

Development of a new inventory for assessing memories of parental rearing behaviour

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A new inventory (EMBU) to assess the own memories of parental rearing behaviour was constructed. EMBU is comprised of 81 questions grouped in 15 subscales and two additional questions referring to consistency and strictness of parental rearing behaviour to be answered in a four-step scale for the father and for the mother separately. The subscales cover such rearing practices as for example overinvolvement, affection, overprotectiveness, guilt engendering, rejection.

152 healthy subjects of both sexes (108 males and 44 females) completed the inventory. The item analysis showed that both parents attained similar scores in about half of the questions. Fathers scored higher in items referring to strictness, punishment and a low degree of involvement whereas mothers scored higher in items referring to involvement and affection. A principal component factor analysis permitted the hypothesized subscales to be identified. An analysis of the internal consistency of the subscales revealed a high frequency of significant internal correlations. A principal component factor analysis of the total scores of the 15 subscales allowed three main dimensions of rearing behaviour to be identified quite close to those reported in similar studies in the literature where other scales had been used.

Key words: Parental rearing behaviour – parental discipline – dimensions of rearing behaviour – perceived parental discipline – EMBU.

In adult psychiatry, research concerned with early childhood experiences in large series of psychiatric patients has been mainly focused upon the occurrence of parental deprivation by death, separation or divorce at various developmental ages. However, the results of these investigations, reviewed by *Granville-Grossman* (1968), *Grad de Alarcón* (1976) and *Becker* (1974) have most often given inconsistent results. In a recent study by *Perris & Perris* (1978) concerned with the early life experiences of a large group of patients suffering from affective or cycloid disorders it was found that childhood deprivation was shared by all the diagnostic undergroups to a similar extent. "Childhood deprivation", however, can be understood in other ways than by only taking into account the loss of or separation from either parent. In fact, *Jacobson et al.* (1975) defined "childhood deprivation" as "the lack, loss or absence of an emotionally sustaining relationship prior to adolescence" and pointed out that such a deprivation could depend either upon a real loss of either or both parents or upon depriving rearing and educational practices on the part of the parents. In a study of 461

depressed female patients *Jacobson et al.* did find support for an association of depriving childrearing practices with adult depression.

Large studies of childrearing practices and of parent-child relationship as important determinants of personality characteristics and as precursors for later mental disorders have been carried out most frequently in relation to child development (*Becker* (1964), *Serot & Teevan* (1961), *Sears et al.* (1953), *Watson* (1957), *Slater* (1962), *Peck* (1958)) (for recent reviews see *Albright* (1978), *Shaw* (1978)). As concerns adults, attention has been paid mainly to the parental behaviour of schizophrenic patients (*Bateson et al.* (1956), *Alanen et al.* (1966), *Garnezy et al.* (1961), *Guertin* (1961), *Heilbrun* (1960)) whereas, studies concerned with parental behaviour in patients suffering from major affective disorders have been almost exceptional. Besides the paper by *Jacobson* mentioned above, another comprehensive investigation was published by *Raskin et al.* (1971), who found a higher frequency of disturbing parental rearing behaviour in depressed than in normal adults. In particular, depressed patients perceived greater emotional deprivation during their adolescence than a matched group of normals.

Several instruments have been developed to assess rearing experiences in large series (*Schaefer* (1959), *Slater* (1962), *Roe & Siegelman* (1963), *Becker* (1964), *Champney* (1941)). Among these, one of the most used is the Childrens' Reports of Parental Behaviour Inventory (CRPBI) by *Schaefer* (1959) which has been used in a shorter version by *Raskin et al.* and which inspired the investigation by *Jacobson et al.*

Using the CRPBI *Schaefer* and his group were able to identify three conceptual dimensions: acceptance vs. rejection, psychological autonomy vs. psychological control and firm control vs. lax control. *Schaefer's* inventory was first used in American subjects. However, cross-national replications (*Renson et al.* (1968)) yielded results very similar to those obtained in Americans. A later study by *Cross* (1969) verified the occurrence of the same three main factors identified by *Schaefer* in another large population. It should be noticed that the model developed by *Schaefer* is roughly similar to those developed independently by *Slater* (1962), *Roe & Siegelman* (1963) and *Becker* (1964).

