



Is a harsh childhood growth environment reflected in parental images and emotional distress in adulthood?

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Published online: 20 April 2020

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Abstract

Harsh parenting can predispose a child to emotional distress, whereas a supportive childhood environment furthers later subjective well-being. We investigated whether the mother's self-reported assessment of her strictness and the adult offspring's recollections of the disciplinary methods of their parents are reflected in the adult offspring's recalled parental images and current emotional distress, anxiety and depression as assessed by the Hopkins Symptom Check List (HSCL-25). Further, we investigated whether the offspring's parental images were also associated with the HSCL-25 scores. Data was collected from northern Finland. The mothers responded to a questionnaire when their child was seven years old ($N = 354$) and the adult offspring responded at age 28–29 ($N = 337$). The mother's assessment of her own strictness was associated both with the adult offspring's dominating images of their parents and their current emotional distress, anxiety and depression. The offspring's recollections of restriction and corporal punishment were associated with dominating parental images, and these images further with current emotional distress, anxiety and depression of the offspring. Correspondingly, the offspring's recollections of parental dialogic discipline were associated with supportive and sociable parental images, and recalled paternal dialogic discipline was associated with lower current emotional distress, particularly in the female offspring. In conclusion, harsh parenting was associated with dominating parental images, which in turn were associated with emotional distress in adulthood. Dialogic discipline and the father's role in parenting were emphasized in the offspring's well-being, but more research is needed to assess the importance of paternity for the offspring's subjective well-being.

Keywords Parent–child relationship · Parental images · Physical/corporal punishment · Parental strictness · Emotional distress/anxiety/depression

Introduction

Adverse childhood experiences and early interpersonal difficulties have been linked with emotional distress in adulthood

(Oshio et al. 2013), and serious family dysfunction – such as domestic violence – with subsequent mental and somatic problems (Arnow 2004). Several studies have also found specific associations between childhood physical punishment – such as pushing, grabbing, shoving, slapping, hitting – and difficulties in later psychological, physical or social development (Afifi et al. 2012; Breen et al. 2015; Gershoff 2002; 2013; Osterman et al. 2014; 2018; Yaffe and Burg 2014). A meta-analysis by Ferguson (2013) indicated minor, but significant longitudinal relationships between corporal punishment and several negative long-term outcomes. In one Finnish cross-sectional study, frequent corporal punishment in childhood was associated with depression and other mental health problems during adulthood (Osterman et al. 2014). Although the adverse effects of physical punishment have led to legislation against corporal punishment in many countries, some researchers and professionals still disagree about the

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advantages of moderate corporal punishment as an effective method of education (Yaffe and Burg 2014).

The Global Initiative to End All Corporal Punishment of Children was launched in 2013 (Gershoff 2013), and by 2019, 53 countries had legally banned corporal punishment in all settings, including the home (Saunders 2019). In Finland, all kinds of physical punishment were criminalized already in 1983 (Finnish Law 1983) as the second nation in the world — Sweden being the first, in 1979 (Janson et al. 2011). Thus, physical punishment was common and part of the educational culture in Finland until 1983, but its acceptability has steadily declined since the introduction of the law (Osterman et al. 2018). In a survey in 1981, physical punishment was accepted by 44% of the respondents, at least in exceptional situations (Peltoniemi 1983), whereas in a study carried out in 2014, only 15% of the respondents agreed at least partly on the acceptability of physical punishment of children (Sariola 2014).

Children have regarded corporal punishment as the least fair disciplinary method compared with methods such as reasoning, house arrest and withdrawal of privileges (Vittrup and Holden 2010). In line with this, emotional atmosphere — as the child's experience — was the most important aspect in the growth environment according to one Finnish longitudinal study (from age 8 to 36) (Pulkkinen 1994; 1996). Parents setting adequate boundaries, encouraging, helping, advising and being interested in their child, could create a supportive growth environment. Taking into account a child's developmental needs enables secure attachment (Bowlby 1973; 1977), which has been linked with supportive parental images (Kiviniemi et al. 2011; Kiviniemi et al. 2016) and with adult well-being and mental health (Mikulincer and Shaver 2007).

According to Bowlby (1998; 1973), experience with the mother and father (or other primary caregivers) leads to expectations and beliefs (“inner working models”) about the self, others, and relationships. In the present study, “parental images” refer to the inner representations of parents which are thought to begin to be formed at the same time as an infant's memory system begins to encode affective experiences of its earliest attachment interactions (Amini et al. 1996; Bowlby 1998; 1973; Waters et al. 2000).

Parents can also transfer their punitive values and attitudes to their offspring (Gershoff 2013; Kemme et al. 2014). A dominant and authoritarian environment with illogical emotional responses (Pulkkinen 1994; 2002) predisposes children to insecure attachment (Bowlby 1984; Widom et al. 2018) and thus to an increased risk of depression in adulthood (Hankin et al. 2005). Lack of parental support during childhood is also associated with increased levels of depressive symptoms and chronic conditions (Shaw et al. 2004). Particularly, low maternal support could act as a risk factor for child depression (Harper et al. 2006). Furthermore, negative childhood experiences and lack of support can result in negative inner parental

images, which can further predispose to adverse outcomes such as depression in young adults (Blatt et al. 1979).

