Suicide attempts and retrospective reports about parent-child relationships: evidence for the affectionless control hypothesis

Suizidversuche und retrospektive Berichte über Eltern-Kind-Beziehungen: Evidenz für die "affectionless control" Hypothese

Abstract

Objective: To compare the characteristics of recalled parent-child relationships in suicide attempters vs. non-attempters

Methods: A total of 509 patients – 249 presenting with pain at a psychosomatic clinic and 260 from the offices of general practitioners – were interviewed retrospectively about suicide attempts and parent-child relationships.

Results: The overall rate of those reporting a suicide attempt was 17%. Bivariate analyses showed associations of poor parent-child relationships with suicide attempts throughout. In a multivariate analysis, the combinations high maternal control*low perceived love (p<.001) and high control*high role reversal (p=.002) were associated with particularly elevated risks for suicide attempts.

Conclusion: Beside the two most extensively explored dimensions of parent-child relationships, parental affection and control, one other dimension, role reversal, also contributes strongly to risk for offspring suicide attempts and should be considered in future studies.

Keywords: suicide, maternal care patterns, case control study

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Zusammenfassung

Fragestellung: Unterscheiden sich die retrospektiven Berichte der Eltern-Kind-Beziehungen von Personen, die mindestens einen Suizidversuch im Leben unternahmen von solchen Personen, die keinen Suizidversuch unternahmen.

Methode: Insgesamt 509 Patienten, davon 249 aus einer psychosomatischen Klinik und 260 aus Hausarztpraxen, wurden retrospektiv zu Eltern-Kind-Beziehungen und zu Suizidversuchen befragt.

Ergebnisse: Insgesamt zeigt sich eine Rate von 17% an berichteten Suizidversuchen. Bivariate Analysen zeigen fast durchweg schlechtere Eltern-Kind-Beziehungen bei Personen, die einen Suizidversuch unternahmen. Eine multivariate Analyse weist zwei Interaktionen als besondere Risiko-Faktoren für Suizidversuche aus: hohe mütterliche Kontrolle kombiniert mit wenig mütterlicher Liebe und hohe mütterliche Rollenumkehr kombiniert mit wenig mütterlicher Liebe.

Schlussfolgerung: Kontrolle und Liebe stellen die zwei am häufigsten untersuchten Dimensionen elterlichen Erziehungsverhaltens dar. Sie zeigen in ihrer Interaktion einen deutlichen Risikofaktor für Suizidversuche auf. Daneben erweist sich eine weitere Dimension, mütterliche Rollenumkehr als signifikanter, zusätzlicher Prädiktor für Suizidversuche. Diese sollte in weiteren Studien vermehrt berücksichtigt werden.

Schlüsselwörter: Selbstmordversuche, mütterliches Erziehungsverhalten, Fall-Kontroll-Studie

Introduction

Strong interpersonal relationships and a secure interpersonal attachment style have been hypothesized to be protective factors that may reduce risk for suicidal behaviour [1]. Major disruptions in family relationships during childhood may play an important role in the development of suicidal ideation that persists into adulthood [2]. These hypotheses are set forth in Bowlby's theory of attachment, in which suicidality during childhood or adolescence is conceptualised as a potential outcome of actual or threatened loss of the caregiver [1]. Similarly, early childhood adversities, such as childhood maltreatment and problematic parenting, are hypothesized as long-term risk factors in interpersonal theories of suicide (e.g. [2], [3]).

Prospective longitudinal research has provided support for these hypotheses. Maternal reports of parent-child relationships during childhood were found to predict offspring-reported suicide attempts during young adulthood [4]. Similarly, Johnson et al. [5] reported that maternal and offspring reports of problematic parenting behaviour during childhood were associated with elevated risk for suicidal behaviour during adolescence and early adulthood. In the latter study, risk for suicidal behaviour was particularly elevated among those youths with a history of problematic parenting who reported major relationship disruptions during adolescence [5].