Shaefer has proposed a spherical conceptual model of parent behaviour on the assumption that visualizing the dimensions of such a behaviour on a conceptual surface would contribute both in clarifying their inter-relation and in revealing sectors for which concepts have not yet been developed.

Development of the EMBU (own memories of childrearing experiences)

Inspired by the research by *Raskin et al.* and *Jacobson et al.*, we decided to include in an ongoing comprehensive investigation of patients' suffering from depressive syndromes a study of their perceived experience of parental rearing practices. At the very beginning the definitions suggested by *Jacobson et al.* were used as guidelines for semistructured interviews with the patients to assess quality of childrearing experiences. However, it was realized quite soon that the use of a standardized inventory would have been preferable in order to be sure that information would be gathered in a similar structured way from all pa-

tients entering the study. At this point we had to choose between translating into Swedish one of the available inventories or to construct a new inventory which both adhered to the concepts expressed by previous authors and reflected the nuances of rearing practices in Sweden. We preferred the latter alternative.

The present article is concerned with a presentation of this new inventory – EMBU – and its application in normals.

As a basis for constructing the EMBU we decided that all the 10 qualities of childrearing practices as defined by *Jacobson et al.* had to be included in the inventory. In addition we included other qualities (e.g. favouring subject over siblings, stimulating, guilt engendering) which were not mentioned in the list by *Jacobson et al.* but which had been used in studies by other authors. Finally, we added two more questions: one concerned with the degree of consistency in parental behaviour and the other with how strict the parents had been in their rearing behaviour.

Previous similar inventories were composed of questions to be answered by “yes” or “no”, which implied a very large number of items (192 in the CRPBI). Since our final aim was to use the EMBU in depressed patients participating in a large research project in which many other inventories and forms had to be used, we decided to decrease the number of items by increasing the number of answer alternatives to four according to the following definitions:

1. It never occurred.
2. It could occur, but it was exceptional.
3. It occurred quite frequently.
4. It was always so.

Also, we decided that the final form should allow an answer both for the father’s and for the mother’s behaviour in contrast to previous similar inventories which were divided into two separate forms for the father and for the mother. This last issue will be further commented later on in this article.

Construction of the subscales

Each of the authors contributed with a pool of questions for each of the planned subscales. Obviously, most of the questions were inspired by the already available inventories. When all the questions had been gathered a first screening was made to eliminate duplicates and to agree about the final formulation. In this way, about 100 questions were left. These questions were used in a pilot study in semistructured interviews of depressed patients. As a consequence, further minor changes were made and some questions which appeared to be inappropriate in practice were excluded. Thus the final form (a copy of the EMBU can be requested from the authors) was established comprising 81 questions grouped into 15 subscales, and another two questions concerned with the strictness of the parental behaviour and its consistency. The 15 subscales are listed in Table 1.

A few examples of the items with an indication of the subscale to which they belong is given in the following: “Did it happen that your parents punished you more than you had deserved?” (abusive), “Did your parents show with

Table 1. Mean scores and differences between fathers and mothers in the subscales

Subscale	Father		Mother		Differences		P
	\bar{x}	s	\bar{x}	s	\bar{x}	s	
Abusive	7.85	0.15	7.76	0.13	0.09	0.15	n.s.
Depriving	8.55	0.18	8.78	0.16	-0.24	0.14	n.s.
Punitive	8.28	0.22	7.69	0.19	0.59	0.20	<0.05
Shaming	7.32	0.20	7.89	0.19	-0.57	0.21	<0.05
Rejecting	11.11	0.21	11.78	0.18	-0.66	0.19	<0.05
Overprotective	10.70	0.19	11.70	0.16	-0.99	0.20	<0.05
Overinvolved	9.28	0.24	11.15	0.24	-1.87	0.26	<0.05
Tolerant	11.40	0.20	11.91	0.15	-0.51	0.19	<0.05
Affectionate	12.26	0.30	13.80	0.26	-1.55	0.27	<0.05
Performance oriented	11.03	0.28	11.47	0.26	-0.44	0.24	n.s.
Guilt engendering	7.84	0.20	9.11	0.23	-1.27	0.23	<0.05
Stimulating	12.27	0.31	12.99	0.28	-0.72	0.27	<0.05
Favouring siblings	5.93	0.21	6.27	0.22	-0.34	0.15	<0.05
Favouring subject	6.11	0.22	6.30	0.22	-0.19	0.17	n.s.
Unspecified	20.01	0.37	21.47	0.33	-1.47	0.36	<0.05

words and gestures that they loved you?" (affectionate), "Did your parents expect you to become the best?" (performance oriented).