Nevertheless, the environmental atmosphere of childhood can also modify the effects of physical punishment. Harper et al. (2006) found that parental support may serve as a buffer for children who are corporally punished. At low levels of paternal corporal punishment, maternal support moderated the effects of penalty (i.e., children were less depressed), but abundant paternal punishment was disadvantageous despite possible maternal support (Harper et al. 2006).

Although both predisposing and protective family factors have been investigated, the role of recalled comprehensive parental images has hitherto received only little attention, despite the fact that they are based on the parent–child interaction (Tazuke 2017) and may have a mediating effect on subsequent well-being. The aims of the present study were to investigate 1) whether the mother's self-reported assessment of her strictness (when the child was seven years old) and the adult offspring's recollections of childhood disciplinary methods, including corporal punishment, are reflected in the adult offspring's recalled parental images and their current emotional distress, anxiety and depression as assessed by the Hopkins Symptom Check List (HSCL-25); and 2) whether the adult offspring's parental images are associated with HSCL-25.

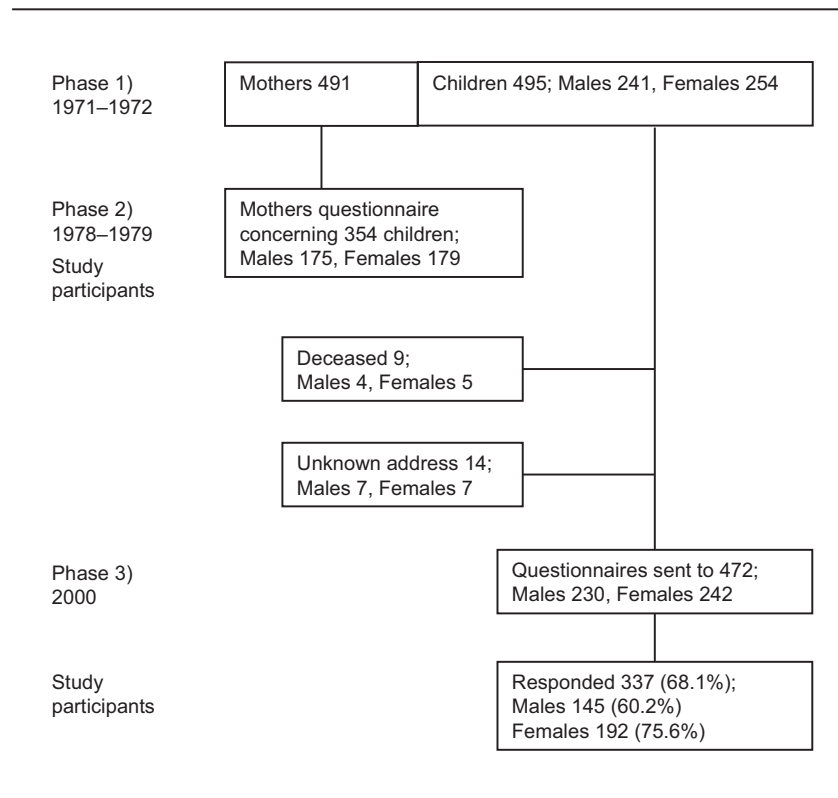
Method

Participants

This sub-study of a longitudinal study, “*The Mother–Child Follow-up Study 1971–1972*,” was conducted in northern Finland by the Clinic of Child Psychiatry at Oulu University Hospital and the University of Oulu. Figure 1 presents the flow-chart for the study sample, its participants and three phases. *In the first phase*, the study participants consisted of 491 women who gave birth to their healthy first or second child ($N = 495$, including four twin pairs) during 1971–1972 in Oulu University Hospital. Of these mothers, 310 were primiparous and 181 biparous (mean age 22.2 and 25.6 years, respectively). *The second study phase* (i.e. the 1st follow-up) was conducted in 1978–1979, when 353 of the mothers returned posted questionnaires about their 354 children (age 7 yrs., one twin pair), including items on the parent's socioeconomic status (Seitamo et al. 1979; Seitamo and Wasz-Höckert 1981). *In the third study phase* (i.e. the 2nd follow-up), the sample consisted of the grown-up offspring born in 1971–1972. In 2000, they were sent questionnaires ($N = 472$), and a total of 337 (68.1%) of the 28–29 years old offspring responded.

The present study represents the second and third study phases (including data of 251 mother–child pairs in both

Fig. 1 Flowchart of the study population.



phases). At the child's age of seven, 91.9% of the mothers were married or cohabiting with the father of the child. Parents belonged most often to the middle social class (47.4% of the mothers and 61.2% of the fathers), and correspondingly 18.8% and 23.4% to the higher and 33.8% and 15.4% to the lower social classes (Rauhala 1966). Three-quarters (75.1%) of the adult offspring were married or cohabiting, 47.1% had university, polytechnic or college level education and 57.9% were working full-time (Table 1).