Parker [6] hypothesized that the combination of low parental love and high parental control, or "affectionless control," may be an important long-term risk factor that may contribute to the development of depressive symptoms and suicidal ideation or behaviour during adolescence or adulthood. This hypothesis has been investigated in a number of studies that assessed affectionless control using the Parental Bonding Inventory (PBI) [7]. A meta-analysis of findings from these studies confirmed that low parental affection and high parental control were associated with depressive symptoms and suicidality, across samples [8]. Interestingly, however, the findings suggested that the parental affection and control dimensions were linear-additive, and that the multiplicative interaction of low parental affection and high parental control did not predict elevated depressive symptoms more than the additive combination of the two parenting dimensions. In addition, affectionless control was found to be associated with a wide range of psychiatric symptoms, rather than being specifically associated with depressive symptoms [8].

The aim of the present study was to compare the retrospective reports of medical patients with and without a history of attempted suicide, with regard to recalled family environment characteristics during childhood. Histories of suicidal behaviour and retrospective reports of the childhood family environment were obtained from a combined sample of primary care patients and patients at a psychosomatic medicine clinic. The linear and non-linear, additive and multiplicative effects of parent-child relationships and interactions among specific types of parent-child relationships were examined.

Material and methods

Sample

The present study's analysis was based on two samples. Sample 1 consisted of 260 patients who were interviewed at the offices of their general practitioners. During the visits the patients were asked by the practitioners if they would be willing to take part in a study about psychosocial factors and health. If so, a date for a structured interview was set by the practitioner. Dates were offered during the daytime and in the early evening so as not to exclude employed patients. The interview itself was performed by a trained student and lasted approximately 1 hour; afterwards, patients were allotted an additional 1/2 hour to fill out a small booklet containing questionnaires. Participation was voluntary and unpaid for all patients. Sample 2 consisted of 249 patients who visited the University Clinic of Psychosomatic Medicine in Mainz because of chronic and medically unexplained pain. Data collection, which was part of the clinic's standard diagnostic procedure, was essentially identical to that for the patients of the general practitioners. All patients of both samples gave written informed consent to take part in a study, but an approval of the study protocol by an institutional review board for evaluation of ethics of research was only provided for sample 2. In sample 1 the data collection was purely observational and it was guaranteed to the patients that no information they gave would be forwarded towards their general practitioner except on explicit demand of the patient (see Notes/Ethical concern). The same group of students conducted the interviews in both samples. A description of both samples is given in Table 1. The table shows that sample 1 is marginally younger than sample 2 and has a slightly worse socio-economic status, according to the Hollingshead scale.

Measures

Data on suicide attempts were collected by use of the Mainz Structured Biographical Interview (MSBI) [9]. The MSBI contains seven sections: actual complaints, pain, complaints of previous years, childhood adversities and protective factors, relationship with spouse, job situation, and actual mood of the patient. It is a rater-based interview, i.e., any decision regarding how an answer should be coded is made by the rater and not by the patient [10]. In cases of uncertainty, the rater has to ask the patient for as long as necessary about details until the rater can allocate the answer to one of the given categories, which are not known to the patients. The questions about suicide were part of the section on physical and psychological complaints in previous years. Patients were asked if they (a) ever in life had serious thoughts about suicide

Table 1: Sample description

	Sample 1: General Practitioner	Sample 2: Psychosomatic Clinic	Test for differences
N	260	249	
Gender: % female	79	72	$X^2_{(1)}$ = 3.32, p < .068
Age: $\overline{x}$ (sd)	43.3 (10.7)	45.6 (12.1)	$t_{504}{}^a$ = 2.17, p < .030
Years of formal education (%)			
≤ 9	43	43	$X^2_{(2)}$ = 1.27, p < .530
10-12	35	32	
≥ 13	22	26	
Living with spouse (%)	77	76	$X^2_{(1)}$ = 0.03, p < .869
Socio-economic status (%)			
I	1	0	$X^2_{(6)}$ = 12.33, p < .055
II	14	11	
IIIa	30	3	
IIIb	7	3	
IV	34	35	
V	8	11	
Still in school	6	4	
Suicide attempt (%)	17	17	$X^2_{(1)}$ = 0.00, p < .991