Applications in healthy individuals

As a first step it was necessary to test the EMBU in normals. For that purpose a sample of 152 subjects was collected. The sample consisted of 73 conscripts, 57 medical students, 15 vocational therapy students, the remaining being staff personnel at the department. The sex distribution was 108 males and 44 females. In the present study the EMBU was administered as a self-rating inventory. The subjects, however, were given an opportunity to ask additional questions separately if the briefing of about ½ h, which occurred mostly in small groups, proved to be insufficient. However, the EMBU can be used both as a self-rating questionnaire, and as the form for a structured interview. It can be administered in group sessions.

Statistical analysis

Due to the smallness of the present sample no attempts were made at this juncture to analyse the two sexes separately. Such an analysis will be carried out when a larger sample is available.

The statistical analysis was carried out using standard programmes at the computer centre of the Umeå University. It comprised: a) the frequency distribution of the scores for each item calculated separately for the father and the mother with a further calculation of the difference between the scores assigned to the father and those assigned to the mother; b) a principal component factor analysis of the whole inventory in order to find out if the hypothesized subscales emerged in practice; c) the frequency distribution of the scores of the subscales for both parents and an analysis of the difference between them; d) an internal consistency analysis (both by means of the product moment

and the Spearman rank correlation coefficients) for each subscale; and finally e) a principal component factor analysis of the scores of the 15 subscales in order to find out if the three main factors identified by other authors in earlier studies could be identified, also by using the EMBU.

RESULTS

A. Item analysis

The frequency distribution of the single-item scores for both parents showed, in half of the cases, similar mean values. In half of the instances, however, there was a significant difference between the score assigned to the father and that assigned to the mother. Examples of such instances are: "Do you think your parents were strict with you?", "Did you feel difficulties in approaching your parents?", "Did your parents always decide about your dressing or what you looked like?". By and large, it can be said that fathers scored higher in items referring to strictness, punishment, and a low degree of involvement, whereas mothers scored higher in items referring to involvement and affection.

A principal component factor analysis with Varimax rotation was then carried out on all items. The limits set on the number of principal components extracted was given by the last component with an eigenvalue of one or greater. In that way 24 principal components were obtained for the fathers, and 23 for the mothers. However, as in the study by *Raskin et al.*, who extracted up to 22 factors, there was a drop in percentage of common variance accounted for beyond the third principal component. In both analyses the fourth principal component accounted for less than 4 % of the total variance. A close scrutiny of the first 10 principal factors (accounting for about 60 % of the total variance both for the fathers and for the mothers), revealed that the components obtained by means of the factor analysis did correspond rather closely to the hypothesized subscales.

B. Additional questions

About 70 % of the respondents perceived the rearing behaviour of their father as consistent, 14 % regarded it as "rigid" and only 4 % as inconsistent. The corresponding figures for the mother are 72 %, 5 %, and 7 %. As to strictness the figures were again similar for fathers and mothers who were regarded as not so strict by 59, respectively 71 %. A highly significant positive correlation ($r = 0.43$, $P < 0.001$) was found between consistency and strictness as concerns the fathers. A similar but lower correlation ($r = 0.27$, $P < 0.001$) occurred for the mothers. In general no significant differences between fathers and mothers emerged in these variables.