Procedure

In Fig. 1, in the first study phase (1971–1972), the mothers responded to questionnaires after giving birth in Oulu University Hospital. They reported their current marital status, family income and the education of both parents. The data of the present study originated from the second study phase (1978–1979), when mothers responded to posted questionnaires. At that time, the child was aged seven and the mother was asked to assess her own disciplinary strictness. The other main study variables of the present study originated from the third study phase (2000), in which the adult offspring responded to posted questionnaires. These questionnaires included items on the adult offsprings' recalled childhood parental disciplinary methods, traits of the comprehensive images of their childhood parents and questions concerning

possible current emotional distress. Address information was obtained from the National Population Register Centre. Nine of the offspring had died and 14 could not be traced.

Measures

The questionnaire at the child's age of seven years (phase 2)

At the child's age of seven, each mother was asked to evaluate her own parental disciplinary style (7 items); indicating whether she punishes in any way, uses spanking, scolds/criticizes, threatens, uses force, gets angry, or is harsh. A five-level Likert scale was used (*never* = 1, *seldom* = 2, *sometimes* = 3, *fairly often* = 4, *often* = 5). Sum scores for maternal strictness were calculated as the means of item scores. The Cronbach's alpha value for maternal strictness was 0.78.

The questionnaire at the offspring's age of 28–29 years (phase 3)

The offspring reported their recollections of both maternal and paternal disciplinary methods. Four different choices were given; dialogic discipline (i.e. discussion, reasoning), loss of privileges, house arrest and corporal punishment (all with alternatives *no* = 0, *yes* = 1). Subsequently, "loss of privileges" and "house arrest" were combined into a new variable named

Table 1 Characteristics of the parents at child's age seven and of the adult offspring at age 28–29

	<i>n</i>	(%)
Parents		
Marital status (mother) <i>N</i> = 345		
Married or cohabiting	317	91.9
Other	28	8.1
Social status /Socio-economic status		
Mother <i>N</i> = 340		
High	64	18.8
Middle	161	47.4
Low	115	33.8
Father <i>N</i> = 338		
High	79	23.4
Middle	207	61.2
Low	52	15.4
Adult offspring <i>N</i> = 337		
Marital status		
Married	121	35.9
Cohabiting	132	39.2
Unmarried	77	22.8
Separated/divorced	5	1.5
Widowed	1	0.3
Unknown	1	0.3
Education		
University	53	16.0
Polytechnic	26	7.8
College level	77	23.3
Secondary	96	29.0
Incomplete	51	15.4
No vocational educ.	28	8.5
Missing data ^a	6	
Work situation		
Working full-time	194	57.9
Working part-time	12	3.6
Self-employed/ entrepreneur	20	6.0
Student	29	8.7
Maternity/paternity leave	44	13.1
Unemployed/laid-off	28	8.3
Retired	2	0.6
Other	6	1.8
Missing data ^a	2	

^a A few participants did not answer every question

“restriction punishment” (*neither of them* = 0, *either or both of them* = 1). Each of these three disciplinary methods was investigated separately, and the absence of each form of discipline was used as a reference category.

The offspring's comprehensive parental images were assessed with the question, “*How did you experience your*

childhood father/mother?” Altogether 17 different items were analyzed with a five-level Likert scale (*never* = 1, *seldom* = 2, *sometimes* = 3, *fairly often* = 4, *very often* = 5). From these items, three image subscales were formed (c.f. Methods) (Tables 5 and 6 in “Appendix”). The first was *supportive image* (5 items); supporting hobbies, supporting schoolwork, giving positive feedback, arranging pleasant surprises and warmth/tenderness. The second was *dominating image* (6 items); demandingness, punishment, authoritativeness, possible violence, coldness/insensitivity and incoherency. The third was *social image* (3 items); talkativeness, happiness and spontaneity. The sum score for each image was calculated as the means of its item scores. The Cronbach's alphas for the three maternal images, i.e. supportive, dominating and social were 0.86, 0.78 and 0.64, and correspondingly for the paternal images 0.85, 0.76 and 0.74 (Kiviniemi et al. 2011).

The supportive image of the present study resembles the Emotional Warmth subscale (EW) of the short version (s-EMBU) (Arrindell et al. 1999; Arrindell et al. 2005) of the originally Swedish Egnä Minnen Beträffanden Uppförstran subscale (EMBU) (Perris et al. 1980). Five of the six themes of the EW-subscale in the s-EMBU were included in our supportive image. Correspondingly, five of the seven themes of the Rejection subscale (R) of the s-EMBU were included in our dominating image. The s-EMBU has been validated and used in different cultures (Arrindell et al. 1999; Arrindell et al. 2005). Since social abilities and personality of parents have been found to be associated with positive parenting outcomes (Prinz et al. 2009), we also examined the recollection of sociable parental images.