t-Test for unequal variances

and, if so, (b) had made a concrete plan or (c) had made even an attempt. Answers were coded into the severest category. For the present analysis, those reporting a suicide attempt were coded "1", all others "0". No additional conditions, e.g., being hurt or needing help, were required. Test-retest reliability of the dichotomised item on suicide attempts was examined in a sub-sample of 62 patients of sample 1 who were interviewed twice by different interviewers with a mean time lag of two years. The kappa between the two measurements was .50 (data available upon request).

Data about the parent-child relationships were collected through use of the questionnaire booklet. The patients filled out the "childhood questionnaire" (KFB), a 128-item questionnaire [11]. The KFB was designed for adults to describe retrospectively their relationships with their parents. It contains eight dimensions, each concerning both mother and father: perceived love, punishment, trivialising punishment, parents as models, ambition, role reversal, parental control, and competition between siblings. Examples for items of each scale are given in Table 2. As role reversal plays a central role in the following results and is not often used in previous research, it shall be described in more detail than the other scales. By utilizing four items, it describes the tendency to make the child responsible for the well being of mother or father, and becoming a partner in case of conflicts between the parents. Such behaviour of parents was considered to be particularly disturbing in the development of children

because it (a) overtaxes the child [12] and (b) puts it into a wrong subsystem of the family [13]. Four more dimensions are not parent-specific and describe a feeling of happiness during childhood, the quality of the parental conjugal relationship, social support from persons who are not members of the family, and the socioeconomic status of the family. The scales range from "0" to "3", indicating that the respective dimension described the parent-child-relationship "not at all", "rather not", "quite a bit", or "very well". The subscales of the KFB show good internal consistency (Table 2) and test-retest coefficients in the .80 range over a two-year period [14]. It should be noted that the patients were asked more than 500 questions regarding a variety of domains other than suicide and parent-child relationships. Even though the patients of sample 1 were informed that the researchers were interested in associations among psychosocial factors and health, and even if it is assumed that patients of a psychosomatic clinic believe that their doctors fancy such associations, no suggestion of a relationship between suicide and parent-child relationships was evident.

Statistics

Out of all subscales of the KFB, 18 were analysed as continuous variables. The two subscales regarding competition between siblings were dichotomised for two reasons: First, patients who had no siblings received a

Table 2: The childhood questionnaire

	Subscale	Reliability	Example items mother[a] , inverted (i)[b]
(1)	Perceived Love (9 Items)	Mo: .93 Fa: .94	My mother was affectionate to me Real love I didn't get from my mother (i)
(2)	Punishment (9 Items)	Mo: .93 Fa: .93	I often felt unfairly punished by my mother My mother often told me off
(3)	Trivialising punishment (3 Items)	Mo: .72 Fa: .80	When my mother punished me, I always deserved it
(4)	Control (7 Items)	Mo: .88 Fa: .89	My mother often decided I had exactly to be like my mother wanted me to
(5)	Ambition (6 Items)	Mo: .86 Fa: .87	My mother was very achievement-oriented
(6)	Mother as a model (4 Items)	Mo: .79 Fa: .76	I never want to become like my mother (i) My mother is a model for me till today
(7)	Role reversal (5 Items)	Mo: .77 Fa: .71	I often felt responsible for my mother I had to console my mother
(8)	Competition between siblings (3 Items)	Mo: .87 Fa: .88	As a child, I often felt neglected, because my mother preferred my sister or brother
(E1)	Happiness during childhood (6 Items)	.81	My childhood was happy and light-hearted We siblings always stayed together
(E2)	Parental conjugal relationship (6 Items)	.91	My parents had a happy marriage Basically my parents should not have married (i)
(E3)	Social support other than from parents (3 Items)	.70	Beside my parents, there were other important adults during my childhood
(E4)	Socioeconomic status (4 Items)	.78	I come from a high prestige family In my family, money was short (i)

Reliability: Cronbachs α; [a] Items regarding the father are identically formulated; [b] Item is inverted; Mo: Mother, Fa: Father.

zero indicating no competition between siblings. Second, the distributions of the responses to the scales were strongly skewed, and a parametric analysis would have been difficult. In both variables, values smaller than 1 were recoded to zero, values of one and higher to one. Hence, the highest scoring 35% of patients regarding their mothers and 24% regarding their fathers received a one, others zero. In the first step of the analysis, bivariate associations were examined between suicide attempts and all subscales of the KFB.

