Perceived Rearing Attitudes and Minor Psychiatric Morbidity among Japanese Adolescents

Toshinori Kitamura, F.R.C. Psych. and Tadaharu Suzuki, M.D.*

Department of Sociocultural Environmental Research, National Institute of Mental Health, Ichikawa

*Department of Neuropsychiatry, Keio University School of Medicine, Tokyo

Abstract: **The relationship between perceived rearing experiences and minor psychiatric morbidity was studied in a sample of Japanese adolescents. Their perceived rearing experiences were measured by the Parental Bonding Instrument (PBI) and minor psychiatric morbidity by the General Health Questionnaire (GHQ). The total GHQ score was slightly but significantly higher (r=0.28) among those recording high maternal protection than among those with low maternal protection, but of the subscale scores of the GHQ, only the anxiety and insomnia subscale retained this same relationship with perceived rearing experiences. The parental age, educational career, and sibship position showed no correlation with the PBI scores.**

INTRODUCTION

Since the publication in 1979 of the Parental Bonding Instrument (PBI), a self-rating measure of perceived parental rearing behaviors, Parker and his coworkers[9] have used it to study the relationship of psychiatric illnesses to subjects' childhood experience. They first investigated both patients and non-patients with neurotic depression, finding a significant correlation between adult depression and low parental care and high (over) protection.[10] They then examined patients with anxiety neurosis, and found similar

trends in the parental rearing attitudes.[11] In the case of hypochondriacal patients, they observed high maternal but low paternal care as well as high paternal protection.[12]

We investigated the relationship between adolescents' perception of the parental rearing and their concurrent minor psychiatric morbidity in a Japanese population. The present study is, to our knowledge, the first to apply the PBI to a Japanese population.

METHODS

Details of the methods of the present study have been described elsewhere.[7] Three-hundred sets of questionnaires, containing the General Health Questionnaire (GHQ)[2] and the Parental Bonding Instrument (PBI), were distributed to final-year high school students. A total of 84 students responded—24 males

and 59 females (one of unknown sex).

The PBI, which was designed to measure perceived parental rearing attitudes, consists of 25 items, each of which is rated 0 to 3 and allocated into either care or protection scores. The care score ranges between 0 and 36 whilst the protection score between 0 and 39. Higher scores indicate higher care or higher protection experiences. The Japanese version PBI was retranslated back to English so as to confirm the translation was consistent with the original meaning.[7] Its validity was confirmed by a high agreement between the PBI scores of each parent recorded independently by the student, his/her father and mother.[7]

The GHQ was developed to identify non-organic, nonpsychotic minor psychiatric morbidity among general populations. The validity of the GHQ has been confirmed in English speaking countries[1 2 5 13] and in Japan[6]. Each item of the GHQ is rated as either 0 or 1 so that the GHQ score ranges between 0 and 60 (in the case of the 60-item version). Its 60-item form was adopted in this study, with the threshold between 16 and 17.[8]

The subjects were divided into two subgroups, of higher and lower than the mean of each PBI score. The total GHQ score was then examined by an analysis of variance (ANOVA), with high- vs. low-care and protection categories as the independent variables for each parent separately. We also estimated the contribution of each GHQ item by t-test, and that of each GHQ subscale by ANOVA. The PBI scores were also examined in terms of parental age, educational career and sibship position.

RESULTS

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The means and standard deviations of the PBI scores are listed in Table 1.

The total GHQ score was examined by ANOVA, with the high- vs. low-care and protection categories for each parent sepa-

Table 1:   The Mean and Standard Deviation of Each PBI Score

PBI	N	Mean	SD
Maternal care score	83	25.8	6.0
Maternal protection score	81	12.6	6.1
Paternal care score	83	23.0	6.1
Paternal protection score	80	13.3	5.3

N: number of subjects

Table 2:   The Total GHQ Scores and the PBI Categories

PBI Categories	N	GHQ Score	F	P
Maternal				
low care	42	19.00	3.20	0.0776
high care	39	14.18		
low protection	40	13.55	4.29	0.0416
high protection	41	19.73		
Interaction	—	—	0.60	0.4404
Paternal				
low care	41	18.76	2.22	0.1400
high care	39	14.67		
low protection	43	13.70	3.77	0.0560
high protection	37	20.35		
interaction	—	—	0.00	0.9898

N: number of subjects

rately (see Table 2). Expected tendencies were observed: the total GHQ score tended to be higher among those with parental low care and those with parental high protection. Statistical significance was, however, reached only for the maternal protection category (F $(1,79) = 5.14$, $p = 0.0241$). No interactions were found between the care and protection categories.

We calculated the correlations of the four PBI scores with the four GHQ subscales described by Goldberg and Hillier.[3] They are the subscales of somatic symptoms, anxiety and insomnia, social dysfunction and severe depression. Because there were four subscales, the significance level was set at 0.0125 $(0.05/4)^4$: Only the maternal care score was significantly correlated with three of the GHQ subscales, anxiety and insomnia ($r =$

−0.278, $N=82$, $p<0.0113$) and social dysfunction ($r=-0.278$, $p<0.0113$). We then examined each of the GHQ subscale scores by ANOVA, with the high- vs. low-care and protection categories for each parent separately as had been done for the GHQ total score. The significance level was set at 0.0125 (0.05/4). The only significant difference observed was between the maternal protection category and the anxiety and insomnia subscale. Thus, the anxiety and insomnia subscale score of those with maternal overprotection was significantly higher than that with those without ($F(1,79)=7.26$, $p=0.0086$).