The self-reported Hopkins Symptom Check List (HSCL-25) was used to measure the current emotional distress, anxiety and depression symptoms of the adult offspring (Derogatis et al. 1973). The *HSCL anxiety subscale* includes 10 items; suddenly scared for no reason, feeling fearful, faintness/dizziness or weakness, nervousness or shakiness inside, heart pounding or racing, trembling, feeling tense or keyed up, headaches, spells of terror or panic, and feeling restless, inability to sit still. The *HSCL depression subscale* has 13 items; feeling low in energy/slowed down, blaming oneself for things, crying easily, loss of sexual interest or pleasure, feeling hopeless about the future, feeling blue, feeling lonely, thoughts of ending one's life, feeling of being trapped or caught, worrying too much about things, feeling no interest in things, feeling everything is an effort, and feelings of worthlessness. HSCL-25 also includes two additional questions, i.e. poor appetite and difficulty in falling/staying asleep, which were used when calculating the HSCL-25 total score (Veijola et al. 2003; Winokur et al. 1984). Each of these items had four response alternatives (*not at all* = 1, *a little* = 2, *quite a bit* = 3, *extremely* = 4). The mean scores were computed for the HSCL-25 total score as well as for its anxiety and depression subscales. A mean score of ≥ 1.55 has usually been used

as the threshold for inclusion, but ≥ 1.75 has also been used (Finne et al. 2014; Finne et al. 2016; Sandanger et al. 1998; Veijola et al. 2003). We used continuous scores in the analyses, but we also give basic statistics with a screening cut-off point at ≥ 1.55 .

Data analyses

The IBM SPSS 24 statistical package was used for statistical analysis (IBM SPSS Statistics for Macintosh, Version 24.0). Principal Component Analysis (PCA) with Varimax rotation had previously been used to construct the parental images (Kiviniemi et al. 2016). Mean scores for men and women were compared by independent samples *T*-tests. A multivariate general linear model (GLM) was used to investigate the relationships between maternal strictness assessed by the childhood mother, the adult offspring's recollections of parental disciplinary methods, their assessments of their parental images and their current emotional distress (HSCL-25).

In each GLM model, women were the reference category and interactions between gender and other explanatory variables were investigated. In Model 1, the associations between maternal strictness assessed by the childhood mother, the adult offspring's recalled childhood parental disciplinary methods and their parental images were studied (Table 2). In Model 2, the relationships between maternal strictness assessed by the childhood mother, the adult offspring's recalled childhood parental disciplinary methods and their current emotional distress (HSCL-25) were investigated (Table 3). In Model 3, the relationship between the adult offspring's comprehensive parental images, both maternal and paternal, and their current emotional distress (HSCL-25) was studied (Table 4). Adjustment by sociodemographic variables, i.e. the parent's socio-economic and marital status and the adult offspring's marital status, education and work situation, was not made, because these variables had no statistically significant correlations either with dependent variables of the models or with other effects of the models. The assumptions of the models were explored and confirmed.

Results

The mean score of the mother's self-reported strictness ($M = 2.18$, $SD = 0.48$, $N = 332$) was composed most often of scolding and criticizing item scores ($M = 2.74$, $SD = 0.74$), followed by getting angry ($M = 2.73$, $SD = 0.72$), punishing in any way ($M = 2.43$, $SD = 0.68$), being harsh ($M = 2.26$, $SD = 0.73$), using force ($M = 1.94$, $SD = 0.80$), threatening ($M = 1.80$, $SD = 0.85$), and most rarely of spanking scores ($M = 1.39$, $SD = 0.6$).

The offspring reported that in their childhood the majority of parents had used dialogic disciplinary methods

i.e. discussion and reasoning (mothers 90.6%; fathers 75.2%). More than half of the parents had used restriction punishment (mothers 65.4%; fathers 59.1%) and more than a quarter corporal punishment (mothers 25.7%; fathers 38.6%).

The offspring's maternal and paternal images were most often sociable (maternal $M = 3.83$, $SD = 0.73$; paternal $M = 3.33$, $SD = 0.81$), then supportive (maternal $M = 3.48$, $SD = 0.77$; paternal $M = 3.12$, $SD = 0.82$) and least often dominating (maternal $M = 2.33$, $SD = 0.62$; paternal $M = 2.47$, $SD = 0.67$).

About 13–18% of the adult offspring reported having current emotional distress; 17.4% of them scored above the screening cut-off point (≥ 1.55) on the HSCL-25 total scale, 12.6% on the HSCL anxiety subscale and 18.3% on the HSCL depression subscale. Women scored higher than men on the HSCL-25 total scale ($M = 1.36$, $SD = 0.3$ vs. $M = 1.28$, $SD = 0.25$; $p = .008$) and on the HSCL depression subscale ($M = 1.40$, $SD = 0.37$ vs. $M = 1.29$, $SD = 0.29$; $p = .002$).

The mother's self-reported strictness and the adult offspring's parental images

Maternal strictness assessed by the childhood mother was positively associated with the adult offspring's dominating maternal ($p = .005$) and paternal images ($p = .022$) and negatively with a sociable maternal ($p = .022$) image, but not with the supportive parental images (Table 2, Model 1).

Adult offspring's recollection of parental disciplinary methods and parental images

In Model 1, the dialogic discipline method of each parent was positively associated with corresponding supportive (mother $p < .001$; father $p < .001$) and sociable parental images (mother $p = .002$; father $p < .001$), and negatively with a dominating parental image (mother $p = .002$; father $p = .001$) (Table 2). The adult offspring's recollection of restriction punishment was positively associated with a corresponding dominating parental image (mother $p = .001$; father $p = .006$), and when used by the mother negatively with supportive ($p = .011$) and sociable ($p = .004$) maternal images. Recalled restriction punishment used by the father was positively associated with a supportive maternal image ($p = .012$), but no such connection was found between recalled restriction punishment used by the mother and a supportive paternal image. If either parent was recalled as having used corporal punishment, the image of the corresponding parent was on average more dominating (mother $p = .028$; father $p < .001$), but maternal corporal punishment was also positively