In the second part of the analysis, a multivariate approach was taken. All parent-child relationships, age, gender, and membership in sample 1 versus sample 2 were entered into a logistic regression analysis. Variables were deleted by a back step procedure, setting alpha at .005. After selecting the relevant main effects, the remaining model was tested for any quadratic term (19 variables) or one of the two-way interactions listed below to be significant at alpha=.005. Tested two-way interactions were: products between mothers and fathers regarding the same dimension (8 terms) to test whether extreme values of a parenting style in both parents had any effect; products of all dimensions within mothers and fathers (2 x 28 terms) to test whether specific combinations of parenting styles have any effect; all interactions with age, gender, and group membership (63 terms) to rule out the

possibility of artefacts. In order to limit the number of statistical tests, no further interactions (e.g., the one between perceived love - mother and control - father) were tested. Quadratic terms and interactions were kept in the model if, and only if, the quadratic/interaction term was significant as well as the joint contribution of this variable/variable pair at alpha=.005. The latter was tested by an X^2-test with 2 degrees of freedom (df) for a squared term, and with 3 df for an interaction term. All terms in and out of the model then were tested again. This procedure was repeated until no more variables had to be added or deleted. For this selection process, all missing values of the explanatory variables were replaced by the mean of the respective variable or, in the case of binary variables, by the value of the larger category. This method was followed to prevent the exclusion of patients who had missing data on some variables that may not be of interest in the final model. For example, most patients who grew up with a single parent had missing data for the father-child relationship (no patient in this sample was brought up by the father alone) and would have had to be excluded if we had not applied the substitution for missing data. The final model was tested again without any substitution of missing data, and variables or terms that were not significant were excluded again. No more tests to add variables were made at this stage. The final effects are shown in Figures as the estimated relationships based on the coefficients of the regression models. Estimates were drawn by setting variables in the model but uninvolved in the specific effect at the sample mean; in the case of an interaction between two continuous variables, three lines were drawn when one variable was set at mean +1 sd, mean, and mean -1 sd, respectively. The X-axes of the graphs display the full theoretical range of the respective scales, while the curves are drawn only for the middle 90% of the observed distributions in this sample in order to avoid over-interpretation.

The procedure described above does not guarantee the identification of the optimal model that could be applied to the data, but provides a compromise for detecting linear and non-linear associations by limiting the computation time to a reasonable degree. Because all possible explanatory variables were tested twice with regard to having an association with suicide (bi- and multivariate), a Bonferroni correction was applied. Hence, the significance level of alpha was set locally to .005, corresponding to a nominal level alpha=.01. Raw values of p then were reported in all tables, as provided by the statistics programs. No trends were reported or interpreted. If p-values were larger than .200, the results were interpreted to mean that no association was present. For p-values in the intermediate range (.005<p<.200) it was interpreted that it is not possible to decide if the association is present or absent. All tests were performed two-tailed. Data were entered twice into a special computer program in order to minimise typing errors. Statistics were performed using SPSS 6.13 [15] and Stata 8.2 [16].

Results

The reported rate of suicide attempts was 17%; a difference between women and men could be neither proven nor rejected (women 19%, men 11%, $X^2_{(1)}$=4.30, p=.038). Membership in samples 1 vs. 2 showed no association with the rate of suicide attempts ($X^2_{(1)}$=0.00, p=.991); neither did age (t_{507}=1.09, p=.277). All scales of the childhood questionnaire are displayed for suicide attempters and non-attempters in Table 3. Most dimensions of the parent-child relationship showed a bivariate association with suicide attempts, with reports of poorer parent-child relationships in the group of suicide attempters compared with non-attempters throughout (Table 1). Comparing the mother-child relationships to the father-child relationships shows that there are higher associations to mother-child relationships.