C. Analysis of the subscales

Frequency distribution. The frequency distribution of the mean scores obtained by the fathers and the mothers in the 15 subscales, and the mean difference between the parents is presented in Table 1. The results of this analysis emphasize the findings of the single items and show that mothers score signifi-

Table 2. *The relative number of significant correlations ($P < 0.05$) between the items in the subscales (Spearman rank correlation coefficient)*

Subscale	No. of items	No. signif. corr./Total no. corr.	
		Fathers	Mothers
Abusive	5	9/10	10/10
Depriving	5	8/10	9/10
Punitive	5	10/10	10/10
Shaming	5	10/10	10/10
Rejecting	5	9/10	10/10
Overprotective	5	5/10	8/10
Overinvolved	5	8/10	9/10
Tolerant	5	10/10	10/10
Affectionate	5	10/10	10/10
Performance oriented	5	9/10	10/10
Guilt engendering	5	9/10	10/10
Stimulating	5	10/10	10/10
Favouring siblings	5	10/10	10/10
Favouring patient	5	10/10	9/10
Unspecified	11	30/55	29/55

cantly higher in most of the subscales and especially in "overprotective", "over-involved", and "affectionate", and "guilt engendering" behaviour.

Internal consistency. To test the internal consistency of each subscale both the product moment correlation coefficients and the Spearman rank correlation coefficients were calculated. Table 2 shows how many of the correlations between the different items in each subscale are significant at the 5 % level. It is apparent that there is a high frequency of significant internal correlations in the different subscales except No. 15 "unspecified" which as expected proved to be very heterogeneous.

Correlation among the subscales. The product moment coefficients between each of the subscales were calculated both for the fathers and the mothers. The results are presented in Table 3. The figures for the mothers are shown in the left lower half and those of the father in the right upper part of the table. Some of the subscales are highly intercorrelated, e.g. "guilt engendering" and "shaming" whilst others are not, e.g. "punitive" and "affectionate".

Principal component factor analysis of the subscales. A principal component factor analysis was finally carried out using the total scores of the 15 subscales. Also in this instance the limits set on the number of principal components extracted was given by the last component with an eigenvalue of one or greater. Three principal components were thus extracted for the fathers (accounting for 68.6 % of the total variance) and four for the mothers (accounting for 68.9 % of the total variance). The factors so obtained are presented in Table 4. They are quite similar for both parents.

Table 3. *Correlations between subscales for fathers and mothers*

		Fathers										Mothers									
		Fathers										Mothers									
		Abusive	Depriving	Punitive	Shaming	Rejecting	Overprotective	Overinvolved	Tolerant	Affectionate	Performance oriented	Guilt engendering	Stimulating	Favouring siblings	Favouring patient	Unspecified					
Abusive		1.0	0.46	0.60	0.59	0.38	0.44	0.36	0.31	0.16	0.34	0.48	0.19	0.44	0.36	0.55					
Depriving		0.44	1.0	0.49	0.63	0.40	0.45	0.50	0.30	0.19	0.45	0.60	0.26	0.38	0.35	0.68					
Punitive		0.54	0.51	1.0	0.67	0.13	0.29	0.40	0.04	-0.09	0.43	0.50	-0.01	0.45	0.26	0.57					
Shaming		0.53	0.59	0.74	1.0	0.17	0.44	0.56	0.15	-0.00	0.47	0.73	0.03	0.50	0.31	0.69					
Rejecting		0.22	0.29	0.13	0.12	1.0	0.46	0.29	0.51	0.65	0.35	0.25	0.68	0.09	0.19	0.43					
Overprotective		0.34	0.29	0.27	0.29	0.28	1.0	0.57	0.48	0.45	0.50	0.44	0.43	0.29	0.28	0.65					
Overinvolved		0.36	0.39	0.51	0.60	0.20	0.45	1.0	0.28	0.34	0.53	0.54	0.24	0.30	0.14	0.64					
Tolerant		0.24	0.08	-0.05	-0.05	0.24	0.28	0.05	1.0	0.57	0.25	0.18	0.57	0.09	0.16	0.37					
Affectionate		-0.01	0.09	-0.00	-0.11	0.55	0.16	0.12	0.35	1.0	0.32	0.08	0.79	-0.08	0.08	0.30					
Performance oriented		0.17	0.35	0.23	0.31	0.25	0.37	0.45	0.08	0.24	1.0	0.42	0.43	0.17	0.17	0.62					
Guilt engendering		0.44	0.57	0.63	0.68	0.23	0.38	0.55	-0.01	-0.10	0.39	1.0	0.05	0.44	0.34	0.57					
Stimulating		0.06	0.16	-0.06	-0.10	0.58	0.10	0.07	0.33	0.71	0.38	-0.07	1.0	0.00	0.11	0.41					
Favouring siblings		0.39	0.28	0.42	0.47	0.01	0.21	0.25	0.05	-0.16	0.07	0.43	-0.06	1.0	0.59	0.37					
Favouring subject		0.21	0.23	0.12	0.15	0.08	0.12	-0.03	0.03	0.00	0.09	0.23	0.06	0.54	1.0	0.33					
Unspecified		0.53	0.58	0.60	0.67	0.31	0.47	0.66	0.09	0.12	0.52	0.49	0.24	0.35	0.19	1.0					