Table 2 Regression coefficients, standard errors and *p* values for modelling the relationships between offspring’s parental images, maternal strictness and parental disciplinary methods with a Multivariate General Linear Model (GLM), *N* = 172 (men 70; women 102)

Model 1	Parental Images ^a																	
	Mother						Father											
	Supportive		Dominating		Sociable		Supportive		Dominating		Sociable							
Variable	β	SE	<i>p</i>	β	SE	<i>p</i>	β	SE	<i>p</i>	β	SE	<i>p</i>						
Intercept	3.104	.285	<.001	1.959	.247	<.001	4.117	.311	<.001	2.930	.328	<.001	1.859	.231	<.001	3.038	.345	<.001
Maternal strictness ^b	-.132	.106	.214	.262	.092	.005	.267	.115	.022	-.081	.121	.506	.198	.086	.022	-.085	.128	.507
Gender ^c	.047	.102	.645	.046	.088	.602	.006	.111	.960	-.151	.117	.199	.043	.083	.604	-.010	.123	.937
Recalled parental disciplinary methods ^a																		
Maternal discipline																		
Dialogic ^d	.935	.169	<.001	-.458	.147	.002	.589	.184	.002	-.286	.194	.144	.091	.137	.508	-.003	.205	.989
Restriction punishment ^e	-.373	.144	.011	.417	.125	.001	-.456	.157	.004	-.072	.165	.665	-.037	.117	.749	-.158	.174	.366
Corporal punishment	.054	.127	.669	.244	.110	.028	.286	.138	.040	.084	.146	.565	-.156	.103	.131	.005	.154	.976
Paternal discipline																		
Dialogic ^d	-.055	.121	.651	-.121	.105	.249	-.107	.131	.415	.878	.139	<.001	-.339	.098	.001	.654	.146	<.001
Restriction punishment ^e	.349	.137	.012	-.146	.119	.224	.252	.150	.095	.178	.158	.261	.310	.111	.006	.072	.166	.664
Corporal punishment	-.219	.115	.059	.089	.100	.375	-.094	.125	.455	-.066	.132	.618	.475	.093	<.001	-.053	.139	.704

p value *p* < .05 is considered suggestive and *p* < .01 significant

^a Assessed by the adult offspring

^b Assessed by the mother at the child’s age of seven years

^c Female as reference category (male vs. female)

^d Dialogic = discussion and reasoning

^e Restriction punishment = lost of privileges and/or home arrest

Table 3 Regression coefficients, standard errors and *p* values for modelling relationships between offspring's current emotional distress (HSCL-25), maternal strictness and parental disciplinary methods with a Multivariate General Linear Model (GLM), *N* = 189 (men 76; women 113)

Model 2	<i>n</i> = Not Yes	HSCL-25 ^a			Anxiety-10 ^a			Depression-13 ^a		
		β	<i>SE</i>	<i>p</i>	β	<i>SE</i>	<i>p</i>	β	<i>SE</i>	<i>p</i>
Intercept		1.220	.109	<.001	1.129	.104	<.001	1.295	.132	<.001
Maternal strictness ^b		.125	.041	.003	.117	.039	.003	.133	.050	.008
Gender ^c		-.226	.077	.004	-.114	.073	.118	-.342	.092	<.001
Recalled parental disciplinary methods ^a										
Maternal discipline										
Dialogic ^d	23 166	.050	.064	.432	.052	.061	.397	.057	.077	.465
Restriction punishment ^e	63 126	.037	.055	.507	.025	.053	.628	.036	.067	.590
Corporal punishment	143 46	-.067	.049	.171	-.044	.046	.340	-.096	.059	.106
Paternal discipline										
Dialogic ^d	58 131	-.290	.056	<.001	-.189	.053	<.001	-.376	.067	<.001
Dialogic ^d x Gender ^c		.182	.089	.042	.066	.084	.431	.282	.107	.009
Restriction punishment ^e	80 109	.001	.053	.990	-.017	.050	.733	.031	.063	.624
Corporal punishment	127 62	.038	.045	.399	.031	.043	.462	.027	.054	.621

Note Hopkins Symptom Checklist-25 (HSCL-25) and its anxiety (Anxiety-10) and depression (Depression-13) subscales; *p* value *p* < .05 is considered suggestive and *p* < .01 significant

^a Assessed by the adult offspring

^b Assessed by the mother at the child's age seven years

^c Female as reference category (male vs. female)

^d Dialogic = discussion and reasoning

^e Restriction punishment = lost of privileges and/or home arrest

associated with a sociable maternal image (*p* = .040). Gender of the offspring had no independent effect on

the parental images or their relationship with recalled parental discipline methods.