In the multivariate analysis, three variables remained as predictors of suicide attempts in terms of two-way interactions; these variables, which are displayed in Figure 1 and Figure 2, are perceived maternal love, maternal control, and maternal role reversal (Table 4). Maternal control "high" means one standard deviation above the mean, "low" one standard deviation below. Low perceived maternal love is associated with a high risk of suicide only when maternal control is high (Figure 1). When maternal control is average or lower, the estimated risk for a suicide attempt is close to zero. Maternal role reversal always increases the risk for suicide attempts, but to a much greater degree when maternal control is high than when maternal control is average or low (Figure 2). None of the squared effects or other interactions reached significance. The squared effect with the smallest p-value was the one for happiness during childhood ($p_{if\ entered}$=.023). Out of the eight terms used to test the same dimension in both parents, the product of perceived maternal love and perceived paternal love was the one with the smallest p-value ($p_{if\ entered}$=.012). One more interaction between maternal parenting dimensions was close to reaching significance: the interaction between maternal punishment and competition between siblings regarding the mother ($p_{if\ entered}$=.006). None of the terms tested for the paternal parenting dimensions reached significance; the one with the smallest p-value for fathers was the main effect for trivialising punishment ($p_{if\ entered}$=.099). None of the 63 interaction terms for age, gender and group membership was significant.

Table 3: Parent-child relationships in patients with vs. without suicide attempt

| | Suicide attempt | | | |
| | Yes (78 < N < 88) | No (397 < N < 421) | | |
	$\overline{x}$ (sd)	$\overline{x}$ (sd)	t	p
a) Continuous variables				
Perceived Love				
Mother	1.48 (0.86)	1.20 (0.74)	5.07	<.001
Father	1.30 (0.87)	1.66 (0.78)	3.68	<.001
Punishment				
Mother	1.17 (0.92)	0.71 (0.70)	-4.39	<.001
Father	1.04 (0.84)	0.80 (0.75)	-2.37	.020
Trivialising punishment				
Mother	1.26 (0.78)	1.51 (0.76)	2.71	.007
Father	1.06 (0.76)	1.40 (0.80)	3.50	<.001
Control				
Mother	1.20 (0.89)	0.87 (0.70)	-3.21	.002
Father	1.20 (0.85)	0.92 (0.72)	-2.66	.009
Ambition				
Mother	1.03 (0.77)	0.73 (0.66)	-3.39	.001
Father	1.02 (0.78)	0.78 (0.67)	-2.55	.012
Parent as a model				
Mother	0.95 (0.81)	1.27 (0.75)	3.35	.001
Father	0.94 (0.77)	1.20 (0.73)	2.63	.010
Role reversal				
Mother	1.04 (0.66)	0.65 (0.64)	-4.50	<.000
Father	0.54 (0.57)	0.40 (0.47)	-2.14	.040
Happiness in childhood	1.56 (0.73)	1.90 (0.60)	3.40	<.001
Social support	1.46 (0.94)	1.29 (0.82	-1.57	.120
Parental marriage	1.30 (0.80)	1.83 (0.81)	5.45	<.001
Socio-economic status	1.26 (0.83)	1.46 (0.71)	2.12	.004
	% (n/N)	% (n/N)	X^2	p
b) Dichotomised variables				
Competition between sibs				
Mother	59 (48/82)	32 (130/410)	17.93	<.000
Father	36 (26/72)	25 (96/391)	1.58	.178

Note: N varies in the subscales due to missing values, the scales for parent-child relationships are shown for mother and father separately.