Table 4. *Factors derived from the 15 subscales*

Factors	Subscales and factor-loading			
	<i>Mothers</i>		<i>Fathers</i>	
Factor 1	Abusive	0.53	Abusive	0.53
	Depriving	0.64	Depriving	0.64
	Punitive	0.78	Punitive	0.69
	Shaming	0.88	Shaming	0.86
	Overinvolved	0.71	Overinvolved	0.68
	Performance oriented	0.44	Performance oriented	0.61
	Guilt engendering	0.76	Guilt engendering	0.70
	Unspecified	0.79	Unspecified	0.79
Factor 2			Overprotective	0.52
	Rejecting	0.63	Rejecting	0.72
	Affectionate	0.79	Affectionate	0.65
	Stimulating	0.94	Stimulating	0.88
	Tolerant	0.36	Tolerant	0.65
Factor 3	Favouring siblings	0.72	Favouring siblings	0.72
	Favouring patient	0.67	Favouring patient	0.71
Factor 4	Overprotective	0.72		

COMMENTS

The results of our study bear a close resemblance to those of other similar studies in the literature mentioned earlier in this paper. Our first factor refers to a controlling, performance-oriented and guilt engendering behaviour. The second bipolar factor is most close to *Schaefer's* dimension of acceptance vs. rejection. In fact, at one pole it refers to a tolerant, affectionate and stimulating behaviour, whereas at the other pole it refers to love deprivation and rejection. The third factor is, at first glance completely puzzling since both variables show high positive loadings. Logically it would have been expected from the way the questions were formulated, that either the subject or the siblings could have been favoured by the parents and not both. However, a closer scrutiny of the mean values assigned to the subscales 13 and 14 and of the scores to the single items suggest that they are similar and relatively low. Our interpretation thus is that the high positive loadings for both variables in the same factor reflect the fact that the respondents did not perceive their parents as either favouring themselves or the siblings and that therefore they assigned an average score to both sets of questions, such a scoring resulting in a high positive correlation. The variable "overprotective" emerged as a separate factor only concerning the mothers' behaviour and not the fathers'.

As concerns perceived parental behaviour the results of our study appear to be consistent with our cultural stereotypes in the sense that the mothers were rated as being more involved, affectionate and overprotective, whereas the fathers, in contrast, were rated as more distant, less affectionate and more openly controlling. However, the mothers were perceived, also as controlling in a more subtle way through a "guiltengendering" and "shaming" rearing behaviour. This last result is in line with the findings by *Droppelman & Schaefer* (1963)

and by *Raskin et al.* (1971) who also found that mothers of both normal and patients made greater use than fathers of negative control techniques and in particular "control through guilt".

One risk with the use of only one form for rating the behaviour of both parents instead of using separate forms for fathers and mothers as other authors did was that the respondents could have given completely similar scores to both parents. The results of our study contradict this assumption. On the contrary, it seems that the respondents were not only able to make a differentiation between the rearing behaviour of their parents, but also that being compelled to give a separate answer for the mother and the father on the same form furthered a more nuanced statement.

As mentioned above no separate calculations according to the sex of the respondent were made at this occasion. However, taking into account previous reports in the literature (*Droppelman & Schaefer* (1963), *Cross* 1969)) where important interactions between sex of the parent and sex of the respondent were found, a separate analysis of the answers of male and female respondents is warranted and will be the aim of future investigations.

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