Table 4 Regression coefficients, standard errors and *p* values for modelling relationship between offspring's current emotional distress (HSCL-25) and parental images with a Multivariate General Linear Model (GLM), *N* = 297 (men 132; women 165)

Model 3	HSCL-25 ^a			Anxiety-10 ^a			Depression-13 ^a			
	β	<i>SE</i>	<i>p</i>	β	<i>SE</i>	<i>p</i>	β	<i>SE</i>	<i>p</i>	
Intercept	1.086	.143	<.001	1.067	.143	<.001	1.071	.175	<.001	
Gender ^b	-.106	.029	<.001	-.085	.029	.003	-.140	.035	<.001	
Parental images ^a										
Mother										
Supportive	.027	.027	.321	.020	.027	.470	.037	.033	.264	
Dominating	.077	.027	.005	.055	.027	.047	.090	.033	.008	
Sociable	-.017	.023	.456	-.017	.023	.447	-.017	.028	.537	
Father										
Supportive	.004	.025	.867	.016	.025	.504	-.010	.030	.729	
Dominating	.090	.023	<.001	.072	.023	.002	.108	.028	<.001	
Sociable	-.049	.022	.025	-.032	.022	.147	-.052	.027	.052	

Note Hopkins Symptom Checklist-25 (HSCL-25) and its anxiety (Anxiety-10) and depression (Depression-13) subscales; *p* value *p* < .05 is considered suggestive and *p* < .01 significant

^a Assessed by the adult offspring

^b Female as reference category (male vs. female)

Table 5 Loadings of maternal variables for each image component in principal component analysis (PCA) with the varimax rotation method and Kaiser normalization

	Components				Communalities
	Supportive	Dominating	Sociable	Hard-working ^b	
% of Variance (total 59.9%)	22.3	15.8	14.3	7.6	
Eigenvalue	5.64	2.05	1.31	1.19	
Cronbach's Alpha	0.857	0.78	0.641	0.361 ^b	
Mother image variables	<i>n</i> = 335	<i>n</i> = 328	<i>n</i> = 326	<i>n</i> = 334	
Supported, took part in hobbies	0.813	−0.062	0.123	0.086	0.688
Supported with school work	0.801	−0.088	0.191	0.095	0.696
Gave acknowledgement, praise	0.760	−0.135	0.290	−0.007	0.680
Arranged pleasant surprises	0.704	0.016	0.005	−0.052	0.498
Warm, tender	0.680	−0.229	0.388	0.004	0.665
Demanding	0.144	0.806	0.026	0.131	0.687
Punished	−0.052	0.760	−0.126	−0.148	0.618
Authoritative	−0.166	0.741	0.029	0.126	0.593
Hit when angry, was violent	−0.388	0.521	−0.067	−0.160	0.453
Cold, insensitive	−0.450	0.510	−0.437	0.128	0.670
Incoherent, erratic and unpredictable	−0.454	0.462	−0.219	−0.029	0.468
Talkative	0.160	0.043	0.765	0.030	0.614
Happy	0.444	−0.238	0.672	−0.013	0.705
Spontaneous in relationships	0.034	0.011	0.656	0.003	0.432
Domestic ^a	0.146	−0.104	0.522	0.091	0.313 ^a
Committed to work	−0.108	0.075	−0.101	0.852	0.754
Diligent	0.278	−0.056	0.364	0.660	0.648

Loadings of variables to form each component are indicated in bold

^a Excluded from the component because of low communality

^b Hard-working not included in this study

The mother's self-reported assessment of her strictness and the adult offspring's current emotional distress

Maternal strictness was associated with the adult offspring's higher HSCL-25 total and subscale scores (total $p = .003$; anxiety $p = .003$; depression $p = .008$) (Table 3, Model 2).

Adult offspring's recollection of parental disciplinary methods and current emotional distress

The recalled paternal dialogic disciplinary method (discussion, reasoning) was associated with lower HSCL-25 total and subscale scores (all $p < .001$), whereas neither restriction nor corporal punishment were associated with current emotional distress (Table 3, Model 2). These correlations were moderated by gender. In women, paternal dialogic discipline was associated with decreased HSCL-25 total and depression

subscale scores more clearly than in men ($p = .042$, $p = .009$ for interaction).

Adult offspring's parental images and current emotional distress

Both maternal and paternal dominating images were associated with higher emotional distress, i.e. with higher HSCL-25 total scores (maternal $p = .005$; paternal $p < .001$), anxiety subscale scores ($p = .047$; $p = .002$) and depression subscale scores ($p = .008$; $p < .001$) (Table 4, Model 3). A sociable paternal image was associated with lower HSCL-25 total score ($p = .025$), whereas neither maternal nor paternal supportive images were statistically significantly associated with current emotional distress. Gender had an independent effect on the emotional distress; men had lower HSCL-scores (total $p < .001$; anxiety $p = .003$; depression $p < .001$).

Table 6 Loadings of paternal variables for each image component in principal component analysis (PCA) with the varimax rotation method and Kaiser normalization