Table 4: Joint analysis of parent-child relationships as predictors of suicide (logistic regression)

Explanatory terms		Estimated parameters			
		ß	sd$_{(ß)}$	z	p
Main effects					
(1)	Perceived maternal love	0.34	(0.31)	1.08	.279
(2)	Maternal control	2.06	(0.52)	3.93	<.001
(3)	Maternal role reversal	1.56	(0.33)	4.69	<.001
Interactions					
(1) x (2)		-0.98	(0.24)	-4.17	<.001
(2) x (3)		-0.74	(0.24)	-3.09	.002
Constant		-3.43	(0.81)	-4.25	<.001
Model	$X^2_{(5)} = 67.10$, p < .001, pseudo R^2 = 14%				

Four patients had missing data in one of the three scales; hence the model was built on the basis of 505 cases.

Estimated Risk for Suicide Attempts
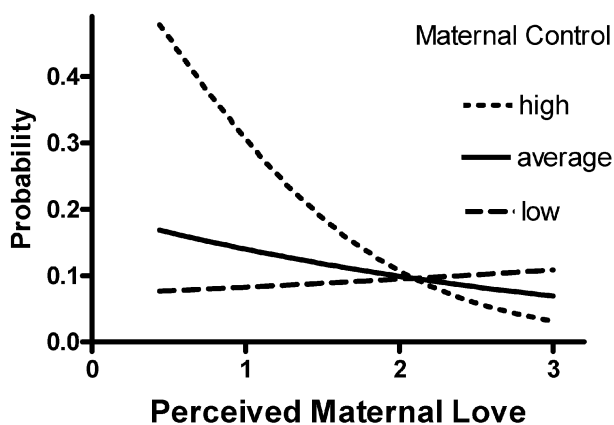
Figure 1: Estimated risk for suicide attempts by perceived maternal love and maternal control

Estimated Risk for Suicide Attempts
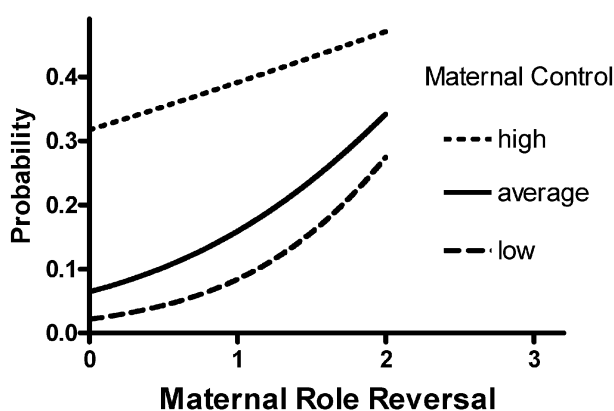
Figure 2: Estimated risk for suicide attempts by maternal role reversal and maternal control

Discussion

Reported rates of suicide attempts were high in this sample compared with rates found in other investigations [17], [18], [19]. This may be partly an effect of the way the question was posed, i.e., we did not require the presence of any effects of the attempt such as being hurt or needing to be treated in a clinic. In addition, our findings may have been influenced by the setting; perhaps it is easier for patients to admit a suicide attempt in a clinical setting than for probands to do so in a survey. An additional possible explanation is that Germans have particularly high rates of suicide attempts, even though suicide rates are not extremely high compared with those of other European countries [20].

The results observed for gender are congruent with those reported by other researchers (e.g. [21], [22]). Even though not significant in the present sample, these results allow the possibility that women show higher rates of attempts than men, a result that is contrary to other findings reported on completed suicides that are generally more frequent in men than in women [22], [23], [24], [25].