Perceived Rearing Attitudes and Sociodemographic Variables

No significant correlations were found between the parental age and any of the PBI scores (maternal care, $r=-0.073$, $N=52$, $p=0.6095$; maternal protection, $r=-0.068$, $N=51$, $p=0.6378$; paternal care, $r=0.032$, $N=45$, $p=0.8349$; paternal protection, $r=-0.151$, $N=44$, $p=0.3270$). The parental educational career in years was not correlated with the PBI scores for either parent (maternal care, $r=-0.014$, $N=53$, $p=0.9022$; maternal protection, $r=-0.170$, $N=52$, $p=$

Table 3: Correlations of PBI Scores with GHQ Subscales

PBI	GHQ Subscales			
	Somatic Symptoms	Anxiety and Insomnia	Social Dysfunction	Severe Depression
Maternal care score	−0.165 (82) $p=0.1386$	−0.278 (82) $p=0.0113$	−0.278 (82) $p=0.0113$	−0.232 (82) $p=0.0361$
Maternal protection score	0.264 (81) $p=0.0173$	0.275 (81) $p=0.0131$	0.038 (81) $p=0.7338$	0.276 (81) $p=0.0127$
Paternal care score	−0.049 (83) $p=0.6623$	−0.241 (83) $p=0.0281$	−0.153 (83) $p=0.1668$	−0.133 (83) $p=0.2322$
Paternal protection score	0.194 (80) $p=0.0853$	0.238 (80) $p=0.0336$	0.117 (80) $p=0.2995$	0.116 (80) $p=0.3038$

( ) indicates the number of pairs calculated.

Table 4: The GHQ Somatic Symptoms Subscale and the PBI Categories

PBI Categories	N	GHQ Subscale Score	F	P
Maternal				
low care	42	2.36	0.15	0.6952
high care	39	2.18		
low protection	40	1.75	5.06	0.0273
high protection	41	2.78		
interaction	—	—	0.17	0.6785
Paternal				
low care	41	2.29	0.00	0.9816
high care	39	2.28		
low protection	43	1.91	3.97	0.0500
high protection	37	2.73		
interaction	—	—	0.17	0.6823

N: number of subjects

Table 5: The GHQ Anxiety and Insomnia Subscale and the PBI Categories

PBI Categories	N	GHQ Subscale Score	F	P
Maternal				
low care	42	2.98	3.56	0.0630
high care	39	2.21		
low protection	40	2.00	7.26	0.0086
high protection	41	3.20		
interaction	—	—	0.21	0.6514
Paternal				
low care	41	3.00	3.49	0.0658
high care	39	2.21		
low protection	43	2.14	3.02	0.0862
high protection	37	3.16		
interaction	—	—	0.01	0.9174

N: number of subjects

Table 6: The GHQ Social Dysfunctioning
Subscale and the PBI Categories

PBI Categories	N	GHQ Subscale Score	F	P
Maternal				
low care	42	1.81	3.73	0.0570
high care	39	1.03		
low protection	40	1.55	0.71	0.4013
high protection	41	1.32		
interaction	—	—	1.44	0.2339
Paternal				
low care	41	1.56	0.30	0.5883
high care	39	1.33		
low protection	43	1.19	1.56	0.2156
high protection	37	1.76		
interaction	—	—	0.27	0.6030

N: number of subjects

Table 7: The GHQ Severe Depression
Subscale and the PBI Categories

PBI Categories	N	GHQ Subscale Score	F	P
Maternal				
low care	42	1.69	1.49	0.2254
high care	39	1.13		
low protection	40	1.00	2.73	0.1024
high protection	41	1.83		
interaction	—	—	1.40	0.2396
Paternal				
low care	41	1.78	2.23	0.1395
high care	39	1.08		
low protection	43	1.12	0.79	0.3761
high protection	37	1.81		
interaction	—	—	0.24	0.6245

N: number of subjects

0.1329; paternal care, $r= -0.038$, $N=45$, $p= 0.7507$, paternal protection, $r=0.132$, $N=44$, $p=0.2789$).

DISCUSSION

In the present study, adolescents' minor psychiatric morbidity was, as expected, related to parental low care and high protection, according to the PBI scores, though this relationship was statistically significant only for the maternal protection score. Since we have already demonstrated that the correlations between the PBI scores rated by the adolescents and those of their parents were not elevated, even after respondents with high GHQ scores had been eliminated, we do not believe that the relationships of the adolescents' psychopathology with the perceived rearing behaviors were spurious in that those with minor psychiatric morbidity erroneously recorded their parents' rearing more negatively.[7] Parker[10] showed that the perceived rearing patterns of the parents of depressive patients did not differ from those of the parents of anxious patients; both reported low care and high protection as the characteristics of their parents' rearing attitudes. Since depression and anxiety are the

two main conditions that are observed in a nonpatient population and that the GHQ was designed to identify, the present findings seem to be consistent with the reports of Parker, Tupling and Brown.[9]

From a factor analysis study, Goldberg and Hillier[3] proposed four subscales of the GHQ, representing somatic symptoms, anxiety, social dysfunctioning and depression. These subscales are not necessarily subcategories of diagnosis, but may rather reflect sets of symptom groups. The present study showed that the GHQ subscales were correlated with some of the PBI scores—care and/or high protection. Nevertheless, there appeared no definite subscales that were distinctly correlated with specific PBI scores. Thus, although low care and high protection were generally linked with adolescents' psychopathology in this study, these findings may suggest that the relationship between past rearing experiences and adult psychiatric disorders is not straight forward and warrant further studies applying the PBI for patients and nonpatients directly interviewed and diagnosed.

and the teachers who gave us an opportunity to conduct the present survey. We are grateful to Ms. S. Watanabe, M.A., for technical support.

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