	Components				Communalities
	Supportive	Dominating	Sociable	Hard-working ^b	
% of Variance (total 61.1%)	20.9	16.9	13.5	9.9	
Eigenvalue	5.25	2.37	1.58	1.19	
Cronbach's Alpha	0.852	0.764	0.735	0.598	
Father image variables	<i>n</i> = 319	<i>n</i> = 319	<i>n</i> = 315	<i>n</i> = 321	
Supported, took part in hobbies	0.818	0.011	0.095	−0.022	0.679
Supported with school work	0.843	−0.066	0.091	0.115	0.737
Gave acknowledgement, praise	0.814	−0.112	0.237	−0.021	0.732
Arranged pleasant surprises	0.620	−0.060	0.289	0.061	0.476
Warm, tender	0.603	−0.242	0.433	−0.035	0.611
Demanding	0.191	0.657	0.009	0.326	0.574
Punished	−0.006	0.736	−0.036	−0.005	0.543
Authoritative	−0.077	0.743	−0.059	0.331	0.671
Hit when angry, was violent	−0.185	0.650	0.012	−0.332	0.568
Cold, insensitive	−0.426	0.540	−0.378	−0.091	0.625
Incoherent, erratic and unpredictable	−0.292	0.623	−0.118	−0.215	0.534
Talkative	0.262	0.018	0.817	−0.008	0.736
Happy	0.394	−0.228	0.739	0.053	0.756
Spontaneous in relationships	0.099	0.037	0.733	0.064	0.553
Domestic ^a	0.301 ^a	−0.281	0.149	0.008	0.192 ^a
Committed to work	−0.186	0.152	0.092	0.774	0.665
Diligent	0.225	−0.125	0.007	0.820	0.738

Loadings of variables to form each component are indicated in bold

^a Excluded from component because of low communality

^b Hard-working not included in this study

Discussion

The purpose of the study was to determine whether the recollections of parental disciplinary methods (e.g. corporal punishment, restriction punishment or dialogic discipline), are reflected either in the adult offspring's recalled parental images or in their current emotional distress, anxiety and depression, and whether these two outcomes are related. Thus far, previous literature has shown that harsh parenting can predispose an offspring to emotional distress (Afifi et al. 2012; Breen et al. 2015), whereas a supportive childhood environment may promote the offspring's later subjective well-being (Kiviniemi et al. 2011; Kiviniemi et al. 2016). It is worth emphasizing that although parental images are based on the parent–child interaction, they have received only a little attention (Tazuke 2017). In the present study, parental images were assessed by the adult offspring with a total of 17 different items closely describing individual characteristics, from which three trait combinations (supportive, dominating, sociable) were formed. We proposed that these comprehensive

items represented the internalized images of childhood parents and were present in the respondent's adult life.

One of our key findings was that recalled paternal dialogic discipline in childhood was associated with low levels of adult emotional distress, anxiety and depression. The positive link with respect to depression was stronger among women, but similar between the genders with respect to anxiety symptoms. Furthermore, the adult offspring's recollections of parental restriction and corporal punishment were reflected in their dominating parental images, which – in turn – were related to emotional distress, anxiety and depression. Neither recollected parental restriction nor corporal punishment were directly associated with emotional distress.

One of our aims was to investigate whether the mother's self-reported assessment of her own strictness is reflected in the offspring's recalled parental images. We found that the aspects of maternal strictness (assessed by the childhood mother herself), such as punishment, spanking, scolding, criticizing, threatening, using force, getting angry and being harsh, corresponded to the traits of offspring's dominating

parental images such as demandingness, authoritativeness, coldness, insensitivity and unpredictability, in addition to possible punitive and violent tendencies. Thus, it is not surprising that maternal strictness was positively correlated with a dominating maternal image. However, we found that the mother's strictness also correlated with the father's dominating image, reflecting a comprehensive experience of a dominating family atmosphere.

We found further that the supportive parental images and recollections of dialogic discipline were associated. The former were described with high quality reciprocal interaction, such as supporting hobbies and schoolwork, giving positive feedback, arranging pleasant surprises as well as general parental warmth and tenderness. In general, these factors can support the offspring's subjective well-being via increasing active mastery of his or her own life (Leiman 2012; Stetsenko and Arievidt 2004). On the other hand, the offspring's recollections of parental restriction or corporal punishment were positively associated with a dominating image of the corresponding parent. Children are also known to have regarded corporal punishment as the least fair disciplinary method, compared with methods such as reasoning, house arrest and withdrawal of privileges. In the study of Vittrup and Holden (2010), the importance of a dialogue was expressed by one 8-year-old girl "You really need to talk to your child if they don't listen to you. You need to sit down and talk to them. If that doesn't work, take a privilege away. [Spanking] doesn't teach the kid a lesson".

Finland was the second nation where all corporal punishment was banned, including in the home. To date, over fifty countries have passed the same legality restrictions, but much work still remains to be done. According to Saunders (2019), corporal punishment of children should not be seen only as an infringement of their human rights but also as a disquieting public health concern. Although several previous researchers have come to the same conclusion as our study that corporal punishment does not have any favorable consequences, children's physical discipline continues to be tolerated in many countries, including many Western countries (Gershoff 2013; Saunders 2019).

A surprising result in the present study was that the adult offspring's recollection of corporal punishment used by the mother was positively associated with a sociable maternal image (including talkativeness, happiness and spontaneity). The data of our study was collected before and during wide societal changes affecting attitudes and practices in the use of corporal punishment (Osterman et al. 2018; Peltoniemi 1983; Sariola 2014). Among other things, Waters et al. (2000) emphasized that fluctuations in attachment security related to meaningful changes in the family environment may enable changes in attachment relations. Zhang and Labouvie-Vief (2004) also indicated that although attachment style is relatively stable on a short span (six-year period), it is

characterized more by fluctuation than by stability. It is also possible that spontaneous, sociable mothers used corporal discipline when it was legally accepted but changed their practices when it was no longer legal. Thus, changing disciplinary practices and attachment security fluctuations may partly explain our findings between corporal punishment and a sociable maternal image.