Our main result that parent-child relationships were reported to be poorer in suicide attempters than in non-attempters, is congruent with other results reported in the literature [26]. Eleven studies using different ways of measuring parent-child relationships generally have reported the same result. In contrast, to our knowledge the present results concerning the multivariate analysis are unique. No study previously had tested parent-child relationships and suicide attempts in a similarly complex way. The three dimensions that turned out to be most relevant were perceived maternal love, maternal control, and maternal role reversal. The first interaction, i.e., between perceived maternal love and maternal control, strongly supports Parker's hypothesis that 'affectionless control' is an extraordinarily unfortunate parenting style [27]. Out

of the 28 combinations of maternal parenting styles that were tested, it was the one that contributed the most to the prediction of suicide attempts. To our knowledge, this study is the first that demonstrated that the interaction of both factors predicts a significantly worse outcome than the linear combination. Even previous research testing this hypothesis came to different results: In a study on 218 widowed individuals, neither the main effects of parental control and affection nor their interaction showed an association to suicidality, even if indirect effects via bereavement, dependency, self-esteem and depressive symptoms were observed [28].

The second interaction that was found to be significant in the present analysis has not been reported in the literature before. Role reversal, a construct that has roots in different types of family therapy [12], [13], [29], has not garnered much attention in empirical research. In a previous analysis, maternal role reversal proved to be a strong predictor of depressive symptoms in adults, but as a simple main effect [30]. That an additional interaction of maternal role reversal exists with maternal control sounds plausible, but this interaction needs further attention.

None of the paternal parenting dimensions showed any association with suicide attempts, given the maternal dimensions in the model. An obvious interpretation of this result is that paternal parenting behaviour is irrelevant in the long run – at least with regard to suicide attempts. This interpretation is probably true for the patients of the present German sample, who were interviewed during the years 1999-2004 and had an average age of 42 (sd=13) years. According to this time frame, a considerable proportion of the patients grew up in the years after the Second World War. That era encompassed two major developments: first, the rebuilding of Germany and then a period called the time of the economic miracle. The latter time period was characterised by a strong role differentiation: Women cared for the family while men were the primary wage earners. It is likely that research conducted in other countries or in a different era would show more relevance of paternal parenting behaviour to suicide attempts.

A somewhat surprising result was that no differences were found between patients of a psychosomatic clinic and patients of general practitioners outside the clinic setting. In samples of 40-year-old patients, the literature describes base rates of suicide attempts in the 5% range [18], [19], whereas alcohol-dependent patients reported rates of about 40% [31]. It would have been plausible that clients of a psychosomatic clinic have higher rates of suicide attempts than clients of GPs. It also could have been assumed that parent-child relationships may play a bigger role in the lives of the former.

In interpreting these results, several limitations should be considered. First, and most important, it should be noted that the model we applied to the data simulates one possible way in which the data could be generated. Other models probably would fit the data, too. In particular, some interactions slightly missed the significance level; the incorporation of other interactions into the model does not necessarily guarantee that the most relevant terms were part of the model. On the other hand, there is no other way to reduce the complexity in such a wide field as family relationships unless clear hypotheses are specified. A second limitation is that the analysis was based on retrospective data – for parent-child relationships and for suicide attempts as well. Even if the reliability of the measurement of parent-child relationships is good, the one for suicide attempts is moderate. Keeping in mind that longitudinal data using different sources for the assessment of suicide attempts and parent-child relationships found significant associations [2], [32], it is not very likely that the association observed here is fully generated by different recall. However, there may be some bias in the patients' reports that suggests associations that are not present in fact. Third, the value of Kappa of .50 for assessment of suicide attempts in the sub-sample that was interviewed twice indicates that the response variable contains considerable proportion of measurement error. A related crucial point is that we did not compare persons who attempted suicide vs. those who did not; rather, we compared persons who reported a suicide attempt vs. those who did not so report. For example, Maughan et al. [33] found that persons who presented with a good adaptation in adulthood had a different (poorer) recall of parental discord than those with a less satisfactory adaptation. Hence, we cannot exclude systematic bias in addition to measurement error. The remaining uncertainty can be solved only by performing a longitudinal study.

Given these limitations, we believe that the present analysis provides some insight into familial factors that may help us understand the development of a vulnerability for committing suicide. It probably would be worthwhile to include an assessment of parent-child relationships in longitudinal studies; furthermore, it would be an asset to add the dimension "role reversal" to the most frequently used dimensions "warmth" and "control".

Notes

Ethical concern

Conflicts of interest

None declared.

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