)	0.44 (0.62)	0.60 (0.93)	F(2,200) = 0.4

*$p < 0.05$, **$p < 0.01$.

Table 3. *Discriminant function analysis*

	Standardised canonical discriminant function coefficients	
	Function 1	Function 2
Female sex	0.60	0.15
Older age	−0.25	0.04
Father's overprotection	0.51	−0.85
Mother's care	−0.48	0.04
Mother's overprotection	−0.70	0.50
Mother's child abuse	0.63	0.53
Health-related negative life events	0.28	−0.03

diversely located on the two discriminant factors. The group centroid of the control group was −0.2 on the function 1 and 0.0 on the function 2. The group centroid of the S.E. group was 0.8 on the function 1 and 0.6 on the function 2. The group centroid of the R.C. group was 1.2 on the function 1 and −0.8 on the function 2. Therefore, it may be interpreted that the function 1 reflects the possibility of the participant to experience Major Depression (of any subtype) whereas the function 2 reflects the subcategory of Major Depression (a higher value means S.E. while a lower value R.C.).

The female sex had a high standardised canonical discriminant function coefficient on the function 1 but not on the function 2. The younger age was moderately linked to the function 1. After these two demographic variables, lack of mother's overprotection, maternal child abuse, father's overprotection and lack of mother's care were linked to Function 1. Associated with the function 2 were lack of father's overprotection, maternal child abuse, and mother's overprotection. Classification result showed that 65% of the subjects could be predicted by the analysis.

Discussion

This part of our series of reports shows that among a community population in Japan, some 15% of individuals had experienced an episode of DSM-III-R Major Depression at least once in their life. The lifetime prevalence of Major Depression was higher than that reported by Weissman et al. (1988) for community residents in five American cities (4.4%), but almost the same as that reported by Kessler et al. (1994) for the National Comorbidity Survey in the US (12.7%). Due to the small number of participants as well as the restricted locality of the study, our result should not be viewed as reflecting the epidemiology of Major Depression in Japan. However, because the primary purpose of our study was to examine the effects of early experiences on adult depression, we believe that we had managed to identify individuals with past or current episodes of Major Depression successfully.

Bivariate analyses showed that both the maternal child abuse and the father's overprotection were associated with Major Depression. They were, however, unique in their link with the subcategory of Major Depression. While the mother's child abuse was linked to the S.E., the father's overprotection was linked to the R.C. subtype. Previous investigations on the issues of influences of child abuse and perceived rearing, which were often conducted separately, demonstrated substantial association with the onset of depression. In addition to being on the same line, our results suggest that the child abuse and perceived rearing have differential effects on the subcategory of depression.

This suggestion was endorsed by our discriminant function analysis. The mother's child abuse predicted the experience of Major Depression but, among its subcategories, only the S.E. was predicted by it. The father's overprotection predicted the experience of Major Depression too, but its presence predicted the R.C. subtype. Furthermore, the lack of mother's care predicted the experience of Major Depression but the subcategory of Major Depression was not linked to it. The father's child abuse failed to predict Major Depression in the discriminant function analysis too. Thus, the effects of parent's aggression and attitudes towards a child may be discrete between the father and the mother. Child abuse has a detrimental effect upon the onset of Major Depression if given by the mother but not so if given by the father. The effect of overprotection is detrimental if it is given by the father but may be protective if it is given by the mother. Lack of care has a detrimental effect only if given by the mother.

It seems puzzling that maternal overprotection is protective in the onset of Major Depression because overprotection measures intrusive control and neglected autonomy of children. This suggests that overprotection of mothers has different cultural meaning. Lack of mother's control may be viewed as similar to lack of affection in the Japanese culture. Although we adopted Parker et al.'s (1979) original

subscales, Sato et al. (1999) have recently performed a confirmatory factor analysis of the PBI items in a Japanese non-patient population. Comparing five factor structures in terms of model-fit, they reported that the best model consisted of three factors – care, protectiveness, and authoritarianism. The last two factors correspond to the original overprotection. Thus, it may be speculated that a specific component of overprotection is linked to the onset of Major Depression whereas another is protective in terms of the development of psychopathology. This should be studied in a large scale study.

Limitations of our study should be noted. Firstly, the number of the sample was small. Secondly, a cross-sectional study may confound the observations. Moreover all the information was obtained only from the subject. All these shortcomings should be overcome in future studies. Nevertheless, we think that these findings warrant further investigations of the relationship between the depression subtype, gender and child abuse – a topic which has been little investigated thus far.

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