The relationships between childhood events and adult well-being are complex. Protective factors such as parental support may moderate the effects of potential risk factors, and e.g. corporal punishment may indicate fairer sanction in a supportive atmosphere compared to circumstances with lack of such positive aspects (Harper et al. 2006). Thus, we investigated whether the offspring's recollections of childhood parental disciplinary methods or parental images correlated with their possible current emotional distress (HSCL-25), anxiety and depression.

Unlike in the study of Harper et al. (2006), in which high paternal support had a direct correlation with low levels of child's depression, in our study recalled paternal dialogic discipline, not his supportive image, was associated with a lower level of emotional distress, anxiety and depression – in the case of depression more clearly among the female offspring. One of our key findings was that paternal dialogic discipline may act as a protective factor for the offspring's well-being. Correspondingly, the adult offspring's dominating parental images – paternal statistically more clearly than maternal – were associated with higher levels of adult emotional distress, but only the paternal social image was linked with lower levels of distress. These results are partly consistent with those of previous studies, in which parental support (Shaw et al. 2004) and a good parent–child relationship have been associated with reduced daily psychological distress (Mallers et al. 2010).

Research literature underscores the relationship between physical punishment in childhood and subsequent depression, anxiety and other adverse psychiatric symptoms (Afifi et al. 2013; Arnow 2004; Gershoff 2002; Oshio et al. 2013; Osterman et al. 2014). In the present study, we found that recalled harsh discipline, i.e. restriction and corporal punishment, even if not related to emotional distress, was related to dominating parental images, which in turn were related to emotional distress, anxiety and depression.

Although harsh parental discipline reported by the adult offspring – i.e. their recollection of restriction and corporal punishment – was not associated with the adult offspring's current well-being, maternal strictness assessed by the mother herself was reflected in the adult offspring's emotional distress, anxiety and depression. This latter result is consistent with those of an earlier study in which higher levels of maternal punishment increased the offspring's depression (Harper et al. 2006). In our study, it may well be that the mothers' reports were based on significant negative disciplinary events

and atmosphere, and even if maternal strictness is not remembered by the offspring, it may have negative emotional effects. On the other hand, for the offspring it appeared that rather than remembering possible negative disciplinary practice, it was more important how they recalled their comprehensive parental images.

In a recent prospective study, childhood neglect and physical abuse were associated with a higher level of insecure attachment style in adulthood, which in turn was linked with higher levels of anxiety and depression and lower self-esteem (Widom et al. 2018). In our study, a dominating parental image included the negatively colored memories of the childhood parents, such as authoritativeness, coldness and insensitivity. We suggest that these factors are closely associated with insecure attachment patterns, which are linked with a dominating growth environment (incl. corporal punishment, domestic violence).

In the present study the recollection of positive childhood paternal dialogic discipline, such as discussion and reasoning, was related to adult emotional distress in a protective way. The results also indicate that overall dominating parental images may play a causative role between the harsher aspects of a childhood growth environment and later emotional distress. We suggest that parental dialogic discipline makes it possible to emotionally and cognitively distinguish different experiences and to master emotional distress, and thus that dialogic upbringing promotes well-being. On the other hand, children with experience of harsh parental discipline are prone to establish negative internal images of their parents. Without the possibility of consciously processing negative childhood memories, these internalizations may be a risk for later well-being. The present study also emphasizes the father's role in parenting. More research is needed concerning the importance of the father for the offspring's later well-being.

In conclusion, the present study supports arguments for banning corporal punishment in countries where this has not yet been done. It provides an alternative by encouraging parents to use discussion and reasoning instead of corporal punishment, since the memory images of one's parents have far-reaching effects.

Limitations

The longitudinal setting of this study allowed us to strengthen and expand the views of two generations regarding the same growth environment. However, we had only the mothers' assessments of discipline at the child's age of seven, not the fathers'. Furthermore, the offsprings' current subjective well-being may have been reflected in their assessments of their own childhood. The general attitude related to the banning of corporal punishment may have affected the answers of the respondents. The attitudes between our research data

collection points may have changed towards child-friendlier parenting. Thus, the results need to be interpreted with some caution in different societies with varying legislation. Further research is proposed in dissimilar cultural contexts.

Acknowledgements We are grateful to the Gyllenberg Foundation for grants to Hanna Ebeling and Annukka Kiviniemi, to the Northern Ostrobothnia Hospital District, the Finnish Cultural Foundation, the Psychological Institute of Finland, the Lisa Andström Foundation and the University of Oulu Scholarship Fund for grants to Annukka Kiviniemi. We are also grateful to Ole Wasz-Höckert † and Leila K. Seitamo, who implemented the first parts of this longitudinal study.

Funding Information Open access funding provided by University of Oulu including Oulu University Hospital.

Compliance with Ethical Standards

The Ethical Committee of the Northern Ostrobothnia Hospital District in Finland approved the study, and written permissions were obtained from the young adults.

Conflict of interest The authors report no conflicts of interest. The authors alone are responsible for the content and writing of the paper.

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